The following Motions and Documents were considered by the GFC Programs Committee at its Thursday, January 12, 2023 meeting:

Agenda Title: **Course, Minor Program, and Minor Regulation Changes**
- Agricultural, Life, and Environmental Sciences
- Arts
- Augustana
- Business
- Education
- Engineering
- Kinesiology, Sport, and Recreation
- Medicine and Dentistry
- Saint Jean
- Science

CARRIED MOTION:
THAT the GFC Programs Committee approve, with delegated authority from General Faculties Council, the attached course, minor program, and minor regulation change submissions from the Faculties of Agricultural, Life, and Environmental Sciences, Arts, Augustana, Business, Education, Engineering, Kinesiology, Sport, and Recreation, Medicine and Dentistry, Saint Jean, and Science.

FINAL Item 4

Agenda Title: **Course Exclusions from the Exploration Credits Policy, Faculty of Arts**

CARRIED MOTION:
THAT the GFC Programs Committee approve, with delegated authority from General Faculties Council, the attached list of Faculty of Arts courses for exclusion from the Exploration Credits policy.

FINAL Item 5

Agenda Title: **Bachelor of Science in Dental Hygiene Academic Standing Regulations, Faculty of Medicine and Dentistry**

CARRIED MOTION:
THAT the GFC Programs Committee approve, with delegated authority from General Faculties Council, the proposed changes to academic standing regulations and application for readmission information for the Bachelor of Science (Dental Hygiene) Program, as proposed by the Faculty of Medicine and Dentistry and as set forth in Attachment 1, to take effect for Fall 2023.

FINAL Item 6

Agenda Title: **Practicum Restructure and Program Changes, Faculty of Kinesiology, Sport, and Recreation**

CARRIED MOTION:
THAT the GFC Programs Committee approve, with delegated authority from General Faculties Council, the proposed changes to existing Practicum Requirements for the BKin, BScKin, and BARST programs, as

submitted by the Faculty of Kinesiology, Sport, and Recreation (KSR), and as set forth in Attachments 1-7, to be published in the 2023-2024 Calendar and take effect in the 2024-2025 academic year.

FINAL Item 7

Agenda Title: **Changes to Science Curriculum and Associated Program Changes, Augustana Faculty**

CARRIED MOTION:
THAT the GFC Programs Committee approve, with delegated authority from General Faculties Council, the proposed elimination of the Science Foundations curriculum, with resulting changes to Bachelor of Science, Bachelor of Arts and Bachelor of Science/Bachelor of Education Combined degree programs in Augustana Faculty, to take effect in Fall 2023.

FINAL Item 8

Agenda Title: **New Second-level Specialization - Artificial Intelligence Option, Faculty of Science**

CARRIED MOTION:
THAT the GFC Programs Committee approves, under delegated authority from the General Faculties Council, the new second-level specialization entitled "Artificial Intelligence Option", effective July 1, 2024.

FINAL Item 9

Agenda Title: **New Embedded Certificate in Applied Data Science, Faculty of Science**

CARRIED MOTION:
THAT the GFC Programs Committee approves, under delegated authority from the General Faculties Council, the new embedded Certificate in Applied Data Science, effective July 1, 2023.

FINAL Item 10

Agenda Title: **Program Changes for PhD Program in the Faculty of Nursing**

TABLED MOTION:
THAT GFC Programs Committee, with delegated authority from General Faculties Council, approve the program and calendar revisions and related course additions and changes for the PhD Nursing program, as presented in the attached document, for inclusion in the next Calendar and implementation for the Fall of 2023.

CARRIED MOTION:
THAT GFC Programs Committee table the motion pending review of the Faculty of Nursing's learning outcomes document and a summary of actions that have been taken to address specific Calls to Action for nursing schools by the Truth and Reconciliation Commission of Canada.

Item 11 (Documents not included)

Agenda Title: **Duolingo English Test: Extension of Short-term Use, Office of the Registrar**

CARRIED MOTION:
THAT the GFC Programs Committee recommend that General Faculties Council approve the proposed extension to accept of the Duolingo English Test (DET) for all applicants to undergraduate and graduate programs as an additional option to demonstrate ELP through to the 2028-29 admission cycle.
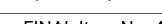
FINAL Item 12

Agenda Title: **SAT/ACT Test Optional Policy, Office of the Registrar**

CARRIED MOTION:
THAT the GFC Programs Committee recommend that General Faculties Council approve an SAT/ACT optional policy for undergraduate applicants from US-patterned students from accredited institutions, effective for the 2024-25 admissions cycle.

FINAL Item 13

FINAL Item No. 4

Governance Executive Summary
Action Item

Agenda Title	Course, Minor Program, and Minor Regulation Changes
	− **Agricultural, Life and Environmental Sciences**
	− **Arts**
	− **Augustana**
	− **Business**
	− **Education**
	− **Engineering**
	− **Kinesiology, Sport, and Recreation**
	− **Medicine and Dentistry**
	− **Nursing**
	− **Saint Jean**
	− **Science**

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 Agricultural, Life and Environmental Sciences, Arts, Augustana, Business, Education, Engineering, Kinesiology, Sport, and Recreation, Medicine and Dentistry, Nursing, Saint Jean, and Science.

Item

Action Requested	☒ Approval ☐ 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 (*please be specific*)	To approve course and minor program changes.
Executive Summary (*outline the specific item − and remember your audience*)	All routine course, minor program, and minor regulation 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. See individual item for Faculty Council approval information.
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](#)>	*Those who are actively **participating**:* • Vice-Provost (Programs) and Chair, GFC Programs Committee • Faculty Councils • Representatives of the Office of the Registrar *Those who have been **consulted**:* • Program Support Team, Undergraduate and Non-Credit • Graduate Program Support Team
Approval Route (Governance) (including meeting dates)	GFC Programs Committee, January 12, 2023

Strategic Alignment

Alignment with *For the Public Good*	Objective 21
Legislative Compliance and jurisdiction	*Post-Secondary Learning Act* (PSLA) GFC Programs Committee (PC) Terms of Reference

Attachments:

1. Agricultural, Life and Environmental Sciences
2. Arts
3. Augustana
4. Business
5. Education
6. Engineering
7. Kinesiology, Sport, and Recreation
8. Medicine and Dentistry
9. Nursing
10. Saint Jean
11. Science

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

Calendar Change Request Form for Program and Regulation Changes

Faculty (& Department or Academic Unit):		ALES (REN R)	
Contact Person:		Leluo Guan (lguan@ualberta.ca)	
Level of change (choose one only)		☐ Undergraduate	
		☑ Graduate	
Type of change request (check all that apply)	☐	Regulation ☑	Program

For which term is this intended to take effect?	Fall 2023
Does this proposal have corresponding course changes? (Should be submitted at the same time)	No

Rationale

Proposed by: N. Erbilgin (Chair, Dept of Renewable Resources) and U. Silins (Associate Chair, Graduate Programs, Dept of Renewable Resources)

We remove a separate Departmental Academic Standing Requirement section. By removing this section, the default academic standing requirements set by FGSR will apply. The graduate program committee decided that separate departmental standards are not necessary, and we have no administrative capacity to enforce those standards.

This change makes the Department of Renewable Resources conform to other Departments in ALES who do not have this section in their graduate program calendar entries (REES, HE, AFNS). The higher 3.0 GPA departmental requirement has not been checked or enforced for some years for lack of administrative resources. We rely on FGSR's screening to flag students that fall below a GPA of 2.7.

Calendar Copy

https://calendar.ualberta.ca/preview_program.php?catoid=36&poid=42399&returnto=11393

Current	**Proposed**
Graduate Programs in Renewable Resources	**Graduate Programs in Renewable Resources**
…	…
Academic Standing Requirement To remain in a graduate program in the Department of Renewable Resources, students are expected to maintain a minimum cumulative GPA of 3.0 with no grade less than C+.	
…	

Reviewed/Approved by:

Approved by ALES Faculty Council; October 17, 2022

Approval Route:
- GPST: October 31, 2022
- PRC: November 10, 2022
- FGSR Council: December 7, 2022
- Programs Committee: January 12, 2022 (Anticipated)

UNIVERSITY OF ALBERTA

Calendar Change Request Form for Program and Regulation Changes

Faculty (& Department or Academic Unit):	ALES (REN R)	
Contact Person:	Leluo Guan (lguan@ualberta.ca)	
Level of change (choose one only)	☐	Undergraduate
	☑	Graduate
Type of change request (check all that apply)	☑	Program
	☐	Regulation
For which term is this intended to take effect?	Fall 2023	
Does this proposal have corresponding course changes? (Should be submitted at the same time)	Yes	

Rationale

The blue highlighting identifies format changes to provide clarity. *The yellow highlighting identifies changes within the program.*

Proposed by: *N. Erbilgin (Chair, Dept of Renewable Resources) and A. Hamann (Associate Chair, Dept of Renewable Resources)*

This change accompanies a change of from 1 to 1.5 credits for the quantitative analysis/statistics courses REN R 581, 582, 585, and 586. Quantitative analysis / statistics requirements should therefore be 3 credits (two 1.5 credit courses or one 3 credit course).

This change accompanies a change of from 1 to 1.5 credits for the quantitative analysis/statistics courses REN R 581, 582, 585, and 586. 1.5 credits/approved hours more accurately reflects the workload/scheduled times for these modules, which each take up 50% of a term.

We therefore revert the quantitative analysis / statistics requirements to a total of 3 credits (two 1.5 credit courses or one 3 credit course). These were the old requirements before the 1-credit courses were introduced. We were not certain at the time if a 1.5 credit specification is possible, but it appears it is. E.g.: SOC 606 (https://apps.ualberta.ca/catalogue/course/soc)

Calendar Copy

https://calendar.ualberta.ca/preview_program.php?catoid=36&poid=42399&returnto=11393

Current	Proposed
Master of Science (Renewable Resources)	**Master of Science (Renewable Resources)**
Program Requirements	**Program Requirements**
Students are required to complete a minimum of 8 units in coursework and a thesis.	Students are required to complete a minimum of 8 units in coursework and a thesis.
Coursework	**Coursework**

Course requirements for the MSc are based on the student's previous training and the anticipated needs in the student's area of specialization.
● REN R 603 - Graduate Research Skills
● REN R 604 - Graduate Research Seminar
● A minimum of 6 units of courses at the 500- or 600- level.
  ○ Course work should include at least 2 units in research methods, statistics, and/or experimental design.
● Additional courses may be required at the discretion of the student's supervisor.
● ~~Courses~~ may be drawn from those listed for the Department of Renewable Resources, and from other Departments within the University.
	Course requirements for the MSc are based on the student's previous training and the anticipated needs in the student's area of specialization.
	● REN R 603 - Graduate Research Skills
	● REN R 604 - Graduate Research Seminar
	● A minimum of 6 units of courses at the 500- or 600- level.
	  ○ Coursework should include at least 3 units in research methods, statistics, and/or experimental design.
	● The other units may be drawn from those listed for the Department of Renewable Resources, and from other Departments within the University.
	● Additional courses may be required at the discretion of the student's supervisor.

…	…

Reviewed/Approved by:

Approved by ALES Faculty Council; October 17, 2022
Approved by FGSR Council - December 7, 2022

Calendar Change Request Form for Course Changes

Faculty (& Department or Academic Unit):	ALES (REN R)
Contact Person:	Leluo Guan (lguan@ualberta.ca)
Level of change (choose one only) [?]	☐ Undergraduate ☑ ~~Graduate~~
For which term will this change take effect?	Fall 2023

Rationale

Proposed by: N. Erbilgin (RENR Department Chair) and A. Hamann (REN R Associate Chair).
REN R 581 and REN R 582 are taught in sequence during the first term, having replaced a 3 credit course, broken into two smaller modules. 1.5 credits/approved hours more accurately reflects the workload/scheduled time.

Current	Proposed
REN R 581 - Introduction to Exploratory Data Analysis **Course Career** Graduate **Units** 4 **Approved Hours** 4-0-4 **Fee index** 2 **Faculty** Agric, Life & Environ Sciences **Department** Renewable Resources **Typically Offered** first term **Description** Methods for exploring, analyzing and presenting data. Data organization, outlier identification, transformations. Data displays for grouped, bivariate, and time series data. Summary statistics for parametric and non-parametric data. Concept of standard errors and confidence intervals. Design of scientific tables, two-way tables. Participants learn how to generate publication-quality graphs and tables with open-source software packages.	**REN R 581 - Introduction to Exploratory Data Analysis** **Course Career** Graduate **Units** 1.5 **Approved Hours** 1.5-0-1.5 **Fee index** 3 **Faculty** Agric, Life & Environ Sciences **Department** Renewable Resources **Typically Offered** first term **Description** Methods for exploring, analyzing and presenting data. Data organization, outlier identification, transformations. Data displays for grouped, bivariate, and time series data. Summary statistics for parametric and non-parametric data. Concept of standard errors and confidence intervals. Design of scientific tables, two-way tables. Participants learn how to generate publication-quality graphs and tables with open-source software packages.

Reviewed/Approved by:

Approved by ALES Faculty Council; October 17, 2022

Calendar Change Request Form for Course Changes

Faculty (& Department or Academic Unit):	ALES (REN R)
Contact Person:	Leluo Guan (lguan@ualberta.ca)
Level of change (choose one only) [?]	☐ Undergraduate ☑ ~~Graduate~~
For which term will this change take effect?	Fall 2023

Rationale

Proposed by: N. Erbilgin (RENR Department Chair) and A. Hamann (REN R Associate Chair).
REN R 581 and REN R 582 are taught in sequence during the first term, having replaced a 3 credit course, broken into two smaller modules. 1.5 credits/approved hours more accurately reflects the workload/scheduled time.

Current	Proposed
REN R 582 - Elementary Statistics for Applied Sciences **Course Career** Graduate **Units** 1 **Approved Hours** 1-0-1 **Fee index** 2 **Faculty** Agric, Life & Environ Sciences **Department** Renewable Resources **Typically Offered** first term	**REN R 582 - Elementary Statistics for Applied Sciences** **Course Career** Graduate **Units** 1.5 **Approved Hours** 1.5-0-1.5 **Fee index** 3 **Faculty** Agric, Life & Environ Sciences **Department** Renewable Resources **Typically Offered** first term
Description Concepts of inferential statistics and null hypothesis testing, statistical versus scientific hypothesis testing, problem formulation, assumptions, and interpretation. One- and two-sample inferences for population means and proportions, one and two-way analysis of variance, linear correlation and regression, classical non-parametric statistics. Participants will gain general statistical literacy and learn how to implement common statistical tests with open-source software packages.	**Description** Concepts of inferential statistics and null hypothesis testing, statistical versus scientific hypothesis testing, problem formulation, assumptions, and interpretation. One- and two-sample inferences for population means and proportions, one and two-way analysis of variance, linear correlation and regression, classical non-parametric statistics. Participants will gain general statistical literacy and learn how to implement common statistical tests with open-source software packages.

Reviewed/Approved by:

Approved by ALES Faculty Council; October 17, 2022

Calendar Change Request Form for Course Changes

Faculty (& Department or Academic Unit):	ALES (REN R)
Contact Person:	Leluo Guan (lguan@ualberta.ca)
Level of change (choose one only) [?]	☐ Undergraduate ☑ ~~Graduate~~
For which term will this change take effect?	Winter 2024

Rationale

Proposed by: N. Erbilgin (RENR Department Chair) and A. Hamann (REN R Associate Chair).
REN R 585 and RENR 586 are taught in sequence during the second term, having replaced a 3 credit course, broken into two smaller modules. 1.5 credits/approved hours more accurately reflects the workload/scheduled time.

Current	Proposed
REN R 585 - Design and Analysis of Experiments **Course Career** Graduate **Units** 1 **Approved Hours** 1-0-1 **Fee index** 2 **Faculty** Agric, Life & Environ Sciences **Department** Renewable Resources **Typically Offered** second term **Description** Concepts and application of analysis of variance to experimental data, including blocked, nested, factorial and split plot designs, and repeated measures. Covers the concepts of fixed and random effects, multiple comparisons, analysis of covariance. Participants learn how to design and evaluate complex field and laboratory experiments with open-source software packages. Prerequisite: knowledge equivalent to REN R 581 and REN R 582 is required.	**REN R 585 - Design and Analysis of Experiments** **Course Career** Graduate **Units** 1.5 **Approved Hours** 1.5-0-1.5 **Fee index** 3 **Faculty** Agric, Life & Environ Sciences **Department** Renewable Resources **Typically Offered** second term **Description** Concepts and application of analysis of variance to experimental data, including blocked, nested, factorial and split plot designs, and repeated measures. Covers the concepts of fixed and random effects, multiple comparisons, analysis of covariance. Participants learn how to design and evaluate complex field and laboratory experiments with open-source software packages. Prerequisite: knowledge equivalent to REN R 581 and REN R 582 is required.

Reviewed/Approved by:

Approved by ALES Faculty Council; October 17, 2022

Calendar Change Request Form for Course Changes

Faculty (& Department or Academic Unit):	ALES (REN R)
Contact Person:	Leluo Guan (lguan@ualberta.ca)
Level of change (choose one only) [?]	☐ Undergraduate ☑ ~~Graduate~~
For which term will this change take effect?	Winter 2024

Rationale

Proposed by: N. Erbilgin (RENR Department Chair) and A. Hamann (REN R Associate Chair).
REN R 585 and RENR 586 are taught in sequence during the second term, having replaced a 3 credit course, broken into two smaller modules. 1.5 credits/approved hours more accurately reflects the workload/scheduled time.

Current	Proposed
REN R 586 - Analyzing Relationships in Data **Course Career** Graduate **Units** 1 **Approved Hours** 1-0-1 **Fee index** 2 **Faculty** Agric, Life & Environ Sciences **Department** Renewable Resources **Typically Offered** second term **Description** Focuses on analyzing complex biological or environmental data for the purpose of prediction and scientific hypothesis testing. Covers multiple regression for a continuous response, logistic regression for a binary response, and log-linear models for count data, non-linear regression and generalized additive models for non-linear relationships, path analysis using structural equation modeling. Prerequisite: knowledge equivalent to REN R 581 and REN R 582 is required.	**REN R 586 - Analyzing Relationships in Data** **Course Career** Graduate **Units** 1.5 **Approved Hours** 1.5-0-1.5 **Fee index** 3 **Faculty** Agric, Life & Environ Sciences **Department** Renewable Resources **Typically Offered** second term **Description** Focuses on analyzing complex biological or environmental data for the purpose of prediction and scientific hypothesis testing. Covers multiple regression for a continuous response, logistic regression for a binary response, and log-linear models for count data, non-linear regression and generalized additive models for non-linear relationships, path analysis using structural equation modeling. Prerequisite: knowledge equivalent to REN R 581 and REN R 582 is required.

Reviewed/Approved by:

Approved by ALES Faculty Council; October 17, 2022

This package contains: Graduate - Substantive Program Changes

Faculty approval date:

AAC Date: April 12,2022	AEC: May 5, 2022	AFC: May 19, 2022

Page	Department or Unit	What is Changing
2	East Asian Studies	Entrance Requirement

Approved by:
GPST: October 31, 2022
PRC: November 10, 2022

UNIVERSITY OF ALBERTA
FACULTY OF ARTS

CALENDAR CHANGE REQUEST FORM

Department: East Asian Studies

Change: Graduate Major Program Change

Rationale: (why is this change being proposed and who was consulted?)

To help with graduate recruitment and to make our admission requirements for previous language study consistent with the language course requirements for the Department's own undergraduate majors. We believe that lowering our stated graduate admission requirements of 4 years of university-level study (or the equivalent) in the target language of research to 3 will increase our pool of potential applicants, especially from Canadian universities, since so few even offer the requisite 4 years in East Asian languages. Moreover, we only require our own undergraduate majors to take 3 years. There is time during the MA program for students to continue strengthening their East Asian language skills, and we think that doing so is appropriate at the MA level. The Department Council and Executive Committee have been consulted.

(https://calendar.ualberta.ca/preview_program.php?catoid=36&poid=42509&returnto=11393)

Calendar Copy:

Current: Strike through and highlight deletions	Proposed: Underline and highlight additions
Graduate Programs in East Asian Studies […] **Entrance Requirements** […] Applicants must have ~~four~~ years of university-level study (or the equivalent) in the language(s) in which they will be carrying out research.	**Graduate Programs in East Asian Studies** […] **Entrance Requirements** […] Applicants must have three years of university-level study (or the equivalent) in the language(s) in which they will be carrying out research.

Department Contact: David Quinter <quinter@ualberta.ca>	Department Council Approval Date: March 25, 2022
Chair or Designate: David Quinter, Associate Chair, Graduate	Signature: *David Quinter*

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

Department: Music

Change: Graduate Minor Program Change

Rationale:

1) The addition of 3 units in Musicology, Popular Music, Ethnomusicology, or Music Theory will ensure that students enrolled in the Master of Music (MMus) performance program take at least one academic course offering that requires an end-of-semester paper. Some academic (as opposed to performance) work should be required for performance students. At present, they can complete their programs without taking a single academic course involving reading and writing (i.e. they can complete their degrees with performance only). We intend to require one, in order to ensure they have a well-rounded education in Music.

2) Removal of the LOE for the MMus in Choral Conducting is motivated by a combination of factors. The nature of the performance program entails, besides regular coursework, late hours on campus for practice, rehearsal, and concert presentations. The core rationale is that (a) language training is inessential to performance competency, and (b) most comparable programs across Canada, including the most prestigious institutions, have removed the language requirement at the master's level. In addition, students need to complete their master's programs in two years, and a language requirement jeopardizes this timeline. In response to similar considerations, the language requirement has already been waived for the Composition, Strings, Woodwind, Voice, and Piano areas. The removal of the LOE for the Choral Conducting and for the Wind Band Conducting areas (as noted in this change request and the accompanying one) will provide for consistency across the MMus program areas.

In researching the question outside the University of Alberta, we found no LOE requirement for master's level performance degrees in Western, Toronto, McGill, and Memorial. UBC has a 100-level language requirement for Voice; only Manitoba maintains LOE requirements for all MMus degrees.

Consultation: Performance and Academic Areas, Graduate Committee, Department Council.

https://calendar.ualberta.ca/preview_program.php?catoid=34&poid=38182&returnto=10333

Calendar Copy:

Current: ~~Strike through and highlight~~ deletions	**Proposed:** <u>Underline and highlight</u> additions
Music [Graduate] […] **The Degree of MMus with a specialization in Choral Conducting (Music) [Graduate]** The Department of Music offers one of the few active graduate programs in choral conducting in Canada. The program emphasizes practical experience in conducting and rehearsal technique, knowledge of repertoire, and development of research skills. The Concert Choir and Madrigal Singers provide opportunities to participate both as a singer and as a choral assistant. **Program Requirements** Students must complete a minimum of ★24 in graduate-level course work. Completion of a thesis-equivalent is also required. **Coursework** MUSIC 630 (★6)- Choral Conducting MUSIC 633 (★3)- Seminar in Choral Literature I MUSIC 634 (★3)- Seminar in Choral Literature II MUSIC 638 (★3)- Choral Conducting MUSIC 640 (★3)- Choral Ensemble	**Music [Graduate]** […] **The Degree of MMus with a specialization in Choral Conducting (Music) [Graduate]** The Department of Music offers one of the few active graduate programs in choral conducting in Canada. The program emphasizes practical experience in conducting and rehearsal technique, knowledge of repertoire, and development of research skills. The Concert Choir and Madrigal Singers provide opportunities to participate both as a singer and as a choral assistant. **Program Requirements** Students must complete a minimum of ★24 in graduate-level coursework. Completion of a thesis-equivalent is also required, (a juried recital is the thesis equivalent and final examination equivalent for MMus students in Performance). **Coursework** 18 units in: MUSIC 630 (★6)- Choral Conducting

MUSIC 633 (★3)- Seminar in Choral Literature I
MUSIC 634 (★3)- Seminar in Choral Literature II
MUSIC 638 (★3)- Choral Conducting
MUSIC 640 (★3)- Choral Ensemble

==3 units in any of the following areas:==
- ==Musicology, Popular Music, Ethnomusicology, or Music Theory.==

==3 units in:==
- graduate-level options, ==to be approved by the supervisor.==

==Notes:==

1. ==S==tudents who have not ==previously== taken a bibliography and research methods course (or equivalent) will be required to take MUSIC 505. The fulfillment of this requirement will count as the option noted above.

2. At the discretion of the supervisor, further coursework may be required. ==This will be based on the student's background and prior preparation.==

Thesis
- Registration in 900-level THES.
- A juried recital will be considered the equivalent of the thesis.
- For program completion and convocation, there is no requirement to submit the thesis-equivalent to FGSR.

~~Two ★3~~ graduate-level options.

1. ~~At the discretion of the supervisor,~~ students who have not taken a bibliography and research methods course (or equivalent) will be required to take MUSIC 505. The fulfillment of this requirement will count as one of the approved options.

2. At the discretion of the supervisor, further coursework may be required.

Thesis
- Registration in 900-level THES. A juried recital will be considered the equivalent of the thesis.
- For program completion and convocation, there is no requirement to submit the thesis-equivalent to FGSR.
-

~~**Language Requirements**~~
~~All MMus Choral Conducting students are required to demonstrate a reading knowledge of French or German, or another language other than English, appropriate to the area of research and approved by the student's supervisor. This requirement will normally be completed before the essay is undertaken. Coursework undertaken to satisfy this requirement will not be credited toward the program.~~

Residence Requirements
The minimum period of residence for the MMus degree is two consecutive four-month terms of full-time attendance at the University of Alberta.

Length of Program
The time required to complete the program will vary according to the previous training of the applicant and the nature of the research undertaken; however, a minimum of two years is normally required.

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

Residence Requirements
The minimum period of residence for the MMus degree is two consecutive four-month terms of full-time attendance at the University of Alberta.

Length of Program
The time required to complete the program will vary according to the previous training of the applicant and the nature of the research undertaken; however, a minimum of two years is normally required.

The maximum time to complete the MMus program as set by the Faculty of Graduate Studies and Research is four years ==for full-time registration and six-years for part-time registration.==

	Music [Graduate] […]

Department Contact: Stephen Tchir	Department Council Approval Date: 3, 02, 21
Chair or Designate: Patrcia Tao	Signature:

Approvals:
AAC: April 14, 2020
AEC: May 6, 2021
AFC: May 27, 2021
FGSR Council: Dec. 7, 2022

CALENDAR CHANGE REQUEST FORM

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

Department: Music

Change: Graduate Minor Program Change

Rationale: 1) The addition of 3 units in Musicology, Popular Music, Ethnomusicology, or Music Theory will ensure that students enrolled in the Master of Music (MMus) performance program take at least one academic course offering requiring an end-of-semester paper. Some academic (as opposed to performance) work should be required for performance students. At present, they can complete their programs without taking a single academic course involving reading and writing (i.e. they can complete their degrees with performance only). We intend to require one, in order to ensure they have a well-rounded education in Music.

2) Removal of the LOE for the MMus in Choral Conducting is motivated by a combination of factors. The nature of the performance program entails, besides regular coursework, late hours on campus for practice, rehearsal, and concert presentations. The core rationale is that (a) language training is inessential to performance competency, and (b) most comparable programs across Canada, including the most prestigious institutions, have removed the language requirement at the master's level. In response to similar considerations, the language requirement has already been waived for the Composition, Strings, Woodwind, Voice, and Piano areas. The removal of the LOE for the Choral Conducting and for the Wind Band Conducting areas (as noted in this change request and the accompanying one) will provide for consistency across the MMus program areas.

In researching the question outside the University of Alberta, we found no LOE requirement for master's level performance degrees in Western, Toronto, McGill, and Memorial. UBC has a 100-level language requirement for Voice; only Manitoba maintains LOE requirements for all MMus degrees.

Consultation: Performance and Academic Areas, Graduate Committee, Department Council.

https://calendar.ualberta.ca/preview_program.php?catoid=34&poid=38182&returnto=10333

Calendar Copy:

Current: ~~Strike through and highlight~~ deletions	Proposed: <u>Underline and highlight</u> additions
The Degree of MMus with a specialization in Performance (Music) [Graduate] Performance studies are offered in piano, voice, strings and selected other instruments, as well as routes in piano pedagogy and wind band conducting. **Program Requirements** Students must complete a minimum of ★24 in graduate-level course work. Completion of a thesis-equivalent is also required. **Coursework** • MUSIC 621 (★6) - Applied Music **~~OR~~** • MUSIC 632 (★6) - Advanced Wind Band Conducting for Wind Band Conducting majors • MUSIC 639 (★3) - Chamber Music **~~OR~~** • MUSIC 631 (★3) - Advanced Band Techniques for Wind Band Conducting majors	**The Degree of MMus with a specialization in Performance (Music) [Graduate]** Performance studies are offered in piano, voice, strings and selected other instruments, as well as routes in piano pedagogy and wind band conducting. **Program Requirements** Students must complete a minimum of ★24 in graduate-level coursework. Completion of a thesis-equivalent is also required, (a juried recital is the thesis equivalent and final examination equivalent for MMus students in Performance). **Coursework** **6 units in:** • MUSIC 621 (★6) - Applied Music Or • MUSIC 632 (★6) - Advanced Wind Band Conducting for Wind Band Conducting majors **3 units in:** • MUSIC 639 (★3) - Chamber Music Or • MUSIC 631 (★3) - Advanced Band Techniques for Wind Band Conducting majors

Left column:

- ~~Five~~ ★3 graduate-level options

    - o ~~Options must include one course (★3) in which a major paper is required~~
    - o MMus students whose area of concentration is Organ may complete ★3 in an approved music option in lieu of MUSIC 639
    - o All MMus Performance students concentrating in band or orchestral instruments (not including Wind Band Conducting majors) are required to take MUSIC 641 (★3)- Instrumental Ensemble as one of their options.
    - o All MMus Performance students concentrating in Wind Band Conducting are required to take MUSIC 643 as one of their options.
    - o At the discretion of the supervisor, MMus students may be required to take MUSIC 625 as one of their options.
    - o All MMUS Performance students concentrating in Piano Pedagogy are required to take MUSIC 603, 604 and 625 as three of their option courses.
    - o At the discretion of the supervisor, students who have not taken a bibliography and research methods course (or equivalent) will be required to take MUSIC 505 . The fulfillment of this requirement will count as one of the approved options.
- At the discretion of the supervisor, further coursework may be required.

Thesis
Registration in 900-level THES.
For performance a juried recital will be considered the equivalent of the thesis and final oral examination.
Students concentrating in Piano Pedagogy may present a juried recital or a Lecture-Recital
For students concentrating in Wind Band Conducting, four conducting performances will be presented over the course of the program and will be considered the equivalent of the thesis. An audio/video recording of the performances will be viewed by the examining committee. Links to audio/video streaming sites are acceptable.
For program completion and convocation, there is no requirement to submit the thesis-equivalent to FGSR.

Right column:

3 units in any of the following areas:
- Musicology, Popular Music, Ethnomusicology, or Music Theory

12 units in graduate-level options, to be approved by the supervisor.

Notes:

1. MMus students whose area of concentration is Organ may complete ★3 in an approved music option in lieu of MUSIC 639
2. All MMus Performance students concentrating in band or orchestral instruments (not including Wind Band Conducting majors) are required to take MUSIC 641 (★3) - Instrumental Ensemble as one of their options.
3. All MMus Performance students concentrating in Wind Band Conducting are required to take MUSIC 643 as one of their options.
4. At the discretion of the supervisor, and based on the student's background and prior preparation, MMus students may be required to take MUSIC 625 as one of their options.
5. All MMUS Performance students concentrating in Piano Pedagogy are required to take MUSIC 603, 604 and 625 as three of their option courses.
6. At the discretion of the supervisor, students who have not taken a bibliography and research methods course (or equivalent) will be required to take MUSIC 505. The fulfillment of this requirement will count as one of the approved options, as noted above.
7. At the discretion of the supervisor, further coursework may be required. This will be based on the student's background and prior preparation.

Thesis

Registration in 900-level THES.

For performance a juried recital will be considered the equivalent of the thesis and final oral examination.

Students concentrating in Piano Pedagogy may present a juried recital or a Lecture-Recital.

For students concentrating in Wind Band Conducting, four conducting performances will be presented over the course of the program and will be considered the equivalent of the thesis. An audio/video recording of the performances will be viewed by the examining committee. Links to audio/video streaming sites are acceptable.

For program completion and convocation, there is no requirement to submit the thesis-equivalent to FGSR.

  Residence Requirements The minimum period of residence for the MMus degree is two four-month terms of full-time attendance at the University of Alberta. **Length of Program** The time required to complete the program will vary according to the previous training of the applicant and the nature of the research undertaken; however, a minimum of two years is normally required. The maximum time to complete the MMus program as set by the Faculty of Graduate Studies and Research is four years.	**Residence Requirements** The minimum period of residence for the MMus degree is two four-month terms of full-time attendance at the University of Alberta. **Length of Program** The time required to complete the program will vary according to the previous training of the applicant and the nature of the research undertaken; however, a minimum of two years is normally required. The maximum time to complete the MMus program as set by the Faculty of Graduate Studies and Research is four years for full-time registration and six-years for part-time registration.

Department Contact: Stephen Tchir	Department Council Approval Date: 3, 02, 21
Chair or Designate: Patrcia Tao	Signature:

Approvals:
AAC: April 14, 2020
AEC: May 6, 2021
AFC: May 27, 2021
FGSR Council: Dec. 7, 2022

UNIVERSITY OF ALBERTA

Faculty (& Department or Academic Unit):	Augustana Faculty
Contact Person:	Jonathan Hawkins jh12@ualberta.ca
Level of change: (choose one only) [?]	☑ Undergraduate
	☐ Graduate
For which term will this change take effect?	Fall 2023

Rationale

Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

The following course changes represent a new course, and minor course description and prerequisite changes arising out of Augustana Departments adjusting to the significant program changes of the last two years - these assist in updating calendar copy and helping the various courses fit more appropriately within Augustana's new/revised majors.

Course Template

Current: Removed language	Proposed: New language
AUECO 254 - India Tour **Course Career** Undergraduate **Units** 3 **Approved Hours** VARIABLE **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Social Sciences **Typically Offered** either term **Description** Three-week study tour of India that focuses on a chosen region of India in order to examine the intersection between religious belief and practice and development challenges. Students will be exposed to various development projects as well as an array of religious sites. It is expected that students will gain an in depth understanding of India, its cultural and religious diversity, and the challenges it faces in the 21st century. Students will be exposed to both rural and urban life. Prerequisite: AUECO 252 or AUREL 260. Notes: Costs associated with this India Tour course and applicable tuition are the responsibility of the students. Enrolment is limited to 15 students. Credit may be obtained for only one of AUECO 254 and AUREL 266. Requires payment of additional student instructional support fees. Refer to the Tuition and Fees page in the University Regulations section of the Calendar.	**AUECO 254 - India Tour** **Course Career** Undergraduate **Units** 3 **Approved Hours** VARIABLE **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Social Sciences **Typically Offered** either term **Description** Three-week study tour of India with a focus on social, cultural, and economic aspects of sustainable development practices. Students will be exposed to various development projects as well as an array of religious sites. It is expected that students will gain an in depth understanding of India's economic growth, its cultural and religious diversity, and the challenges it faces in the 21st century. Students will be exposed to both rural and urban life. Notes: Costs associated with this India Tour course and applicable tuition are the responsibility of the students. Enrolment is limited to 15 students. Credit may be obtained for only one of AUECO 254 and AUIDS 286 (India Tour). Requires payment of additional student instructional support fees. Refer to the Tuition and Fees page in the University Regulations section of the Calendar.

Course Template

Current: ~~Removed language~~	Proposed: New language
New	**AUPSY 375 - Neuroplasticity** **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Social Sciences **Typically Offered** either term **Description** An introduction to neuroplasticity, the ability of our central nervous system to change due to the interplay between development and experience. Prerequisite: AUPSY 275.

Course Template

Current: ~~Removed language~~	Proposed: New language
New	**AUPSY 475 – Brain Injury** **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Social Sciences **Typically Offered** either term **Description** This course is an introduction to brain injury. We will cover the pathophysiology of traumatic brain injury and stroke as well as factors involved in prognosis and recovery. Prerequisites: AUPSY 275

Course Template

Current: ~~Removed language~~	Proposed: <u>New language</u>
New	**<u>AUREL 390 - Selected Topics in Religious Studies</u>** **<u>Course Career</u>** <u>Undergraduate</u> **<u>Units</u>** <u>3</u> **<u>Approved Hours</u>** <u>3-0-0</u> **<u>Fee index</u>** <u>6</u> **<u>Faculty</u>** <u>Augustana Faculty</u> **<u>Department</u>** <u>AU Fine Arts</u> **<u>Typically Offered</u>** <u>either term</u> **<u>Description</u>** <u>Selected topics in the study of religion. Topics may vary from year to year depending on the course instructor.</u>

Reviewed/Approved by:

Augustana Faculty Council
Augustana Curriculum Committee, November 22, 2022

UNIVERSITY OF ALBERTA

Calendar Change Request Form for Course Changes

See the Calendar Guide for tips on how to complete this form.

Faculty (& Department or Academic Unit):	Augustana Faculty	
Contact Person:	Jonathan Hawkins jh12@ualberta.ca	
Level of change (choose one only) [?]	☑	Undergraduate
	☐	Graduate
For which term will this change take effect?	Fall 2023	

Rationale

The following course changes support the streamlining of nomenclature in the Bachelor of Music program. This, in turn, will help to make advising and administration of the program more straightforward, as well as making course sequencing for students more flexible over their degree program.

Course Template

Current	Proposed
AUMUS 160 - Theoretical and Analytical Studies I	**AUMUS 160 - Theoretical and Analytical Studies I**
Course Career Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Fine Arts **Typically Offered** either term	**Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Fine Arts **Typically Offered** either term
Description Study of common-practice harmony: scales and modes, intervals, triads, figured bass, cadences, phrases, periods, sentences, nonharmonic tones, harmonic progression and rhythm, part-writing, seventh chords, diatonic modulation playing simple harmonic progression formulae on piano. Prerequisites: AUMUS 100 or a score higher than 70% in the Music Theory Placement Examination (MTPE), and completion of the Keyboard Skills Interview (KSI). ~~Corequisite: AUMUS 162.~~	**Description** Study of common-practice harmony: scales and modes, intervals, triads, figured bass, cadences, phrases, periods, sentences, nonharmonic tones, harmonic progression and rhythm, part-writing, seventh chords, diatonic modulation. playing simple harmonic progression formulae on piano. Prerequisites: AUMUS 100 or a score higher than 70% in the Music Theory Placement Examination (MTPE), and completion of the Keyboard Skills Interview (KSI).

Course Template

Current	Proposed
AUMUS 162 - Aural, Sight Singing, and Keyboard Skills I **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Fine Arts **Typically Offered** either term **Description** Development of listening, reading, and keyboard skills integral to the internalization of concepts covered in AUMUS 160. Prerequisites: AUMUS 100 or a score higher than 70% in the Music Theory Placement Examination (MTPE), and completion of the Keyboard Skills Interview (KSI). ~~Corequisite: AUMUS 160.~~	**AUMUS 162 - Aural, Sight Singing, and Keyboard Skills I** **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Fine Arts **Typically Offered** either term **Description** Development of listening, reading, and keyboard skills integral to the internalization of concepts covered in AUMUS 160. Prerequisites: AUMUS 100 or a score higher than 70% in the Music Theory Placement Examination (MTPE), and completion of the Keyboard Skills Interview (KSI).

Course Template

Current	Proposed
AUMUS 191 - Applied Music **Course Career** Undergraduate **Units** 2 **Approved Hours** 0-0.5L-0 **Fee index** 7 **Faculty** Augustana Faculty **Department** AU Fine Arts **Typically Offered** two term **Description** Private lessons in instrument or voice; a half-hour weekly lesson over two terms. ~~Prerequisite: Consent of the Department. Note: A student should consult the Department before registering.~~	**AUMUS 191 - Applied Music** **Course Career** Undergraduate **Units** 2 **Approved Hours** 0-0.5L-0 **Fee index** 7 **Faculty** Augustana Faculty **Department** AU Fine Arts **Typically Offered** two term **Description** Private lessons in instrument or voice; a half-hour weekly lesson over two terms.

Course Template

Current	Proposed
AUMUS 239 - ~~Vocal Pedagogy I~~	**AUMUS 239 - The Child Voice**
Course Career Undergraduate **Units** 3 **Approved Hours** ~~2-1L-0~~ **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Fine Arts **Typically Offered** either term	**Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Fine Arts **Typically Offered** either term
Description ~~Comprehensive study of the voice and how it functions, survey of current methods, and supervised practical instruction. Prerequisite: Applied music in voice at the 200-level, or consent of the instructor.~~	**Description** An in-depth examination of the development, training, and phenomenon of the child voice from historical, physiological, pedagogical, and cultural perspectives. Note: Credit may be obtained for only one of AUMUS 239 and AUMUS 252 (2023).

Course Template

Current	Proposed
AUMUS 250 - Introduction to Music Education	**AUMUS 250 - Introduction to Music Education**
Course Career Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Fine Arts **Typically Offered** either term	**Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Fine Arts **Typically Offered** either term
Description A foundational course in the theory and practice of ~~teaching music from pre-K to 6. Special emphasis on classroom observation and practical experience with the use of age-appropriate techniques, strategies and materials.~~	**Description** A foundational course in the theory and practice of music pedagogy in a variety of contexts from classroom to studio.

Course Template

Current	Proposed
~~**AUMUS 252 - The Child Voice**~~	**To be deleted**
~~**Course Career** Undergraduate~~	
~~**Units** 3~~	
~~**Approved Hours** 3-0-0~~	
~~**Fee index** 6~~	
~~**Faculty** Augustana Faculty~~	
~~**Department** AU Fine Arts~~	
~~**Typically Offered** either term~~	
~~**Description**~~	
~~An in depth examination of the development, training, and phenomenon of the child voice from historical, physiological, pedagogical, and cultural perspectives.~~	

Course Template

Current	Proposed
AUMUS 260 - Theoretical and Analytical Studies II	**AUMUS 260 - Theoretical and Analytical Studies II**
Course Career Undergraduate	**Course Career** Undergraduate
Units 3	**Units** 3
Approved Hours 3-0-0	**Approved Hours** 3-0-0
Fee index 6	**Fee index** 6
Faculty Augustana Faculty	**Faculty** Augustana Faculty
Department AU Fine Arts	**Department** AU Fine Arts
Typically Offered either term	**Typically Offered** either term
Description	**Description**
Continuation of the study of common-practice harmony, including secondary dominants, borrowed chords, chromatic and enharmonic modulations, extended chords, augmented sixths, playing harmonic progression formulae on piano and large-scale formal analysis. Prerequisite: AUMUS 160. ~~Corequisite: AUMUS 262.~~	Continuation of the study of common-practice harmony, including secondary dominants, borrowed chords, chromatic and enharmonic modulations, extended chords, augmented sixths, playing harmonic progression formulae on piano and large-scale formal analysis. Prerequisite: AUMUS 160 and AUMUS 162.

Course Template

Current	Proposed
AUMUS 261 - Theoretical and Analytical Studies III	**To be deleted**
Course Career Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Fine Arts **Typically Offered** either term	
Description Advanced study of common-practice harmony, including third relation harmony; polychords, extended chromaticism, atonal analysis, integral serialism and short compositions using post-1945 techniques. Prerequisite: AUMUS 260. Corequisite: AUMUS 263.	

Course Template

Current	Proposed
AUMUS 262 - Aural, Sight Singing and Keyboard Skills II	**AUMUS 262 - Aural, Sight Singing and Keyboard Skills II**
Course Career Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Fine Arts **Typically Offered** either term	**Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Fine Arts **Typically Offered** either term
Description Development of listening, reading, and keyboard skills integral to the internalization of concepts covered in AUMUS 260. Prerequisite: AUMUS 162. Corequisite: AUMUS 260.	**Description** Development of listening, reading, and keyboard skills integral to the internalization of concepts covered in AUMUS 260. Prerequisite: AUMUS 160 and AUMUS 162.

Course Template

Current	Proposed
~~**AUMUS 263 - Aural, Sight Singing, and Keyboard Skills III**~~ ~~**Course Career** Undergraduate~~ ~~**Units** 3~~ ~~**Approved Hours** 3-0-0~~ ~~**Fee index** 6~~ ~~**Faculty** Augustana Faculty~~ ~~**Department** AU Fine Arts~~ ~~**Typically Offered** either term~~ ~~**Description**~~ ~~Development of listening and reading skills integral to the internalization of concepts covered in AUMUS 261. Prerequisites: AUMUS 260 and 262. Corequisite: AUMUS 261.~~	**To be deleted**

Course Template

Current	Proposed
AUMUS 339 - Vocal Pedagogy ~~II~~ **Course Career** Undergraduate **Units** 3 **Approved Hours** ~~2-1L-0~~ **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Fine Arts **Typically Offered** either term **Description** ~~Comprehensive study of the voice and how it functions, survey of current methods, and supervised practical instruction.~~ Prerequisite: Applied music in voice at the 200 level~~, or consent of the instructor~~.	**AUMUS 339 - Vocal Pedagogy** **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Fine Arts **Typically Offered** either term **Description** A study of vocal pedagogy, from adolescence to adult maturity, including a survey of current pedagogical methods, and supervised practical instruction. Prerequisite: Applied music in voice at the 200 level: AUMUS 239: or consent of the department.

Course Template

Current	Proposed
AUMUS 351 - Music Education II **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Fine Arts **Typically Offered** either term **Description** A course in the theory and practice of teaching as applied to middle and high school music programs. Special emphasis on ~~general, choral and ensemble, classroom observation and practical experience with the use of age-appropriate techniques, strategies and materials.~~ Prerequisite: AUMUS 250 or consent of the ~~instructor~~.	**AUMUS 350 - Music Education II** **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Fine Arts **Typically Offered** either term **Description** A course in the theory and practice of teaching as applied to primary, middle and high school music programs. Special emphasis on pedagogical techniques, strategies, and materials as well as classroom observation and practical experience. Prerequisite: AUMUS 250 or consent of the department. Note: Credit may be obtained for only one of AUMUS 350 and AUMUS 351 (2023).

Course Template

Current	Proposed
New	**AUMUS 360 - Theoretical and Analytical Studies III** **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Fine Arts **Typically Offered** either term **Description** Advanced study of common-practice harmony, including third relation harmony; polychords, extended chromaticism, atonal analysis, integral serialism and short compositions using post-1945 techniques. Prerequisite: AUMUS 260 and 262. Note: Credit may be obtained for only one of AUMUS 360 and AUMUS 261 (2023).

Course Template

Current	Proposed
New	**AUMUS 362 - Aural, Sight Singing, and Keyboard Skills III** **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Fine Arts **Typically Offered** either term **Description** Development of listening and reading skills integral to the internalization of concepts covered in AUMUS 360. Prerequisites: AUMUS 260 and 262. Note: Credit may be obtained for only one of AUMUS 362 and AUMUS 263 (2023).

Course Template

Current	Proposed
AUMUS 397 - Applied Music **Course Career** Undergraduate **Units** 7 **Approved Hours** 0-2L-0 **Fee index** 17 **Faculty** Augustana Faculty **Department** AU Fine Arts **Typically Offered** two term **Description** Private lessons in instrument or voice and the presentation of a formal recital (minimum duration: 45 minutes) prepared under the guidance of the instructor and marked by a jury. Participation in group master classes is required. Prerequisite: Consent of the Department. Note: This course is restricted to majors in the Bachelor of Music program.	**AUMUS 397 - Applied Music** **Course Career** Undergraduate **Units** 6 **Approved Hours** 0-2-0 **Fee index** 15 **Faculty** Augustana Faculty **Department** AU Fine Arts **Typically Offered** two term **Description** Private lessons in instrument or voice; a one-hour weekly lesson in the fall and winter terms for a student exhibiting advanced abilities in music performance. Participation in group master classes is required. Prerequisite: Consent of the Department. Note: This course is restricted to majors in the Bachelor of Music program.

Reviewed/Approved by:

Augustana Faculty Council, December 2, 2022.
Augustana Fine Arts and Humanities Department: October 14, 2022 Augustana Curriculum Committee: November 22, 2022

Calendar Change Request Form
for Program and Regulation Changes
See the [Calendar Guide](#) for tips on how to complete this form.

UNIVERSITY OF ALBERTA

Faculty (& Department or Academic Unit):	Augustana
Contact Person:	Jonathan Hawkins (jh12@ualberta.ca)
Level of change: (choose one only)	☑ Undergraduate
	☐ Graduate
Type of change request: (check all that apply)	☑ Program
	☐ Regulation
For which term is this intended to take effect?	Fall 2023
Does this proposal have corresponding course changes? (Should be submitted at the same time)	Yes

Rationale

Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

The changes outlined below are presented for the following reasons:

1 – Keyboard Skills Proficiency Examinations (KPSE) is no longer needed or used. Our program revisions of 2019-2020 have spread the teaching and testing of these skills across a number of courses. This deletion is therefore a follow-up to our program revision of 2019-2020.

2 – The following course number changes streamline the nomenclature we use for our courses, which may in turn help advising and administration of the various components of our program: AUMUS 261 becomes AUMUS 360; AUMUS 263 becomes AUMUS 362; AUMUS 351 becomes AUMUS 350. In this way our Theoretical and Analytical courses are now all AUMUS X60; Aural, Sight Singing courses are AUMUS X62; and Music Education becomes AUMUS 250 and 350.

3 – The renaming of AUMUS 239 and AUMUS 339, and the deletion of AUMUS 252 clean-up and complete the changes initiated with our program revision in 2019-2020. These changes have no impact on the courses we offer our students or on our programs. Currently students are required to take AUMUS 252 and then AUMUS 239 – an illogical sequence - while AUMUS 339 is not required or offered. By reassigning the numbers to AUMUS 239 and AUMUS 339, we continue to offer two vocal pedagogy courses, and it is now easier for students, administrators and advisors to understand the sequential nature of these classes.

4 – The change to our language requirements for vocal students is needed to reflect the current paucity of language options available at Augustana.

Calendar Copy

URL in current Calendar (or "New page")
https://calendar.ualberta.ca/preview_program.php?catoid=36&poid=42880&returnto=11333

Current Copy: ~~Removed language~~	**Proposed Copy:** New language

Bachelor of Music [Augustana]

Overview
The Bachelor of Music program consists of 122 units in Performance-Based Pedagogy major, including 61 units of core music requirements, 31 units in a Comprehensive, Conducting, Keyboard, or Voice stream of study, and 30 units of non-music requirements.

Residence Requirement
Students registered in a BMus program must complete at least 60 units offered by the Augustana Faculty, at least 54 of which must be at the senior level. However,

1. Language or other study abroad may, with special permission of the Associate Dean, Academics, count toward the residence requirement
2. An exception to this may be granted to students already holding a BA or BSc who can transfer sufficient credits from their first degree to be able to complete the requirements of the Bachelor of Music degree in fewer than 60 units. Normally in such cases at least the final 45 units must be completed at Augustana.

General Information
The Bachelor of Music, Performance-Based Pedagogy major, provides study and performance concentrations in voice, keyboard, conducting and comprehensive streams, with broad possibilities for exploration in performance, music education, music therapy, arts administration and musicology. The wide-ranging curriculum, with extensive performance and pedagogical opportunities, equips students for successful careers as performing artists or as teachers of studio, classroom or choral.

[Effective October 2020, there will be no further admission to the Bachelor of Music Comprehensive, Piano or Voice majors. Students who entered the Bachelor of Music program prior to October 2020 must complete all program requirements by April 30, 2025. The last degree with these specific majors will be granted at Spring Convocation 2025.

Bachelor of Music [Augustana]

Overview
The Bachelor of Music program consists of 122 units in Performance-Based Pedagogy major, including 61 units of core music requirements, 31 units in a Comprehensive, Conducting, Keyboard, or Voice stream of study, and 30 units of non-music requirements.

Residence Requirement
Students registered in a BMus program must complete at least 60 units offered by the Augustana Faculty, at least 54 of which must be at the senior level. However,

3. Language or other study abroad may, with special permission of the Associate Dean, Academics, count toward the residence requirement
4. An exception to this may be granted to students already holding a BA or BSc who can transfer sufficient credits from their first degree to be able to complete the requirements of the Bachelor of Music degree in fewer than 60 units. Normally in such cases at least the final 45 units must be completed at Augustana.

General Information
The Bachelor of Music, Performance-Based Pedagogy major, provides study and performance concentrations in voice, keyboard, conducting and comprehensive streams, with broad possibilities for exploration in performance, music education, music therapy, arts administration and musicology. The wide-ranging curriculum, with extensive performance and pedagogical opportunities, equips students for successful careers as performing artists or as teachers of studio, classroom or choral.

[Effective October 2020, there will be no further admission to the Bachelor of Music Comprehensive, Piano or Voice majors. Students who entered the Bachelor of Music program prior to October 2020 must complete all program requirements by April 30, 2025. The last degree with these specific majors will be granted at Spring Convocation 2025.

Continuing students must refer to the Calendar under which they were admitted for program, promotion and graduation requirements.]

Admission Requirements

See Augustana Faculty. Each student who wishes to be exempt from taking AUMUS 100 must complete the Music Theory Placement Exam (MTPE); a student who scores lower than 70% must register in AUMUS 100. All successful applicants will complete a general first year within the Comprehensive stream, and a further audition to specific BMus streams (Comprehensive, Conducting, Keyboard, and Voice) will take place at the end of the first year of BMus study. For further information about entrance into the Music program, contact the Department of Fine Arts and Humanities, Augustana Faculty.

Program Requirements

The minimum of 122 units required during the program is drawn from three areas: Core Music Requirements, Additional Music Requirements according to stream of study, and Non-Music Requirements.

Core Music Requirements (61 units):

A common core of music courses and requirements is required of every student enrolled in the Bachelor of Music program.

- ~~Passing grade in the Keyboard Skills Proficiency Examination (KSPE).~~
- Successful completion of the Recital Attendance Requirement Events (RARE). For every year in a Music program at Augustana, a student must attend a minimum of 10 RARE-designated events per year. Failure to achieve this minimum in a given year will require withdrawal from any Music program (BMus or BA). A minimum of 40 recitals or concerts is required for graduation, unless transferring in from another institution or program.
- A student who fails to achieve at least a C+ standing in their primary instrument of study at the end of an academic year will be required to withdraw from the Bachelor of Music program. Each student's progress will be

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Continuing students must refer to the Calendar under which they were admitted for program, promotion and graduation requirements.]

Admission Requirements

See Augustana Faculty. Each student who wishes to be exempt from taking AUMUS 100 must complete the Music Theory Placement Exam (MTPE); a student who scores lower than 70% must register in AUMUS 100. All successful applicants will complete a general first year within the Comprehensive stream, and a further audition to specific BMus streams (Comprehensive, Conducting, Keyboard, and Voice) will take place at the end of the first year of BMus study. For further information about entrance into the Music program, contact the Department of Fine Arts and Humanities, Augustana Faculty.

Program Requirements

The minimum of 122 units required during the program is drawn from three areas: Core Music Requirements, Additional Music Requirements according to stream of study, and Non-Music Requirements.

Core Music Requirements (61 units):

A common core of music courses and requirements is required of every student enrolled in the Bachelor of Music program.

- Successful completion of the Recital Attendance Requirement Events (RARE). For every year in a Music program at Augustana, a student must attend a minimum of 10 RARE-designated events per year. Failure to achieve this minimum in a given year will require withdrawal from any Music program (BMus or BA). A minimum of 40 recitals or concerts is required for graduation, unless transferring in from another institution or program.
- A student who fails to achieve at least a C+ standing in their primary instrument of study at the end of an academic year will be required to withdraw from the Bachelor of Music program. Each student's progress will be reviewed annually. Such students may transfer to another program in Augustana

reviewed annually. Such students may transfer to another program in Augustana Faculty or in another Faculty if the entrance and promotion requirements for such a program are met. After transfer, all requirements for the new program must be met.
- A student beyond first year who fails to achieve an academic average of at least 2.3 will be required to withdraw from the Bachelor of Music program. Such students may transfer to another program in Augustana Faculty or in another Faculty if the entrance and promotion requirements for such a program are met. After transfer, all requirements for the new program must be met. Each student's progress will be reviewed annually.

Music Performance (25 units)
- 16 units in Applied Music: to be completed in an approved major instrument of study. Note: Consult Department of Fine Arts and Humanities for details.
- 9 units Choral and/or Instrumental Ensembles.

Music History and Literature, Music in Society (12 units):
- AUMUS 170 - Tuning In: An Introduction to Music
- AUMUS 224 - Music from the Ancient to Baroque Eras
- AUMUS 225 - Music from the Classical Era to the Present Day
- AUMUS 369 - Popular Music: Analysis, Interpretation, Meaning

Theoretical and Analytical Studies, Musicianship Skills (21 units)
- AUMUS 160 - Theoretical and Analytical Studies I
- AUMUS 162 - Aural, Sight Singing, and Keyboard Skills I
- AUMUS 235 - Introduction to Conducting
- AUMUS 260 - Theoretical and Analytical Studies II
- AUMUS 261 - Theoretical and Analytical Studies III

Faculty or in another Faculty if the entrance and promotion requirements for such a program are met. After transfer, all requirements for the new program must be met.
- A student beyond first year who fails to achieve an academic average of at least 2.3 will be required to withdraw from the Bachelor of Music program. Such students may transfer to another program in Augustana Faculty or in another Faculty if the entrance and promotion requirements for such a program are met. After transfer, all requirements for the new program must be met. Each student's progress will be reviewed annually.

Music Performance (25 units)
- 16 units in Applied Music: to be completed in an approved major instrument of study. Note: Consult the Department of Fine Arts and Humanities for details.
- 9 units Choral and/or Instrumental Ensembles.

Music History and Literature, Music in Society (12 units):
- AUMUS 170 - Tuning In: An Introduction to Music
- AUMUS 224 - Music from the Ancient to Baroque Eras
- AUMUS 225 - Music from the Classical Era to the Present Day
- AUMUS 369 - Popular Music: Analysis, Interpretation, Meaning

Theoretical and Analytical Studies, Musicianship Skills (21 units)
- AUMUS 160 - Theoretical and Analytical Studies I
- AUMUS 162 - Aural, Sight Singing, and Keyboard Skills I
- AUMUS 235 - Introduction to Conducting
- AUMUS 260 - Theoretical and Analytical Studies II
- AUMUS 262 - Aural, Sight Singing and Keyboard Skills II

- AUMUS 262 - Aural, Sight Singing and Keyboard Skills II
- ~~AUMUS 263 - Aural, Sight Singing, and Keyboard Skills III~~

Music Education (3 units):
- AUMUS 250 - Introduction to Music Education

Additional Music Requirements According to Major (31 units):
In addition to the Core Music Requirements listed above, additional courses are required in each stream. Students in the Keyboard and Voice streams have the option of completing a public recital in their 4th year of study:

Comprehensive Stream:
- AUMUS 236 - Introduction to Choral Techniques, Literature, and Interpretation

- AUMUS 238 - Piano Pedagogy I **OR**
- ~~AUMUS 239 - Vocal Pedagogy I~~

- ~~AUMUS 252 - The Child Voice~~
- AUMUS ~~351~~ - Music Education II
- AUMUS 356 - Music and Wellness
- 4 units: Additional applied credits. Note: Consult Department of Fine Arts and Humanities for details.
- 12 units: Music options.

Conducting Stream:
- AUMUS 231 - Lyric Diction
- AUMUS 236 - Introduction to Choral Techniques, Literature, and Interpretation
- AUMUS 239 - ~~Vocal Pedagogy I~~
- ~~AUMUS 252 - The Child Voice~~
- AUMUS ~~351~~ - Music Education II
- AUMUS 356 - Music and Wellness
- 4 units: Additional secondary-instrument applied (Piano or Voice). Note: Consult Department of Fine Arts and Humanities for details.
- 3 units: Additional ensemble
- 6 units: Music options

Keyboard Stream:
- AUMUS 238 - Piano Pedagogy I

- AUMUS 360 - Theoretical and Analytical Studies III
- AUMUS 362 - Aural, Sight Singing, and Keyboard Skills III

Music Education (3 units):
- AUMUS 250 - Introduction to Music Education

Additional Music Requirements According to Major (31 units):
In addition to the Core Music Requirements listed above, additional courses are required in each stream. Students in the Keyboard and Voice streams have the option of completing a public recital in their 4th year of study:

Comprehensive Stream:
- AUMUS 236 - Introduction to Choral Techniques, Literature, and Interpretation

- AUMUS 238 - Piano Pedagogy I **OR** AUMUS 339 - Vocal Pedagogy

- AUMUS 239 - The Child Voice
- AUMUS 350 - Music Education II
- AUMUS 356 - Music and Wellness
- 4 units: Additional applied credits. Note: Consult Department of Fine Arts and Humanities for details.
- 12 units: Music options.

Conducting Stream:
- AUMUS 231 - Lyric Diction
- AUMUS 236 - Introduction to Choral Techniques, Literature, and Interpretation
- AUMUS 239 - The Child Voice
- AUMUS 339 - Vocal Pedagogy
- AUMUS 350 - Music Education II
- AUMUS 356 - Music and Wellness
- 4 units: Additional secondary-instrument applied (Piano or Voice). Note: Consult Department of Fine Arts and Humanities for details.
- 3 units: Additional ensemble
- 6 units: Music options

Keyboard Stream:
- AUMUS 238 - Piano Pedagogy I

- AUMUS 329 - History of Piano Literature
- AUMUS 338 - Piano Pedagogy II
- AUMUS 347 - Chamber Ensemble
- AUMUS 351 - Music Education II
- 8 units: Additional applied credits in Piano
- 2 units: Additional applied credits in Voice. Note: Consult Department of Fine Arts and Humanities for details
- 6 units Music options.

Voice Stream:
- AUMUS 231 - Lyric Diction
- AUMUS 239 - Vocal Pedagogy I
- AUMUS 252 - The Child Voice
- AUMUS 327 - History of Vocal Literature
- AUMUS 330 - Music for the Theatre
- 8 units: Additional applied credits in Voice
- 2 units: Additional applied credits in Piano. Note: Consult Department of Fine Arts and Humanities for details
- 6 units: Music options.

Non-Music Requirements (30 units):
The Augustana Core: 18 units
The Augustana Core requirement is met by the completion of the following courses:

- AUIDS 101 - First Year Seminar
- AUIDS 201 - Collaborative Learning
- AUIDS 301 - Community Partnership Project
- AUIDS 401 - Advanced Integration Project

Note:
All students must complete AUIDS 101. Bachelor of Music students may be granted permission to opt out of the remainder of the Augustana Core in order to explore other pathways of study. Students interested in this route should consult the Department of Fine Arts and Humanities for details.

6 units from:
- AUENG 102 - Critical Reading, Critical Writing
- 3 units from non-Music 200-level or 300-level Creativity and Culture: Text and Theory courses

6 units from:
- Any second language. Note: A Voice stream student must include 3 units in German.

- AUMUS 329 - History of Piano Literature
- AUMUS 338 - Piano Pedagogy II
- AUMUS 347 - Chamber Ensemble
- AUMUS 350 - Music Education II
- 8 units: Additional applied credits in Piano
- 2 units: Additional applied credits in Voice. Note: Consult Department of Fine Arts and Humanities for details
- 6 units Music options.

Voice Stream:
- AUMUS 231 - Lyric Diction
- AUMUS 239 - The Child Voice
- AUMUS 339 - Vocal Pedagogy
- AUMUS 327 - History of Vocal Literature
- AUMUS 330 - Music for the Theatre
- 8 units: Additional applied credits in Voice
- 2 units: Additional applied credits in Piano. Note: Consult Department of Fine Arts and Humanities for details
- 6 units: Music options.

Non-Music Requirements (30 units):
The Augustana Core: 15 units
The Augustana Core requirement is met by the completion of the following courses:

- AUIDS 101 - First Year Seminar
- AUIDS 201 - Collaborative Learning
- AUIDS 301 - Community Partnership Project
- AUIDS 401 - Advanced Integration Project

Note:
All students must complete AUIDS 101. Bachelor of Music students may be granted permission to opt out of the remainder of the Augustana Core in order to explore other pathways of study. Students interested in this route should consult the Department of Fine Arts and Humanities for details.

9 units from:
- AUENG 102 - Critical Reading, Critical Writing
- 6 units from non-Music 200-level or 300-level Creativity and Culture: Text and Theory courses

6 units from:
- Any Modern Languages language other than English offerings. Note: A Voice stream student must consult the Department of Fine

	<mark>Arts and Humanities to confirm language choice(s).</mark>

Reviewed/Approved by:

Augustana Faculty Council,
Augustana Department of Fine Arts and Humanities, October 14, 2022. Augustana Curriculum Committee, November 22 & 24, 2022

Calendar Change Request Form
for Program and Regulation Changes
See the Calendar Guide for tips on how to complete this form.

UNIVERSITY OF ALBERTA

Faculty (& Department or Academic Unit):	Augustana Faculty	
Contact Person:	Jonathan Hawkins jh12@ualberta.ca	
Level of change: (choose one only)	☑ Undergraduate	
	☐ Graduate	
Type of change request: (check all that apply)	☑ Program	
	☐ Regulation	
For which term is this intended to take effect?	Fall 2023	
Does this proposal have corresponding course changes? (Should be submitted at the same time)	No (results from a course change already approved)	

Rationale
Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

On March 4, 2022, Augustana Faculty approved a course change for AUIDS 401, reducing it from being offered as a 6 unit course to being offered for 3 units. The proposed changes to the Core: Foundation section of these three Augustana degree programs - Bachelor of Arts, Bachelor of Management, and Bachelor of Science - reflects this decrease in overall units of the Augustana Core: Foundation by 3 units.

Calendar Copy

URL in current Calendar (or "New page") https://calendar.ualberta.ca/preview_program.php?catoid=36&poid=42718&returnto=11333	
Current Copy: Removed language	**Proposed Copy:** New language
Bachelor of Arts [Augustana] **Overview** The Bachelor of Arts degree consists of 120 units in arts and science, including at least 55 units in arts (see Classification of Courses). The 120 units in the program are made up of the Foundation and Knowledge components of the Augustana Core, a major subject, an optional minor, and options, as follows: **The Augustana Core: Foundation 18 units** The Augustana Foundation requirement is met by the completion of the following courses:	**Bachelor of Arts [Augustana]** **Overview** The Bachelor of Arts degree consists of 120 units in arts and science, including at least 55 units in arts (see Classification of Courses). The 120 units in the program are made up of the Foundation and Knowledge components of the Augustana Core, a major subject, an optional minor, and options, as follows: **The Augustana Core: Foundation 15 units** The Augustana Foundation requirement is met by the completion of the following courses:

- AUIDS 101 - First Year Seminar
- AUIDS 201 - Collaborative Learning
- AUIDS 301 - Community Partnership Project
- AUIDS 401 - Advanced Integration Project

[...no further changes…]

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- AUIDS 101 - First Year Seminar
- AUIDS 201 - Collaborative Learning
- AUIDS 301 - Community Partnership Project
- AUIDS 401 - Advanced Integration Project

[...no further changes…]

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Calendar Copy

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https://calendar.ualberta.ca/preview_program.php?catoid=36&poid=42719&returnto=11333

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Bachelor of Management [Augustana] **Overview** The four year Bachelor of Management (BMgt) degree consists of 120 units in arts, science and professional (see Classification of Courses) including up to 72 units in the Management program and the credits required for the Foundation and Knowledge components of the Augustana Core. Because of the possibility of overlap between the credits required for portions of the Augustana Core and those required for the Management program, a student may also include options or an optional minor as follows: **Management Program:** See below for details on the Management Foundation, Economics Foundation, Stream, and Supporting course requirements of the Management program. **The Augustana Core: Foundation 18 units** The Augustana Foundation requirement is met by the completion of the following courses: • AUIDS 101 - First Year Seminar • AUIDS 201 - Collaborative Learning • AUIDS 301 - Community Partnership Project • AUIDS 401 - Advanced Integration Project [...no further changes…]	**Bachelor of Management [Augustana]** **Overview** The four year Bachelor of Management (BMgt) degree consists of 120 units in arts, science and professional (see Classification of Courses) including up to 72 units in the Management program and the credits required for the Foundation and Knowledge components of the Augustana Core. Because of the possibility of overlap between the credits required for portions of the Augustana Core and those required for the Management program, a student may also include options or an optional minor as follows: **Management Program:** See below for details on the Management Foundation, Economics Foundation, Stream, and Supporting course requirements of the Management program. **The Augustana Core: Foundation 15 units** The Augustana Foundation requirement is met by the completion of the following courses: • AUIDS 101 - First Year Seminar • AUIDS 201 - Collaborative Learning • AUIDS 301 - Community Partnership Project • AUIDS 401 - Advanced Integration Project [...no further changes…]

Calendar Copy

| URL in current Calendar (or "New page")
https://calendar.ualberta.ca/preview_program.php?catoid=36&poid=42720&returnto=11333 |

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Bachelor of Science [Augustana] **Overview** The Bachelor of Science degree consists of 120 units in arts and science, including at least 66 units in science (see Classification of Courses). The 120 units in the program are made up of the Foundation and Knowledge components of the Augustana Core, a major subject, an optional minor, and options, as follows: **The Augustana Core: Foundation 18 units** The Augustana Foundation requirement is met by the completion of the following courses: ● AUIDS 101 - First Year Seminar ● AUIDS 201 - Collaborative Learning ● AUIDS 301 - Community Partnership Project ● AUIDS 401 - Advanced Integration Project [...no further changes…]	**Bachelor of Science [Augustana]** **Overview** The Bachelor of Science degree consists of 120 units in arts and science, including at least 66 units in science (see Classification of Courses). The 120 units in the program are made up of the Foundation and Knowledge components of the Augustana Core, a major subject, an optional minor, and options, as follows: **The Augustana Core: Foundation 15 units** The Augustana Foundation requirement is met by the completion of the following courses: ● AUIDS 101 - First Year Seminar ● AUIDS 201 - Collaborative Learning ● AUIDS 301 - Community Partnership Project ● AUIDS 401 - Advanced Integration Project [...no further changes…]

Reviewed/Approved by:

| Augustana Faculty Council, March 4, 2022 |
| |

Calendar Change Request Form
for Program and Regulation Changes
See the Calendar Guide for tips on how to complete this form.

UNIVERSITY OF ALBERTA

Faculty (& Department or Academic Unit):	Augustana Faculty
Contact Person:	Jonathan Hawkins jh12@ualberta.ca
Level of change: (choose one only)	☑ Undergraduate
	☐ Graduate
Type of change request: (check all that apply)	☑ Program
	☐ Regulation
For which term is this intended to take effect?	Fall 2023
Does this proposal have corresponding course changes? (Should be submitted at the same time)	Yes

Rationale

Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

The changes expand the choice of offerings in the 200-level and 300-level Text and Theory categories, remove a restriction in the Music Specialization, and update a course change from the Augustana Department of Science.

Calendar Copy

URL in current Calendar (or "New page")
https://calendar.ualberta.ca/preview_program.php?catoid=36&poid=42718&returnto=11333

Current Copy: Removed language	**Proposed Copy:** New language
Creativity and Culture Program Requirements [Augustana]	**Creativity and Culture Program Requirements [Augustana]**
Creativity and Culture combines the study of Text and Theory, Creative Practice, and Language and requires a minimum of 63 units to complete; students who choose to pursue a specialization in Visual Art, Drama, or Music will require 75 units.	Creativity and Culture combines the study of Text and Theory, Creative Practice, and Language and requires a minimum of 63 units to complete; students who choose to pursue a specialization in Visual Art, Drama, or Music will require 75 units.
Text and Theory elements are drawn from courses in Art History, Classical Studies, English, Music History, Philosophy, Religion, and French, German, and Scandinavian Literature.	Text and Theory elements are drawn from courses in Art History, Classical Studies, English, Music History, Philosophy, Religion, and French, German, and Scandinavian Literature.
Creative Practice elements include courses in Studio Art, Creative Writing, Drama, and Music.	Creative Practice elements include courses in Studio Art, Creative Writing, Drama, and Music.

The Language element will typically be satisfied by French, German, Latin, or Norwegian language courses at the appropriate level for a student

Requirements
3 units at the 100-level in Text and Theory from:
- AUENG 102 - Critical Reading, Critical Writing
- AUSCA 142 - Viking Age Mythology

3 units at the 100-level in Text and Theory from:
- AUART 100 - Introduction to Art History and Visual Culture
- AUMUS 170 - Tuning In: An Introduction to Music

6 units at the 100-level in Creative Practice from:
- AUART 111 - Making Art: First Steps
- AUDRA 144 - Introduction to the Dramatic Process
- AUMUS 100 - Introduction to Music Theory **OR**
- AUMUS 160 - Theoretical and Analytical Studies I

Note:
Students may only use one of AUMUS 100 or 160 to fulfill this requirement. Students intending to complete the Music Specialization must complete AUMUS 160.

6 units in a Language other than English from:
- AUFRE 101 - Beginners' French I
- AUFRE 102 - Beginners' French II
- AUFRE 201 - Intermediate French I
- AUFRE 202 - Intermediate French II
- AUGER 101 - Beginners' German I
- AUGER 102 - Beginners' German II
- AUGER 201 - Intermediate German I
- AUGER 202 - Intermediate German II
- AULAT 101 - Beginners' Latin I
- AUSCA 101 - Beginners' Norwegian I
- AUSCA 102 - Beginners' Norwegian II
- AUSCA 201 - Intermediate Norwegian I

- AUSCA 202 - Intermediate Norwegian II
- AUSPA 101 - Beginners' Spanish I
- AUSPA 102 - Beginners' Spanish II
- AUSPA 201 - Intermediate Spanish I
- AUSPA 202 - Intermediate Spanish II

Note:
Language courses completed through study abroad programs or in an approved French immersion program in Canada also count towards this requirement.

12 units at the 200-level in Text and Theory from:
- AUART 220 - Modern Life, Modern Art
- AUART 223 - Canadian Art
- AUART 224 - Art and Its Histories
- AUART 225 - Photography: History and Theory
- AUART 260 - Selected Topics in Art History
- AUART 261 - Selected Topics in Art History
- AUART 262 - Selected Topics in Art History
- AUART 265 - Selected Topics in Art History Tour
- AUART 281 - Sex, Gender and Art
- AUART 289 - Studies in Visual Culture
- AUDRA 201 - History and Critical Analysis of Theatre
- AUENG 205 - Children's Literature
- AUENG 206 - Native Children's Literature
- AUENG 213 - The English Language
- AUENG 220 - Classical Foundations of Western Literature
- AUENG 221 - Chaucer and Premodern Society
- AUENG 225 - The World of the Middle Ages
- AUENG 230 - The Early English Renaissance
- AUENG 231 - The Later English Renaissance
- AUENG 233 - Shakespeare
- AUENG 240 - Restoration and Eighteenth Century Literature and Culture
- AUENG 270 - America, Exceptionalism and Empire
- AUENG 271 - American Law, Literature and Justice
- AUENG 280 - Canadian Literature to 1950
- AUENG 281 - Canadian Literature since 1950
- AUENG 298 - Selected Topics in English Studies

- AUSCA 202 - Intermediate Norwegian II
- AUSPA 101 - Beginners' Spanish I
- AUSPA 102 - Beginners' Spanish II
- AUSPA 201 - Intermediate Spanish I
- AUSPA 202 - Intermediate Spanish II

Note:
Language courses completed through study abroad programs or in an approved French immersion program in Canada also count towards this requirement.

12 units at the 200-level in Text and Theory from:
- AUART 220 - Modern Life, Modern Art
- AUART 223 - Canadian Art
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- AUDRA 201 - History and Critical Analysis of Theatre
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- AUENG 230 - The Early English Renaissance
- AUENG 231 - The Later English Renaissance
- AUENG 233 - Shakespeare
- AUENG 240 - Restoration and Eighteenth Century Literature and Culture
- AUENG 260 - Literary Animal Studies
- AUENG 270 - America, Exceptionalism and Empire
- AUENG 271 - American Law, Literature and Justice
- AUENG 280 - Canadian Literature to 1950
- AUENG 281 - Canadian Literature since 1950

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- AUENG 299 - Selected Topics in English Studies
- AUHIS 207 - History of the Roman Republic
- AUHIS 208 - History of the Roman Empire
- AUHUM 276 - Introduction to Visual Culture Studies
- AUGER 291 - German Drama in Translation
- AUIND 240 - Introduction to Indigenous Cultural Production
- AUMUS 224 - Music from the Ancient to Baroque Eras
- AUMUS 225 - Music from the Classical Era to the Present Day
- AUMUS 226 - Music and the Moving Image
- AUMUS 252 - The Child Voice
- AUPHI 200 - Metaphysics: Theories of Reality
- AUPHI 240 - Ancient Political Philosophy
- AUPHI 241 - Modern Political Philosophy
- AUPHI 250 - History of Christian Thought
- AUPHI 277 - Women, Darkness and Crooked Things: Feminist Philosophy
- AUPHI 290 - Philosophy of Contemporary Culture
- AUREL 202 - Women's Writing and Feminist Theology
- AUREL 208 - Jesus of Nazareth in Contemporary Theology
- AUREL 212 - Introduction to the Hebrew Bible (Old Testament)
- AUREL 216 - The Hebrew Prophets
- AUREL 250 - Theories of Religion
- AUREL 282 - Major Religious Traditions: Middle East
- AUREL 290 - Selected Topics in Religion
- AUREL 291 - Selected Topics in Religion
- AUSCA 231 - Scandinavian Culture and Civilization
- AUSCA 237 - Selected Topics in Scandinavian Literature
- AUSCA 261 - Scandinavian Folk Literature
- AUSCA 271 - Personal Narratives of the North

6 units at the 200-level in Creative Practice from:
- AUART 215 - Sculpture I

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- AUENG 298 - Selected Topics in English Studies
- AUENG 299 - Selected Topics in English Studies
- AUHIS 207 - History of the Roman Republic
- AUHIS 208 - History of the Roman Empire
- AUHUM 276 - Introduction to Visual Culture Studies
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6 units at the 200-level in Creative Practice from:
- AUART 215 - Sculpture I

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- AUART 230 - Special Topics in Drawing
- AUART 231 - Drawing I: A Basic Toolkit
- AUART 232 - Drawing II: The Figure
- AUART 270 - Special Topics in Painting
- AUART 271 - Painting I: A Basic Toolkit (Oil)
- AUART 272 - Painting II: Concepts and Approaches
- AUART 298 - Selected Topics in Art Studio
- AUDRA 209 - Script Analysis and Production Preparation
- AUDRA 230 - Acting Techniques I
- AUDRA 233 - Clown and Mask
- AUDRA 238 - Theatre Company
- AUDRA 239 - Theatre Company
- AUDRA 244 - Improvisation II: Workshop and Performance
- AUDRA 250 - Applied Improvisation
- AUDRA 260 - Dramaturgy and Play Analysis
- AUENG 214 - Advanced Creative Writing: Poetry
- AUENG 215 - Creative Writing
- AUMUS 260 - Theoretical and Analytical Studies II
- AUMUS 262 - Aural, Sight Singing and Keyboard Skills II
- Any 200-level AUMUS ensemble courses
- Any 200-level AUMUS applied music courses

6 units in Social Sciences from:
- Any 100-level, 200-level, or 300-level courses in AUHIS, AUPOL, or AUSOC including 3 units from the following:
  - AUIND 101 - Introduction to Indigenous Studies
  - AUIDS 230 - Introduction to Gender and Women's Studies
  - AULAN 101 - Introduction to Linguistic Analysis
  - AUSOC 262 - Mass Communication and Contemporary Society
  - AUSOC 372 - Visual Sociology

6 units in Science:
Any Augustana Science course may count towards this requirement. The following courses are recommended:

- AUART 230 - Special Topics in Drawing
- AUART 231 - Drawing I: A Basic Toolkit
- AUART 232 - Drawing II: The Figure
- AUART 270 - Special Topics in Painting
- AUART 271 - Painting I: A Basic Toolkit (Oil)
- AUART 272 - Painting II: Concepts and Approaches
- AUART 298 - Selected Topics in Art Studio
- AUDRA 209 - Script Analysis and Production Preparation
- AUDRA 230 - Acting Techniques I
- AUDRA 233 - Clown and Mask
- AUDRA 238 - Theatre Company
- AUDRA 239 - Theatre Company
- AUDRA 244 - Improvisation II: Workshop and Performance
- AUDRA 250 - Applied Improvisation
- AUDRA 260 - Dramaturgy and Play Analysis
- AUENG 214 - Advanced Creative Writing: Poetry
- AUENG 215 - Creative Writing
- AUMUS 260 - Theoretical and Analytical Studies II
- AUMUS 262 - Aural, Sight Singing and Keyboard Skills II
- Any 200-level AUMUS ensemble courses
- Any 200-level AUMUS applied music courses

6 units in Social Sciences from:
- Any 100-level, 200-level, or 300-level courses in AUHIS, AUPOL, or AUSOC including 3 units from the following:
  - AUIND 101 - Introduction to Indigenous Studies
  - AUIDS 230 - Introduction to Gender and Women's Studies
  - AULAN 101 - Introduction to Linguistic Analysis
  - AUSOC 262 - Mass Communication and Contemporary Society
  - AUSOC 372 - Visual Sociology

6 units in Science:
Any Augustana Science course may count towards this requirement. The following courses are recommended:

- AUCSC ~~113   Foundational~~ Introduction to Computational Thinking and Problem Solving
- AUCSC 204 - Computing Technology in Modern Society
- AUIDS 137 - Science Laboratory Experiences

9 units at the 300-level in Text and Theory from:
- AUART 380 - Directed Reading in Art History
- AUART 381 - Selected Topics in Art History and Visual Culture
- AUART 382 - Selected Topics in Art History and Visual Culture
- AUENG 306 - Indigenous Children's Literature & Theory
- AUENG 313 - The English Language
- AUENG 330 - The Early English Renaissance
- AUENG 331 - The Later English Renaissance
- AUENG 333 - Shakespeare
- AUENG 368 - Ecofeminist Theory & Women's Writing
- AUENG 380 - Canadian Literature to 1950
- AUENG 381 - Canadian Literature since 1950
- AUENG 382 - Postcolonial Literature and Theory
- AUENG 392 - Feminist Theory and Women's Writing
- AUENG 398 - Selected Topics in English Studies
- AUENG 399 - Selected Topics in English Studies
- AUFRE 305 - Aspects of Civilization and Culture of France I
- AUFRE 337 - Selected Topics in French Literature
- AUFRE 339 - Selected Topics in French Literature
- AUGER 335 - Selected Topics in German Language
- AUGER 337 - Selected Topics in German Literature
- AUMUS 356 - Music and Wellness
- AUMUS 369 - Popular Music: Analysis, Interpretation, Meaning
- AUPHI 336 - Nineteenth-Century Philosophy
- AUPHI 345 - Philosophy in Canada
- AUPHI 350 - Philosophy of Science
- AUPHI 351 - Thinking About Sex: Philosophy, Science, and the Construction of Sex

- AUCSC 111 - Introduction to Computational Thinking and Problem Solving
- AUCSC 204 - Computing Technology in Modern Society
- AUIDS 137 - Science Laboratory Experiences

9 units at the 300-level in Text and Theory from:
- AUART 380 - Directed Reading in Art History
- AUART 381 - Selected Topics in Art History and Visual Culture
- AUART 382 - Selected Topics in Art History and Visual Culture
- AUENG 306 - Indigenous Children's Literature & Theory
- AUENG 313 - The English Language
- AUENG 330 - The Early English Renaissance
- AUENG 331 - The Later English Renaissance
- AUENG 333 - Shakespeare
- AUENG 368 - Ecofeminist Theory & Women's Writing
- AUENG 380 - Canadian Literature to 1950
- AUENG 381 - Canadian Literature since 1950
- AUENG 382 - Postcolonial Literature and Theory
- AUENG 392 - Feminist Theory and Women's Writing
- AUENG 398 - Selected Topics in English Studies
- AUENG 399 - Selected Topics in English Studies
- AUFRE 305 - Aspects of Civilization and Culture of France I
- AUFRE 337 - Selected Topics in French Literature
- AUFRE 339 - Selected Topics in French Literature
- AUGER 335 - Selected Topics in German Language
- AUGER 337 - Selected Topics in German Literature
- AUHIS 300 - Topics in European History
- AUMUS 356 - Music and Wellness
- AUMUS 369 - Popular Music: Analysis, Interpretation, Meaning
- AUPHI 336 - Nineteenth-Century Philosophy
- AUPHI 345 - Philosophy in Canada
- AUPHI 350 - Philosophy of Science

- AUPHI 355 - Philosophy and the Environment
- AUPHI 358 - Philosophy of Religion II
- AUPHI 365 - Aesthetics
- AUPHI 390 - Indigenous Thought: First Nations Thought and Knowledge
- AUPHI 392 - World Philosophy: Comparing Perspectives
- AUREL 302 - Women's Writing and Feminist Theology
- AUREL 325 - Sex and Gender in Ancient Religions
- AUREL 345 - Religion and Ecology
- AUREL 347 - Theology of Luther
- AUREL 365 - Storied Landscapes
- AUSCA 337 - Selected Topics in Scandinavian Literature

6 units at the 400-level in Text and Theory or Creative Practice from:
- AUART 421 - Selected Topics in Art History and Visual Culture
- AUART 480 - Directed Reading in Art History
- AUENG 401 - Directed Reading I
- AUENG 402 - Directed Reading II
- AUENG 441 - Selected Topics in English Studies
- AUENG 450 - Selected Topics in English Studies
- AUENG 460 - Selected Topics in English Studies
- AUFRE 403 - Directed Reading
- AUGER 403 - Directed Reading
- AUSCA 403 - Directed Reading
- AUSCA 405 - Directed Study: Area Studies
- AUSPA 403 - Directed Study: Literature

[Note that the following courses have specific prerequisites:]
- AUART 411 - Interdisciplinary Exploration: Studio
- AUART 490 - Directed Project in Visual Explorations
- AUDRA 401 - Directed Reading II
- AUDRA 409 - Script Analysis and Production Preparation
- AUDRA 420 - Performer-Created Theatre
- AUDRA 430 - Movement and Physical Theatre

- AUPHI 351 - Thinking About Sex: Philosophy, Science, and the Construction of Sex
- AUPHI 355 - Philosophy and the Environment
- AUPHI 358 - Philosophy of Religion II
- AUPHI 365 - Aesthetics
- AUPHI 390 - Indigenous Thought: First Nations Thought and Knowledge
- AUPHI 392 - World Philosophy: Comparing Perspectives
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- AUDRA 420 - Performer-Created Theatre
- AUDRA 430 - Movement and Physical Theatre

- AUDRA 437 - Senior Showcase
- AUDRA 438 - Theatre Company
- AUDRA 439 - Theatre Company
- AUDRA 444 - Story Theater
- AUENG 416 - Advanced Creative Writing: Fiction
- AUMUS 400-level course (any offering at the 400-level)

Specializations
Students in Creativity and Culture may choose to include a specialization in Visual Art, Drama, or Music. Each specialization requires an additional 12 units, along with prescribed courses that overlap with other requirements of the major.

Requirements for Visual Art Specialization
Overlapping courses
- 6 units of the 200- and 300-level Text and Theory courses must be in Art History
- AUART 100 - Introduction to Art History and Visual Culture
- AUART 111 - Making Art: First Steps
- AUART 231 - Drawing I: A Basic Toolkit
- AUART 232 - Drawing II: The Figure
- AUART 411 - Interdisciplinary Exploration: Studio

Additional courses
- AUART 271 - Painting I: A Basic Toolkit (Oil)
- AUART 272 - Painting II: Concepts and Approaches
- AUART 331 - Drawing III: Contemporary Ideas in Drawing
- AUART 371 - Painting III: Contemporary Ideas in Painting

Requirements for Drama Specialization
Overlapping courses
- AUDRA 144 - Introduction to the Dramatic Process
- AUDRA 230 - Acting Techniques I
- AUDRA 239 - Theatre Company
- 3 units at 400-level in AUDRA

Additional courses

- AUDRA 437 - Senior Showcase
- AUDRA 438 - Theatre Company
- AUDRA 439 - Theatre Company
- AUDRA 444 - Story Theater
- AUENG 416 - Advanced Creative Writing: Fiction
- AUMUS 400-level course (any offering at the 400-level)

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- AUART 272 - Painting II: Concepts and Approaches
- AUART 331 - Drawing III: Contemporary Ideas in Drawing
- AUART 371 - Painting III: Contemporary Ideas in Painting

Requirements for Creative Writing Specialization
Overlapping Courses
- AUENG 215 - Creative Writing
- AUENG 280 - Canadian Literature to 1950
- AUENG 281 - Canadian Literature since 1950
- AUENG 416 - Advanced Creative Writing: Fiction
- 3 units at the 200-level in Creative Practice from:

- 6 units additional at the 200-level in AUDRA courses
- AUDRA 350 - Introduction to Directing
- 3 units additional at the 300-level in AUDRA courses

Requirements for Creative Writing Specialization
Overlapping Courses
- AUENG 215 - Creative Writing
- AUENG 280 - Canadian Literature to 1950
- AUENG 281 - Canadian Literature since 1950
- AUENG 416 - Advanced Creative Writing: Fiction
- 3 units at the 200-level in Creative Practice from:
    - AUDRA 260 - Dramaturgy and Play Analysis
    - AUENG 214 - Advanced Creative Writing: Poetry
    - AUENG 218 - Creative Writing Memoir
Additional Courses
- 12 units additional at the 200- or 300-level in AUENG courses, including 6 units from:
    - AUENG 214 - Advanced Creative Writing: Poetry
    - AUENG 218 - Creative Writing Memoir
    - AUENG 318
    - AUDRA 260 - Dramaturgy and Play Analysis
    - AUDRA 384 - Playwriting

Requirements for Music Specialization
Overlapping courses
- 6 units at the 200-level in Creative Practice in Music
- AUMUS 160 - Theoretical and Analytical Studies I
- AUMUS 170 - Tuning In: An Introduction to Music
- 3 units at 400-level in AUMUS
- ~~6 units in Text and Theory from:~~
    - ~~AUMUS 224 - Music from the Ancient to Baroque Eras~~
    - ~~AUMUS 225 - Music from the Classical Era to the Present Day~~

- AUDRA 260 - Dramaturgy and Play Analysis
- AUENG 214 - Advanced Creative Writing: Poetry
- AUENG 218 - Creative Writing Memoir

Additional Courses
- 12 units additional at the 200- or 300-level in AUENG courses, including 6 units from:
    - AUENG 214 - Advanced Creative Writing: Poetry
    - AUENG 218 - Creative Writing Memoir
    - AUENG 318
    - AUDRA 260 - Dramaturgy and Play Analysis
    - AUDRA 384 - Playwriting

Requirements for Drama Specialization
Overlapping courses
- AUDRA 144 - Introduction to the Dramatic Process
- AUDRA 230 - Acting Techniques I
- AUDRA 239 - Theatre Company
- 3 units at 400-level in AUDRA
Additional courses
- 6 units additional at the 200-level in AUDRA courses
- AUDRA 350 - Introduction to Directing
- 3 units additional at the 300-level in AUDRA courses

Requirements for Music Specialization
Overlapping courses
- 6 units at the 200-level in Creative Practice in Music
- AUMUS 160 - Theoretical and Analytical Studies I
- AUMUS 170 - Tuning In: An Introduction to Music
- 3 units at 400-level in AUMUS
Additional courses
- AUMUS 162 - Aural, Sight Singing, and Keyboard Skills I
- AUMUS 260 - Theoretical and Analytical Studies II

- AUMUS 226 - Music and the Moving Image - AUMUS 227 - AUMUS 231 - Lyric Diction - AUMUS 235 - Introduction to Conducting - AUMUS 236 - Introduction to Choral Techniques, Literature, and Interpretation - AUMUS 239 - Vocal Pedagogy I - AUMUS 329 - History of Piano Literature - AUPHI 365 - Aesthetics **Additional courses** - AUMUS 162 - Aural, Sight Singing, and Keyboard Skills I - AUMUS 260 - Theoretical and Analytical Studies II - AUMUS 262 - Aural, Sight Singing and Keyboard Skills II 3 units additional at the 300-level in AUMUS	- AUMUS 262 - Aural, Sight Singing and Keyboard Skills II 3 units additional at the 300-level in AUMUS

Reviewed/Approved by:

Augustana Faculty Council, November 4, 2022.
Augustana Department of Fine Arts and Humanities, August 18, 2022. Augustana Curriculum Committee, October 27, 2022

UNIVERSITY OF ALBERTA

Calendar Change Request Form for Course Changes
See the Calendar Guide for tips on how to complete this form.

Faculty (& Department or Academic Unit):	Alberta School of Business	
Contact Person:	Dr. Michelle Inness	
Level of change (choose one only) [?]	●	Undergraduate X
	●	Graduate
For which term will this change take effect?	Fall, 2023	

Rationale

We would like to pilot this course as an option for current students next year, and as a core course the following year. This course will not only continue the 'community impact' focus of BUS 101, but will help students develop a sense of personal professionalism and responsibility in their approach to work and stakeholder interactions.

Course Template

Current	Proposed
Removed language	New language
Subject & Number	**Subject & Number BUS 222**
Title	**Title: Professionalism and responsible impact**
Course Career **Units** **Approved Hours** **Fee index** **Faculty** **Department** **Typically Offered**	**Course Career** Undergraduate **Units:** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Alberta School of Business **Department** Business **Typically Offered** either term
Description **N/A**	**Description** Prerequisite: BUS 101 (this prerequisite can be waived for transfer students) Professionalism shows up in how you interact with people and communities, and how you represent yourself and your organization. This course will delve into several aspects of professional skills including

	business communication, respectful interactions with communities, giving presentations, and presenting one's self as a job candidate. Teambuilding and collaboration will be honed through case-based work. Topics such as responsible and ethical decision making, equity, diversity and inclusivity (EDI) across different aspects of business, and aspects of Indigenous business will be introduced, amongst others.

Reviewed/Approved by:

Business Council Dec 19, 2022
USPC Dec 1, 2022

UNIVERSITY OF ALBERTA

Calendar Change Request Form for Course Changes

See the Calendar Guide for tips on how to complete this form.

Faculty (& Department or Academic Unit):	Alberta School of Business	
Contact Person:	Dr. Michelle Inness	
Level of change (choose one only) [?]	●	Undergraduate X
	●	Graduate
For which term will this change take effect?	Fall, 2023	

Rationale

This course will introduce some new topics and give students the opportunity to apply their business skills and their learnings from BUS 101, BUS 202 and other core courses to a variety of organizational contexts via case-based learning.

Course Template

Current	Proposed
Removed language	New language
Subject & Number	**Subject & Number** BUS 303
Title	**Title: Application of Business Concepts**
Course Career **Units** **Approved Hours** **Fee index** **Faculty** **Department** **Typically Offered**	**Course Career** Undergraduate **Units:** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Alberta School of Business **Department** Business **Typically Offered** either term
Description **N/A**	**Description** Prerequisite: BUS 222 This course will continue building upon the professional, interpersonal, and team-building skills practiced in earlier courses. Collaboration and problem-solving will continue to be honed through case-based work. Aligning your skills and knowledge with broader societal impact issues will be explored to

	==help you think about how business can solve problems.==

Reviewed/Approved by:

Business Council Dec 19, 2022
USPC Dec 1, 2022

Calendar Change Request Form for Course Changes

See the Calendar Guide for tips on how to complete this form.

Faculty (& Department or Academic Unit):	Alberta School of Business
Contact Person:	Dr. Michelle Inness
Level of change (choose one only) [?]	● Undergraduate X
	● Graduate
For which term will this change take effect?	Fall, 2024

Rationale

We would like to pilot this course as an option for students in 2024, and as a core course the following year.
This course will serve as a capstone course wherein students take on a term-long project that solves an organizational or community problem using their Business skills. This course will challenge students to focus on the impact they have on relevant stakeholders.

Course Template

Current	Proposed
Removed language	New language
Subject & Number	**Subject & Number BUS 404**
Title	**Title: Capstone Project**
Course Career **Units** **Approved Hours** **Fee index** **Faculty** **Department** **Typically Offered**	**Course Career** Undergraduate **Units:** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Alberta School of Business **Department** Business **Typically Offered** either term
Description **N/A**	**Description** Prerequisite: BUS 303 This will be a project-based course that will give our students the opportunity to apply knowledge from all areas of business understanding and skills to helping solve a problem faced by a business, organization, or

	community. Where possible real-world problems and challenges will be addressed.

Reviewed/Approved by:

Business Council: Dec 19, 2022
USPC Dec 1, 2022

Calendar Change Request Form
for Program and Regulation Changes
See the [Calendar Guide](#) for tips on how to complete this form.

UNIVERSITY OF ALBERTA

Faculty (& Department or Academic Unit):	Alberta School of Business
Contact Person:	Dr. Michelle Inness
Level of change: (choose one only)	• Undergraduate X
	• Graduate
Type of change request: (check all that apply)	• Program X
	• Regulation
For which term is this intended to take effect?	Fall 2023
Does this proposal have corresponding course changes? (Should be submitted at the same time)	Yes

Rationale

Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

We would like to develop a series of courses that would be required courses in the Bachelor of Commerce Program. This year, we piloted BUS 101 as an introductory course for all new students to Business. We would like to add a series of three other courses to be taken in each of the second, third, and fourth years of the BCom program, respectively. We see this as an opportunity to 1. Engage students in topics that have relevance to every Business student, regardless of major, including (but not limited to) EDI, Indigenous business content, Business Communications, Ethics, and professionalism. Where possible, we will endeavor to involve students in group projects, including those that involve stakeholder engagement as a way of providing experiences in problem solving and teamwork. 2. This is an opportunity to keep cohorts of students connected even after they move into their respective majors.

Calendar Copy

URL in current Calendar (or "New page") https://calendar.ualberta.ca/preview_program.php?catoid=36&poid=42745&returnto=11332

Current Copy: ~~Removed language~~	**Proposed Copy:** New language

Courses in the Faculty of Business

Courses in the Faculty of Business fall into six categories:

Foundational Requirements: INT D 101, ECON 101, ECON 102, MATH 154 or equivalent, STAT 161 or equivalent, 3 units in 100-level English (except ENGL 150) OR 3 units in 100-level WRS. For post-secondary transfers or after-degree students, completion of ECON 101, ECON 102, MATH 154 and STAT 161 or their equivalents is normally a prerequisite to admission to any of the BCom programs. Where a student is deficient in any of these requirements, probationary admission may be granted if the deficient course(s) is/are made up in the first year the student is registered in the Faculty of Business. Completion of INT D 101 will be a requirement to be completed in the first year the student is registered in the Faculty of Business and is not a prerequisite for admission.

Primary Core: BUS 101 or equivalent, ACCTG 311, SEM 310, MARK 301, FIN 301, MGTSC 312. These courses or their equivalents are required for all BCom students and are normally taken as a cohort in Year Two, with the exception of BUS 101 which is normally taken in Year One.

Secondary Core: ACCTG 322, BTM 311, B LAW 301, OM 352, BUEC 311, BUEC 479, SEM 441.

Senior Business Electives: All courses at the 400-level offered by the Faculty of Business, and courses at the 300-level where these are

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Primary Core: BUS 101 or equivalent, ACCTG 311, SEM 310, MARK 301, FIN 301, MGTSC 312, BUS 222, BUS 303, and BUS 404. These courses or their equivalents are required for all BCom students. BUS 101 is normally taken in Year One. ACCTG 311, SEM 310, MARK 301, FIN 301, MGTSC 312, and BUS 222, are normally taken as a cohort in Year 2. BUS 303, and BUS 404 are normally taken in Years Three and Four, respectively.

not part of the Primary core. Secondary core courses not required to fulfil major or program requirements are also acceptable as Senior Business electives. Individual departments may deem other courses acceptable as substitutes for Senior Business courses. ECON 281 is permitted as a substitute for BUEC 311 in many majors. See Policy on Elective Courses (3) below.
Electives Outside Business: Any course offered by the University of Alberta in any Faculty except Business.
Free Electives: Any course offered by the University of Alberta in any Faculty including Business.

Secondary Core: ACCTG 322, BTM 311, B LAW 301, OM 352, BUEC 311, BUEC 479, SEM 441.
Senior Business Electives: All courses at the 400-level offered by the Faculty of Business, and courses at the 300-level where these are not part of the Primary core. Secondary core courses not required to fulfil major or program requirements are also acceptable as Senior Business electives. Individual departments may deem other courses acceptable as substitutes for Senior Business courses. ECON 281 is permitted as a substitute for BUEC 311 in many majors. See Policy on Elective Courses (3) below.
Electives Outside Business: Any course offered by the University of Alberta in any Faculty except Business.
Free Electives: Any course offered by the University of Alberta in any Faculty including Business.

Reviewed/Approved by:

Business Council Dec 19, 2022

Seconded motion at USPC, Dec 1, 2022

Faculty (& Department or Academic Unit):	Education
Contact Person:	Jennifer Branch-Mueller
Level of change: (choose one only) [?]	☑ Undergraduate
	☐ Graduate
For which term will this change take effect?	Fall 2023

Rationale
Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

The Language and Literacy SAC would like to remove the 3 in 3-0-3 so that the EDEL 305 course is 3-0-0 going forward. Labs have not been used in this course for a very long time. It is confusing for students and more work for schedulers.

Course Template

Current: Removed language	Proposed: New language
EDEL 305 - Language Arts in the Elementary School **Course Career Undergraduate** **Units 3** **Approved Hours 3-0-3** **Fee index 6** **Faculty Education** **Department Elementary Education** **Typically Offered either term** **Description** **This course will introduce the language arts curriculum and will give a broad overview of the knowledge and skills required to implement a language arts program in the elementary school, including oral language, reading and writing. Prerequisite: EDU 100 and 210; pre/corequisite EDU 211. For students in the Elementary After Degree program: pre/corequisite EDU 210, 211, and 300. EDEL 305 is offered as part of Year 3 of the Elementary Program Route.**	**EDEL 305 - Language Arts in the Elementary School** **Course Career Undergraduate** **Units 3** **Approved Hours 3-0-0** **Fee index 6** **Faculty Education** **Department Elementary Education** **Typically Offered either term** **Description** **This course will introduce the language arts curriculum and will give a broad overview of the knowledge and skills required to implement a language arts program in the elementary school, including oral language, reading and writing. Prerequisite: EDU 100 and 210; pre/corequisite EDU 211. For students in the Elementary After Degree program: pre/corequisite EDU 210, 211, and 300. EDEL 305 is offered as part of Year 3 of the Elementary Program Route.**

Reviewed/Approved by:

REQUIRED: Faculty Council (or delegate) and approval date. Faculty of Education, Undergraduate Academic Affairs Approved - November 24, 2022.

OPTIONAL: Other internal faculty approving bodies, consultation groups, or departments, and approval dates.

UNIVERSITY OF ALBERTA

Faculty (& Department or Academic Unit):	Education
Contact Person:	Jennifer Branch-Mueller
Level of change: (choose one only) [?]	☑ Undergraduate
	☐ Graduate
For which term will this change take effect?	Fall 2023

Rationale

Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

A revised course title and description is required to account for removal of the field experience and changing the pre-requisite. The changes reflect a move away from second language (because it might be a third of fourth language). It moves past English Language Learners which is a deficit model to one that celebrates being multilingual.

Course Template

Current: Removed language	Proposed: New language
EDEL 451 - Methods and Programs in the Teaching of English as a Second Language 3-0-0, 3 units, either term This course is designed for those interested in ESL teaching at the K-6 levels. Course focuses include orientation and assessment of ESL students, program planning, ESL teaching methods and techniques, integrating language and content, and ESL materials and resources. This course will include a field placement in an off-campus ESL classroom one morning per week. Prerequisite: EDPY 416; or consent of Department.	**EDEL 451 - Methods in the Teaching of English to Multilingual Students** 3-0-0, 3 units, either term This course is designed for those interested in teaching English to multilingual students at the K-6 levels. Course focuses include orientation and assessment, program planning, teaching methods and techniques for second language education, integrating language and content, and multilingual materials and resources. Prerequisite: successful completion of EDFX 425; or consent of the Associate Chair.

Reviewed/Approved by:

REQUIRED: Faculty Council (or delegate) and approval date. Faculty of Education, Undergraduate Academic Affairs - Approved - November 24, 2022.

OPTIONAL: Other internal faculty approving bodies, consultation groups, or departments, and approval dates.

Calendar Change Request Form
for Program and Regulation Changes
See the Calendar Guide for tips on how to complete this form.

Faculty (& Department or Academic Unit):	Education
Contact Person:	Dr. David Chorney
Level of change: (choose one only)	☑ Undergraduate
	☐ Graduate
Type of change request: (check all that apply)	☑ Program
	☐ Regulation
For which term is this intended to take effect?	Fall 2023
Does this proposal have corresponding course changes? (Should be submitted at the same time)	

Rationale
Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

Revisions are required due to course offering changes and the redevelopment of the Activity Core Requirement of the BKin and BKinBEd Degree programs in the Faculty of Kinesiology, Sport, and Recreation. These program changes will result in the deletion of all reference to the use of PAC and PAC course offerings from the calendar, likely completed and effective Fall 2024.

Calendar Copy

URL in current Calendar: **Education Chart 1 - Secondary Education Major Teaching Subject: Physical Education**, https://calendar.ualberta.ca/preview_program.php?catoid=36&poid=42684	
Current Copy: Removed language	**Proposed Copy:** New language
Secondary Education Major Teaching Subject: Physical Education **Notes:** 1. A variety of PAC/DAC/KIN courses outside personal level of expertise is recommended. 2. PAC 110 or aquatics competency highly recommended 3. KIN 365 (Gymnastics) may be preferred. 4. CPR Certification is highly recommended	**Secondary Education Major Teaching Subject: Physical Education** **Notes:** 1. A variety of DAC/Dance/KIN/KRLS/RLS courses outside personal level of expertise is recommended. 2. KIN 110 or aquatics competency highly recommended 3. KIN 365 (Gymnastics) may be preferred. 4. CPR Certification is highly recommended

5. KIN 207, KIN 294, and KIN 391 should be taken in Year 1 and 2.

Requirements (36 units)

- KIN 207 - Physical Growth and Psychomotor Development
- KIN 294 - A Conceptual Approach to Physical Activity
- KIN 391 - Introduction to Human Anatomy and Physiology
- KRLS 105 - Introduction to the Management of Sport, Physical Activity and Recreation Programs

3 units chosen from

- HE ED 110 - Introduction to Personal Health and Well-Being
- HE ED 120 - Introduction to the Biological Aspects of Fitness to Health

~~24~~ **units chosen from**

~~The five activity dimensions (a,b,c,d,e) listed below. Select a minimum of 3 units from each of the dimensions a to e, with no more than 6 units from any one dimension.~~

a. Alternative Environments:

- ~~PAC 110 - Instruction of the Basics of Aquatics~~
- ~~PAC 182 - Instruction of the Basics of Indoor Wall Climbing~~
- KIN 205 - Introduction to Outdoor Environmental Education

b. Dance:

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5. KIN 207, KIN 294, and KIN 391 should be taken in Year 1 and 2.

Requirements (36 units)

- KIN 207 - Physical Growth and Psychomotor Development
- KIN 294 - A Conceptual Approach to Physical Activity
- KIN 391 - Introduction to Human Anatomy and Physiology
- Choice of:
  - KRLS 105 - Introduction to the Management of Sport, Physical Activity and Recreation Programs
  - Or
  - KRLS 371 - Assessment and Evaluation in Physical Activity for Children and Youth

3 units chosen from

- HE ED 110 - Introduction to Personal Health and Well-Being
- HE ED 120 - Introduction to the Biological Aspects of Fitness to Health

12 units chosen from

The four activity dimensions (a,b,c,d) listed below. Select 3 units from each of the dimensions a to d.

a. Alternative Environments:

- KIN 110 - Introduction to Movement Foundations in Aquatic Environments
- KIN 205 - Introduction to Outdoor Environmental Education

b. Dance:

- DAC 125 - Social Dance

- ~~DAC 125 - Social Dance~~
- ~~DANCE 200 - The Spectrum of Dance in Society~~
- ~~DANCE 340 - Modern Dance~~

c. Games:

- KIN 320 - Structure and Strategy of Games
- KIN 325 - The Study of Games for Children and Youth
- ~~PAC 111 - Instruction of the Basics of Basketball~~
- ~~PAC 114 - Instruction of the Basics of Ice Hockey~~
- ~~PAC 117 - Instruction of the Basics of Rugby~~
- ~~PAC 118 - Instruction of the Basics of Soccer~~
- ~~PAC 135 - Instruction of the Basics of Tennis~~
- ~~PAC 137 - Instruction of the Basics of Volleyball~~
- ~~PAC 145 - Instruction of the Basics of Golf~~
- ~~PAC 183 - Instruction of the Basics of Curling~~
- ~~PAC 197 - Selected Topics in Physical Activity - Level I~~
- ~~PAC 199 - Directed Studies~~
- ~~PAC 311 - Coaching Basketball~~
- ~~PAC 314 - Coaching Ice Hockey~~
- ~~PAC 337 - Coaching Volleyball~~

~~**d. Gymnastics:**~~

- ~~KIN 365 - The Study of Gymnastics for Children and Youth~~
- ~~PAC 160 - Instruction of the Basics of Gymnastics~~

~~**e. Individual Activities:**~~

- ~~PAC 154 - Instruction of the Basics of Wrestling~~
- ~~PAC 156 - Instruction of the Basics of Yoga~~
- ~~PAC 173 - Instruction of the Basics of Athletics (Track and Field)~~
- ~~PAC 197 - Selected Topics in Physical Activity - Level I~~
- ~~PAC 199 - Directed Studies~~
- ~~PAC 356 - Yoga for Stress Management~~

- DANCE 200 - The Spectrum of Dance in Society
- DANCE 340 - Modern Dance
- DANCE 431 - Study of Dance for Children

c. Games:

- KIN 106 - Movement Foundations of Game Play
- KIN 320 - Structure and Strategy of Games
- KIN 325 - The Study of Games for Children and Youth
- KRLS 420 - Play: The Foundation of Recreation, Sport and Physical Activity
- KRLS 421 - Play Leadership

d. Individual Activities:

- KIN 102 - Foundations of Human Movement
- KIN 104 - Individual Movement Pursuit Foundations
- KIN 156 - Introduction to Movement Foundations in Fitness
- KIN 245 - Introduction to the Profession of Coaching
- KIN 335 - Advanced Conditioning Methodology
- KIN 356 - Advanced Practices and Program Development in Fitness Instruction
- KIN 365 - The Study of Gymnastics for Children and Youth
- KIN 435 - Applied Resistance Training
- KIN 436 - Applied Endurance Training

9 units chosen from Activity Core Electives (Kinesiology, Sport, and Recreation)

Notes

- A single course cannot be used to satisfy more than one degree program requirement.
- Students may not have access to all courses included in this list as course restrictions exist for some of these courses (i.e., course prerequisites, student program eligibility). Students should refer

to Bear Tracks to check course restrictions and consult with an Academic Advisor.

- KIN 365 recommended

Activity Core electives list (Alphabetical order)

- DAC 125 - Social Dance
- DANCE 200 - The Spectrum of Dance in Society
- DANCE 340 - Modern Dance
- DANCE 431 - Study of Dance for Children
- KIN 102 - Foundations of Human Movement
- KIN 104 - Individual Movement Pursuit Foundations
- KIN 106 - Movement Foundations of Game Play
- KIN 110 - Introduction to Movement Foundations in Aquatic Environments
- KIN 156 - Introduction to Movement Foundations in Fitness
- KIN 197 - Selected Topics in Movement Foundations
- KIN 199 - Directed Studies in Movement Foundations
- KIN 205 - Introduction to Outdoor Environmental Education
- KIN 245 - Introduction to the Profession of Coaching
- KIN 293 - Introduction to the Movement Activities of Children
- KIN 294 - A Conceptual Approach to Physical Activity
- KIN 302 - Human Motor Control
- KIN 306 - Quantitative Biomechanics of Human Movement
- KIN 320 - Structure and Strategy of Games
- KIN 325 - The Study of Games for Children and Youth
- KIN 335 - Advanced Conditioning Methodology
- KIN 338 - Physical Activity and Sport Participation in Children and Youth
- KIN 356 - Advanced Practices and Program Development in Fitness Instruction
- KIN 365 - The Study of Gymnastics for Children and Youth
- KIN 399 - Research Project
- KIN 435 - Applied Resistance Training
- KIN 436 - Applied Endurance Training
- KRLS 207 - Adapted Physical Activity and Leisure for Diverse Populations
- KRLS 323 - Indigenous Perspective on Activity, Health, and Wellness in Canada

- KRLS 370 - Assessment and Service Delivery for Adapted Physical Activity and Therapeutic Recreation
- KRLS 371 - Assessment and Evaluation in Physical Activity for Children and Youth
- KRLS 420 - Play: The Foundation of Recreation, Sport and Physical Activity
- KRLS 421 - Play Leadership
- KRLS 440 - Play Around the World Program Preparation
- RLS 100 - Life, Leisure, and the Pursuit of Happiness
- RLS 331 - Leisure Education

Notes

Students must take EDSE 347 during the Introductory Professional Term (IPT), which is normally offered in both the Fall and Winter Terms.

Students must take EDSE 447 during the Advanced Professional Term (APT), which is normally offered in both the Fall and Winter Terms.

Notes

Students must take EDSE 347 during the Introductory Professional Term (IPT), which is normally offered in both the Fall and Winter Terms.

Students must take EDSE 447 during the Advanced Professional Term (APT), which is normally offered in both the Fall and Winter Terms.

URL in current Calendar: **Education Chart 2 - Secondary Education Minor Teaching Subject - Physical Education** https://calendar.ualberta.ca/preview_program.php?catoid=36&poid=42684&returnto=11334

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Requirements (18 units)

- KIN 294 - A Conceptual Approach to Physical Activity

3 units chosen from

- HE ED 110 - Introduction to Personal Health and Well-Being

Requirements (18 units)

- Choice of:
  - KIN 294 - A Conceptual Approach to Physical Activity
  - Or
  - KRLS 371 - Assessment and Evaluation in Physical Activity for Children and Youth
- HE ED 110 - Introduction to Personal Health and Well-Being

12 units chosen from

- ~~HE ED 120 - Introduction to the Biological Aspects of Fitness to Health~~

~~**12 units chosen from the five activity dimensions listed below.**~~

~~(Note: no more than 3 units can be selected from any one dimension).~~ A variety of courses outside personal level of expertise is recommended. Aquatics competency and CPR certification recommended.

a. Alternative Environments:

- ~~PAC 110 - Instruction of the Basics of Aquatics~~
- ~~PAC 182 - Instruction of the Basics of Indoor Wall Climbing~~
- KIN 205 - Introduction to Outdoor Environmental Education

b. Dance:

- ~~DAC 125 - Social Dance~~
- ~~DANCE 200 - The Spectrum of Dance in Society~~
- ~~DANCE 340 - Modern Dance~~

c. Games:

- KIN 320 - Structure and Strategy of Games
- KIN 325 - The Study of Games for Children and Youth
- ~~PAC 111 - Instruction of the Basics of Basketball~~
- ~~PAC 114 - Instruction of the Basics of Ice Hockey~~
- ~~PAC 117 - Instruction of the Basics of Rugby~~

The four activity dimensions (a,b,c,d) listed below. Select 3 units from each of the dimensions a to d.

A variety of courses outside personal level of expertise is recommended. Aquatics competency and CPR certification recommended.

a. Alternative Environments:

- KIN 110 - Introduction to Movement Foundations in Aquatic Environments
- KIN 205 - Introduction to Outdoor Environmental Education

b. Dance:

- DAC125 - Social Dance
- DANCE 200 - The Spectrum of Dance in Society
- DANCE 340 - Modern Dance
- DANCE 431 - Study of Dance for Children

c. Games:

- KIN 106 - Movement Foundations of Game Play
- KIN 320 - Structure and Strategy of Games
- KIN 325 - The Study of Games for Children and Youth
- KRLS 420 - Play: The Foundation of Recreation, Sport and Physical Activity
- KRLS 421 - Play Leadership

- ~~PAC 118 - Instruction of the Basics of Soccer~~
- ~~PAC 135 - Instruction of the Basics of Tennis~~
- ~~PAC 137 - Instruction of the Basics of Volleyball~~
- ~~PAC 145 - Instruction of the Basics of Golf~~
- ~~PAC 183 - Instruction of the Basics of Curling~~
- ~~PAC 199 - Directed Studies~~
- ~~PAC 311 - Coaching Basketball~~
- ~~PAC 314 - Coaching Ice Hockey~~
- ~~PAC 337 - Coaching Volleyball~~

~~**d. Gymnastics:**~~

~~_____~~

- ~~KIN 365 - The Study of Gymnastics for Children and Youth~~
- ~~PAC 160 - Instruction of the Basics of Gymnastics~~

~~**e. Individual Activities:**~~

- ~~PAC 154 - Instruction of the Basics of Wrestling~~
- ~~PAC 156 - Instruction of the Basics of Yoga~~
- ~~PAC 173 - Instruction of the Basics of Athletics (Track and Field)~~
- ~~PAC 197 - Selected Topics in Physical Activity - Level I~~
- ~~PAC 199 - Directed Studies~~
- ~~PAC 356 - Yoga for Stress Management~~

Note

Students must take EDSE 348 which is normally offered in both the Fall and Winter Terms.

d. Individual Activities:

- KIN 102 - Foundations of Human Movement
- KIN 104 - Individual Movement Pursuit Foundations
- KIN 156 - Introduction to Movement Foundations in Fitness
- KIN 245 - Introduction to the Profession of Coaching
- KIN 335 - Advanced Conditioning Methodology
- KIN 356 - Advanced Practices and Program Development in Fitness Instruction
- KIN 365 - The Study of Gymnastics for Children and Youth
- KIN 435 - Applied Resistance Training
- KIN 436 - Applied Endurance Training

Note

Students must take EDSE 348 which is normally offered in both the Fall and Winter Terms.

URL in current Calendar: **Education Chart 3 - Major Teaching Subject in the Secondary After Degree Education Route** - Physical Education,
https://calendar.ualberta.ca/preview_program.php?catoid=36&poid=43138#physical-education

Current Copy: ~~Removed language~~	Proposed Copy: New language
Physical Education (36 units) ● 3 units in Individual Health Education or Nutrition class: Approved 3 ~~credit~~ (or equivalent) courses offered by a Faculty of Kinesiology, Sport, and Recreation in the following Activity Dimensions from the Alberta Physical Education curriculum: ● 3 units in Alternative Environments: Aquatics -water adjustment, survival techniques, stroke development, snorkelling, scuba diving, water games, diving, synchronized, swimming, water safety; Water -based – canoeing, rowing, kayaking, sailing, sailboarding, water skiing; Outdoor Pursuits – hiking, backpacking, climbing rock or wall, camping winter or summer, orienteering, snowshoeing, skiing, snowboarding, skating ice or inline, horseback riding, walking, cycling, tobogganing, luge ● 3 units in Dance: Rhythmic/Creative; Multicultural; Contemporary/Social; Jazz; Ballroom/Social; Aboriginal ● 3 units in Games: softball, cricket or rounders, soccer, basketball, touch football, hockey-type games field, floor, ice, team handball, lacrosse (field), rugby, broomball, ringette, plastic disc games, volleyball, tennis, badminton, pickleball, table tennis, handball, netball, racquetball, squash, Asian foot volleyball, lacrosse, tchouk ball, archery, bocce, bowling, curling, golf, trapshooting, croquet, horseshoes ● ~~3 units in Gymnastics: Rhythmic; Artistic; Acrobatic; Educational~~ ● 3 units in Individual Activities: Athletics—Track and Field - running events, jumping events, throwing events; combatives – fencing, wrestling, self-defense, martial arts; Individual Manipulatives – juggling hand or foot, skipping; Training Programs – aerobics, rope jumping, walking, jogging, lap swimming, cycling/mountain biking, use of exercise equipment, weight training, inline skating, circuit, plyometrics, triathlon; Movement Arts - tai chi, yoga ● ~~18~~ units in dance, principles and concepts of physical activity, recreation and leisure studies, and Kinesiology **Notes**	**Physical Education (36 units)** ● 3 units in Individual Health Education or Nutrition class: Approved 3 units (or equivalent) courses offered by a Faculty of Kinesiology, Sport, and Recreation in the following Activity Dimensions from the Alberta Physical Education curriculum: ● 3 units in Alternative Environments: KIN 110 or KIN 205; Aquatics -water adjustment, survival techniques, stroke development, snorkelling, scuba diving, water games, diving, synchronized, swimming, water safety; Water -based – canoeing, rowing, kayaking, sailing, sailboarding, water skiing; Outdoor Pursuits – hiking, backpacking, climbing rock or wall, camping winter or summer, orienteering, snowshoeing, skiing, snowboarding, skating ice or inline, horseback riding, walking, cycling, tobogganing, luge ● 3 units in Dance: DAC, DANCE; Rhythmic/Creative; Multicultural; Contemporary/Social; Jazz; Ballroom/Social; Aboriginal ● 3 units in Games: KIN 106, 320, or 325 KRLS 420, or KRLS 421 or softball, cricket or rounders, soccer, basketball, touch football, hockey-type games field, floor, ice, team handball, lacrosse (field), rugby, broomball, ringette, plastic disc games, volleyball, tennis, badminton, pickleball, table tennis, handball, netball, racquetball, squash, Asian foot volleyball, lacrosse, tchouk ball, archery, bocce, bowling, curling, golf, trapshooting, croquet, horseshoes ● 3 units in Individual Activities: KIN 102, 104, 156, 245, 335, 356, 435 or 436 Athletics—Track and Field - running events, jumping events, throwing events; combatives – fencing, wrestling, self-defense, martial arts; Individual Manipulatives – juggling hand or foot, skipping; Training Programs – aerobics, rope jumping, walking, jogging, lap swimming, cycling/mountain biking, use of exercise equipment, weight training, inline skating, circuit, plyometrics, triathlon; Movement Arts - tai chi, yoga ● 21 units in DAC, KIN, KRLS, PAC, RLS 100, 331 or dance, principles and concepts of physical activity, recreation and leisure studies, and Kinesiology **Notes**

1. Aquatics competency and CPR certification recommended
2. Students must take EDSE 347 during the Introductory Professional Term (IPT), which is normally offered in both the Fall and Winter Terms.
3. Students must take EDSE 447 during the Advanced Professional Term (APT), which is normally offered in both the Fall and Winter Terms.

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1. Aquatics competency and CPR certification recommended
2. Students must take EDSE 347 during the Introductory Professional Term (IPT), which is normally offered in both the Fall and Winter Terms.
3. Students must take EDSE 447 during the Advanced Professional Term (APT), which is normally offered in both the Fall and Winter Terms.

URL in current Calendar: **Education Chart 4 - Minor Teaching Subject in the Secondary After Degree Education Route - Physical Education** https://calendar.ualberta.ca/preview_program.php?catoid=36&poid=43138

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Physical Education (18 units)

- 3 units in Physical Movement
- 3 units in Health Education
- 12 units chosen from the five Activity Dimensions from the Alberta Physical Education curriculum:
    - ***Please Note: no more than 3 units can be selected from any one dimension.
    - 3 units in Alternative Environments: Aquatics -water adjustment, survival techniques, stroke development, snorkelling, scuba diving, water games, diving, synchronized, swimming, water safety; Water-based – canoeing, rowing, kayaking, sailing, sailboarding, water skiing; Outdoor Pursuits – hiking, backpacking, climbing rock or wall, camping winter or summer, orienteering, snowshoeing, skiing, snowboarding, skating ice or inline, horseback riding, walking, cycling, tobogganing, luge
    - 3 units in Dance: Rhythmic/Creative; Multicultural; Contemporary/Social; Jazz; Ballroom/Social; Aboriginal
    - 3 units in Games: softball, cricket or rounders, soccer, basketball, touch football, hockey-type games field, floor, ice, team handball, lacrosse (field), rugby, broomball, ringette, plastic disc games, volleyball, tennis, badminton, pickleball,

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Physical Education (18 units)

- 3 units in Physical Movement
- 3 units in Health Education
- 12 units chosen from the five Activity Dimensions from the Alberta Physical Education curriculum:
    - ***Please Note: no more than 3 units can be selected from any one dimension.
    - 3 units in Alternative Environments: KIN 110 or KIN 205 or Aquatics -water adjustment, survival techniques, stroke development, snorkelling, scuba diving, water games, diving, synchronized, swimming, water safety; Water-based – canoeing, rowing, kayaking, sailing, sailboarding, water skiing; Outdoor Pursuits – hiking, backpacking, climbing rock or wall, camping winter or summer, orienteering, snowshoeing, skiing, snowboarding, skating ice or inline, horseback riding, walking, cycling, tobogganing, luge
    - 3 units in Dance: DAC, DANCE or Rhythmic/Creative; Multicultural; Contemporary/Social; Jazz; Ballroom/Social; Aboriginal
    - 3 units in Games: KIN 106, 320, 325, KRLS 420, or KRLS 421 or softball, cricket or rounders, soccer, basketball, touch football, hockey-type games field, floor,

table tennis, handball, netball, racquetball, squash, Asian foot volleyball, lacrosse, tchouk ball, archery, bocce, bowling, curling, golf, trapshooting, croquet, horseshoes

- ~~3 units in Gymnastics: Rhythmic; Artistic; Acrobatic; Educational~~
- 3 units in Individual Activities: Athletics—Track and Field - running events, jumping events, throwing events; Combatives – fencing, wrestling, self-defense, martial arts; Individual Manipulatives – juggling hand or foot, skipping; Training Programs – aerobics, rope jumping, walking, jogging, lap swimming, cycling/mountain biking, use of exercise equipment, weight training, inline skating, circuit, plyometrics, triathlon; Movement Arts - tai chi, yoga

Note

1. Students must take EDSE 348 which is normally offered in both the Fall and Winter Terms.

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ice, team handball, lacrosse (field), rugby, broomball, ringette, plastic disc games, volleyball, tennis, badminton, pickleball, table tennis, handball, netball, racquetball, squash, Asian foot volleyball, lacrosse, tchouk ball, archery, bocce, bowling, curling, golf, trapshooting, croquet, horseshoes

- 3 units in Individual Activities: KIN 102, 104, 156, 245, 355, 356, 435 or 436; Athletics—Track and Field - running events, jumping events, throwing events; Combatives – fencing, wrestling, self-defense, martial arts; Individual Manipulatives – juggling hand or foot, skipping; Training Programs – aerobics, rope jumping, walking, jogging, lap swimming, cycling/mountain biking, use of exercise equipment, weight training, inline skating, circuit, plyometrics, triathlon; Movement Arts - tai chi, yoga

Note

1. Students must take EDSE 348 which is normally offered in both the Fall and Winter Terms.

Reviewed/Approved by:

REQUIRED: Faculty Council (or delegate) and approval date. Faculty of Education, Undergraduate Academic Affairs - Approved - November 24, 2022.

OPTIONAL: Other internal faculty approving bodies, consultation groups, or departments, and approval dates.

Calendar Change Request Form
for Program and Regulation Changes
See the Calendar Guide for tips on how to complete this form.

Faculty (& Department or Academic Unit):	Education
Contact Person:	Lynn McGarvey (Heather Kennedy-Plant/Lucy De Fabrizio)
Level of change: (choose one only)	☑ Undergraduate
	☐ Graduate
Type of change request: (check all that apply)	☑ Program
	☐ Regulation
For which term is this intended to take effect?	Fall 2023
Does this proposal have corresponding course changes? (Should be submitted at the same time)	n/a

Rationale

Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

This is an embedded certificate that is interdisciplinary and housed in the Faculty of Education. The changes reflect the additions and deletions to course offerings.

Calendar Copy

https://calendar.ualberta.ca/preview_program.php?catoid=36&poid=42695

Current Copy: Removed language	Proposed Copy: New language
Certificate in Global Citizenship For information, contact: gccd@ualberta.ca or visit the Certificate in Global Citizenship website. **Requirements** ● INT D 404 - Global Citizenship: Contemporary Issues and Perspectives **9 units selected from:** ● ADMI 342 - Introduction au Commerce International ● ALES 391 - Topics in Agricultural, Life and Environmental Sciences * ● ANTHE 320 - Anthropologie de la religion ● ANTHR 230 - Anthropology of Science, Technology, and Environment	**Certificate in Global Citizenship** For information, contact: gccd@ualberta.ca or visit the Certificate in Global Citizenship website. **Requirements** ● INT D 404 - Global Citizenship: Contemporary Issues and Perspectives **9 units selected from:** ● ADMI 342 - Introduction au Commerce International ● ALES 391 - Topics in Agricultural, Life and Environmental Sciences * ● ANTHE 320 - Anthropologie de la religion ● ANTHR 230 - Anthropology of Science, Technology, and Environment

- ANTHR 310 - The Anthropology of Gender
- ANTHR 320 - Anthropology of Religion
- ANTHR 372 - Anthropology of Food
- ANTHR 393 - Health and Healing
- ANTHR 417 - Anthropology of Modernity
- ARAB 399 - Special Topics
- AREC 365 - Natural Resource Economics
- AREC 375 - World Food and Agriculture
- AREC 485 - Trade and Globalization in Food and Resources
- B LAW 428 - Natural Resource and Environmental Law
- BIOL 332 - Community Ecology
- BIOL 367 - Conservation Biology
- BIOL 381 - A Planet in Crisis
- BUEC 342 - Introduction to International Business
- BUEC 463 - Energy and the Environment: Industry Structure, Performance and Challenges
- C LIT 101 - World Literature I
- C LIT 102 - World Literature II
- C LIT 103 - Approaches to World Literature
- C LIT 220 - Mythology and Literature
- C LIT 228 - Literature, Popular Culture, and the Visual Arts
- C LIT 242 - Science Fiction
- C LIT 243 - Fairy Tales and Folk Tales
- C LIT 266 - Women and World Literature
- C LIT 347 - Elements of Genre
- C LIT 352 - Literature and the Other Arts
- C LIT 358 - Great Themes of Literature and Art
- C LIT 425 - East/West Critical Theory
- C LIT 426 - Orientalisms and Occidentalisms
- C LIT 440 - Comparative Studies in Popular Culture
- C LIT 460 - Fundamentals of Comparative Literature
- C LIT 497 - Special Topics in Comparative Literature
- CHIM 340 - Chimie verte
- CHRTC 221 - Indigenous Spiritual Traditions and Christianity
- CHRTC 339 - International Service Learning
- CHRTC 347 - World War II and Christians
- CHRTC 349 - Social Justice and Christianity
- CHRTC 396 - Environmental Issues: Christian Perspectives
- CLASS 102 - Greek and Roman Mythology
- CLASS 103 - Introduction to Ancient Greece
- CLASS 104 - Introduction to Ancient Rome
- CLASS 110 - The Ancient World
- CLASS 261 - Women, Gender and Sexuality in the Ancient World
- CLASS 400 - Topics in the Culture and Society of Greco-Roman Antiquity

- ANTHR 310 - The Anthropology of Gender
- ANTHR 320 - Anthropology of Religion
- ANTHR 372 - Anthropology of Food
- ANTHR 393 - Health and Healing
- ANTHR 417 - Anthropology of Modernity
- ARAB 399 - Special Topics
- AREC 365 - Natural Resource Economics
- AREC 375 - World Food and Agriculture
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- B LAW 428 - Natural Resource and Environmental Law
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- BUEC 463 - Energy and the Environment: Industry Structure, Performance and Challenges
- C LIT 101 - World Literature I
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- C LIT 228 - Literature, Popular Culture, and the Visual Arts
- C LIT 242 - Science Fiction
- C LIT 243 - Fairy Tales and Folk Tales
- C LIT 266 - Women and World Literature
- C LIT 347 - Elements of Genre
- C LIT 352 - Literature and the Other Arts
- C LIT 358 - Great Themes of Literature and Art
- C LIT 425 - East/West Critical Theory
- C LIT 426 - Orientalisms and Occidentalisms
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- C LIT 460 - Fundamentals of Comparative Literature
- C LIT 497 - Special Topics in Comparative Literature
- CHIM 340 - Chimie verte
- CHRTC 221 - Indigenous Spiritual Traditions and Christianity
- CHRTC 339 - International Service Learning
- CHRTC 347 - World War II and Christians
- CHRTC 349 - Social Justice and Christianity
- CHRTC 350 - Science and Religion: Christian Perspectives
- CHRTC 361 - Death, Dying, and Culture
- CHRTC 372 - The Theology and Spirituality of Eastern Christianity
- CHRTC 396 - Environmental Issues: Christian Perspectives
- CLASS 102 - Greek and Roman Mythology
- CLASS 103 - Introduction to Ancient Greece
- CLASS 104 - Introduction to Ancient Rome
- CLASS 110 - The Ancient World

- CLASS 475 - Techniques of Classical Field Archaeology
- CLASS 476 - Advanced Field Techniques in Classical Archaeology
- CSL 100 - An Introduction to Community Engagement
- CSL 200 - Theory and Practice in Community Service-Learning
- CSL 350 - Selected Topics in Community Service-Learning
- CSL 360 - Community Service-Learning Practicum
- CSL 480 - Individual Study in Community Service-Learning *
- D HYG 440 - Advocacy for Change in Healthcare
- DRAMA 203 - Performance Analysis
- DRAMA 302 - Modern Canadian Theatre
- DRAMA 312 - Indigenous Theatre in Canada
- DRAMA 327 - Community-Based Theatre
- DRAMA 427 - Topics in Community Based and Applied Theatre
- EAS 208 - Introduction to Global Change
- EAS 457 - Global Change
- EASIA 101 - Understanding East Asia
- EASIA 205 - Language in Chinese Society
- EASIA 223 - East Asian Religions
- EASIA 236 - Modernity and Contemporary Chinese Civilization
- EASIA 239 - Daoism and Chinese Civilization
- EASIA 240 - Overview of Japanese Culture
- EASIA 316 - Japanese Language and Society
- EASIA 323 - Topics in East Asian Religions
- EASIA 351 - Culture and Identity in Taiwan
- EASIA 423 - Topics in Japanese Religions
- EASIA 425 - Topics in East/West Critical Theory
- EASIA 427 - Colonial and Post Colonial Culture in East Asia
- EASIA 438 - Topics in Chinese Studies
- EASIA 456 - Languages and Cultures of the Ryukyus
- EASIA 471 - Topics in Korean Studies
- EASIA 472 - Topics in Korean Literary History
- ECON 211 - Chinese Economic Development
- ECON 213 - An Introduction to the Economics of Developing Countries
- ECON 323 - International Economics
- ECON 410 - Pacific Rim Economic Development
- ECON 421 - International Trade
- ECON 422 - International Payments
- ECON 467 - Environmental and Natural Resource Policy
- ECONE 223 - Enjeux économiques mondiaux
- EDPS 422 - International Development Education
- EDPS 425 - Global Education: Issues and Strategies for Teachers

- CLASS 261 - Women, Gender and Sexuality in the Ancient World
- CLASS 400 - Topics in the Culture and Society of Greco-Roman Antiquity
- CLASS 475 - Techniques of Classical Field Archaeology
- CLASS 476 - Advanced Field Techniques in Classical Archaeology
- CSL 100 - An Introduction to Community Engagement
- CSL 200 - Theory and Practice in Community Service-Learning
- CSL 350 - Selected Topics in Community Service-Learning
- CSL 360 - Community Service-Learning Practicum
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- ECON 410 - Pacific Rim Economic Development
- ECON 421 - International Trade
- ECON 422 - International Payments
- ECON 467 - Environmental and Natural Resource Policy
- ECONE 223 - Enjeux économiques mondiaux

- EDFX 425 - Elementary Route: Advanced Field Experience *
- EDFX 450 - Secondary Route: Advanced Field Experience *
- EDFX 490 - Additional Placement in an Education Related and/or Outside Alberta Context
- EDU M 498 - Séminaire citoyenneté globale et justice sociale
- EDU S 350
- EDU P 333 - École, famille, communauté
- ENCS 473 - Environmental and Conservation Policy
- ENGL 220 - Reading Gender and Sexuality
- ENGL 221 - Reading Class and Ideology
- ENGL 222 - Reading Race and Ethnicity
- ENGL 223 - Reading Empire and the Postcolonial
- ENGL 300 - Social and Cultural History of the English Language
- ENGL 308 - Topics in Indigenous Literature
- ENGL 309 - Indigenous Poetics
- ENGL 312 - African Writing in English
- ENGL 314 - Irish Writing in English
- ENGL 315 - South Asian Writing in English
- ENGL 316 - Middle-Eastern Writing in English
- ENGL 373 - Colonialism and Canadian Literatures
- ENGL 380 - Writing from Here
- ENGL 390
- ENGL 391
- ENGL 392 - Queer and Trans Studies
- ENGL 465 - Studies in Gender and Sexualities
- ENGL 467 - Studies in Race and Ethnicity
- ENGL 481 - Studies in Empire and the Postcolonial
- ENT 101 - Insect-Human Interactions
- FOLK 204 - Forms of Folklore
- FOLK 205 - History of Folklore Studies
- FOREC 473 - Forest Policy
- FREN 316
- FREN 315 - Cultural Representations of Food
- FREN 317 - Postcolonial Issues in French and Francophone Societies
- FREN 318 - Socio-Cultural Aspects of Contemporary Francophone Societies
- FREN 333 - French Cultural Moments
- FREN 399 - Special Topics
- FREN 467 - Women Writing in French
- FREN 499 - Special Topics
- LITT 230 - Francophonies littéraires hors Canada
- LITT 335 - Francophonies littéraires et discours identitaires
- GERM 343 - Postwar Cultures
- GERM 353 - Myths, Tales, and Legends
- GERM 451 - Genre and Aesthetics
- GERM 453 - Cultural and Literary Theories
- GERM 454 - Gender and Sexuality

- EDPS 422 - International Development Education
- EDPS 425 - Global Education: Issues and Strategies for Teachers
- EDFX 425 - Elementary Route: Advanced Field Experience *
- EDFX 450 - Secondary Route: Advanced Field Experience *
- EDFX 490 - Additional Placement in an Education Related and/or Outside Alberta Context
- EDU M 498 - Séminaire citoyenneté globale et justice sociale
- EDU S 350
- EDU P 333 - École, famille, communauté
- ENCS 473 - Environmental and Conservation Policy
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- ENGL 221 - Reading Class and Ideology
- ENGL 222 - Reading Race and Ethnicity
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- ENGL 300 - Social and Cultural History of the English Language
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- ENGL 315 - South Asian Writing in English
- ENGL 316 - Middle-Eastern Writing in English
- ENGL 373 - Colonialism and Canadian Literatures
- ENGL 380 - Writing from Here
- ENGL 390
- ENGL 391
- ENGL 392 - Queer and Trans Studies
- ENGL 465 - Studies in Gender and Sexualities
- ENGL 467 - Studies in Race and Ethnicity
- ENGL 481 - Studies in Empire and the Postcolonial
- ENT 101 - Insect-Human Interactions
- FOLK 204 - Forms of Folklore
- FOLK 205 - History of Folklore Studies
- FOREC 473 - Forest Policy
- FREN 316
- FREN 315 - Cultural Representations of Food
- FREN 317 - Postcolonial Issues in French and Francophone Societies
- FREN 318 - Socio-Cultural Aspects of Contemporary Francophone Societies
- FREN 333 - French Cultural Moments
- FREN 399 - Special Topics
- FREN 467 - Women Writing in French
- FREN 499 - Special Topics
- LITT 230 - Francophonies littéraires hors Canada
- LITT 335 - Francophonies littéraires et discours identitaires
- GERM 343 - Postwar Cultures
- GERM 353 - Myths, Tales, and Legends

- HADVC 301 - Geographies of Art, Design, and Visual Culture
- HADVC 412 - Topics in Asian Art, Design and Visual Culture
- HECOL 441 - Textiles and Apparel in the Global Economy
- HGP 452
- HIST 104 - The Atomic Age: The World After 1945
- HIST 111 - The Early Modern World
- HIST 112 - The Modern World
- HIST 114 - The History of the World in the Last 10 Years
- HIST 123 - Plague: Disease and Epidemics in History
- HIST 127 - Drugs in Modern Global History
- HIST 128 - War, Revolution, and Society
- HIST 130 - Democracy, War and Consumer Capitalism: The Making of Modern Europe
- HIST 135 - Origins of Ancient India: Cities, Migrations and Peoples
- HIST 179 - Sex Work and Intimate Labour in Global History
- HIST 195 - Warfare Since 1789: From Mass Armies to Thermonuclear War
- HIST 205 - Capitalism
- HIST 206 - Women and Gender in Modern Europe
- HIST 210 - Europe in the 19th and 20th Centuries
- HIST 212 - Early Modern Europe
- HIST 237 - The Pacific World Since 1500
- HIST 241 - Colonial Latin America
- HIST 242 - Modern Latin America
- HIST 246 - Africa from Medieval to Modern Times
- HIST 247 - Africa in the 20th and 21st Centuries: From Colonial Rule to Modern Nations
- HIST 250 - American History to 1865
- HIST 251 - From the End of Slavery to the Present: American History Since 1865
- HIST 252 - Slavery in the Americas
- HIST 280 - East Asia to 1500
- HIST 281 - East Asia from 1500
- HIST 285 - China and the West
- HIST 292 - Medieval India from 500 to 1500 CE
- HIST 293 - History of Science, Technology and Medicine: Key Moments
- HIST 294 - An Introduction to the History of Sciences, Technology, and Medicine
- HIST 296 - World War Two
- HIST 306 - France in the 20th Century and Beyond
- HIST 308 - Sexuality and Gender in Modern Europe
- HIST 310 - A History of the Habsburg Monarchy, 1526-1918
- HIST 312 - Foundations of East European History
- HIST 313 - Medieval and Early Imperial Russia
- HIST 318 - Modern Ukraine

- GERM 451 - Genre and Aesthetics
- GERM 453 - Cultural and Literary Theories
- GERM 454 - Gender and Sexuality
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- HADVC 412 - Topics in Asian Art, Design and Visual Culture
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- HIST 322 - Russia in the 20th Century
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- HIST 339 - The Modern British Empire and the Commonwealth Experience
- HIST 342 - Political and Social Revolution in Latin America
- HIST 352 - African American History from Slavery to Black Power
- HIST 382 - History of Modern Japan
- HIST 383 - The Civilization and Culture of Early China
- HIST 385 - Modern China
- HIST 387 - History of Indian Yoga and Meditation
- HIST 390 - Imperial China from circa 600 to 1911
- HIST 395 - The Early British Empire
- HIST 405 - Fashion and Material Culture c. 1600-1900
- HISTE 121 - Histoire des mondes connectés: 1500-1815
- HISTE 122 - Histoire des mondes connectés depuis 1815
- HISTE 255 - Histoire des États-Unis dans l'espace nord-américain
- HISTE 303
- HISTE 311 - Histoire de l'Afrique francophone
- HISTE 390 - Histoire publique et engagement communautaire
- INT D 303 - Economics of World Food and Agriculture
- INT D 361
- INT D 370
- INT D 375 - Intercultural Exploration of Health and Practice in Italy
- INT D 393
- INT D 457 - Global Health - China Collaboration
- ITAL 299 - Special Topics
- KRLS 104 - Introduction to Sociology of Sport and Leisure in Canadian Society
- KRLS 440 - Play Around the World Program Preparation *
- KRLS 441 - Play Around the World - Field Placement *
- KRLS 451 - Cultural Studies of Sport and Leisure
- LA ST 205 - Mexico, Central America and the Caribbean
- LA ST 210 - South America
- LA ST 313 - Women in Latin America
- ~~LA ST 320~~
- LA ST 399 - Topics in Latin American Studies
- LA ST 499 - Special Topics
- LING 224 - Endangered Languages

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- MARK 455 - Sustainability and Responsible Marketing
- ~~MEAS 300*~~
- MLCS 210 - Approaches to Cultural Studies
- MLCS 299 - Special Topics
- MLCS 345 - Video Games across Cultures
- MLCS 399 - Special Topics
- MLCS 473 - Cultural Representations, World Media and Ethics
- MLCS 475 - X-Rated: Sex on Screen
- MLCS 499 - Special Topics
- MUSIC 101 - Introduction to Western Art Music
- MUSIC 102 - Introduction to World Music
- MUSIC 103 - Introduction to Popular Music
- MUSIC 143 - Indian Music Ensemble I
- MUSIC 144 - West African Music Ensemble I *
- MUSIC 148 - Middle Eastern and North African Music Ensemble I
- MUSIC 202 - Studies in World Music
- MUSIC 206 - History of Jazz
- MUSIC 314 - Music in Canada
- MUSIC 365 - Topics in Ethnomusicology *
- MUSIC 413 - Studies in the History of Jazz
- MUSIC 443 - Indian Music Ensemble
- MUSIC 444 - West African Music Ensemble *
- MUSIC 448 - Middle Eastern and North African Music Ensemble
- MUSIC 464
- MUSIC 465 - Area Studies in Ethnomusicology
- MUSIC 466
- MUSIC 468 - Area Studies in Ethnomusicology: The Arab World
- MUSIC 469 - Area Studies in Ethnomusicology: Music and Islam
- MUSIC 472 - Area Studies in Ethnomusicology: Africa
- MUSIC 473 - Area Studies in Ethnomusicology: The Persianate World
- MUSIC 482 - Studies in Music and Gender
- MUSIC 489 - Studies in Music and Identity
- MUSIQ 301 - Musique et société
- NS 111 - Contemporary Perspectives in Indigenous Studies
- NS 300 - Traditional Cultural Foundations I
- NS 355 - Indigenous Knowledge and Oral Traditions
- NS 361 - Race, Stereotypes, and Indigeneity
- NS 405 - Selected Topics in International Indigenous Studies
- ~~NURS 474~~
- NURS 425 - Nursing Leadership in a Focus Area *
- NURS 485 - Nursing Practice in a Focused Area *
- NURS 498 - Special Study - Nursing *
- PHARM 453 - Intercultural Exploration of Pharmacy and Health

- LA ST 399 - Topics in Latin American Studies
- LA ST 499 - Special Topics
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- PHIL 202 - Indian Philosophy
- PHIL 203 - Islamic Philosophy
- PHIL 270 - Political Philosophy
- PHIL 339 - Contemporary World Views and Christianity
- PHIL 355 - Environmental Ethics
- PHIL 357 - Philosophy of Religion
- PHIL 366 - Computers and Culture
- PHILE 242 - Introduction aux philosophies non occidentales
- POL S 101 - Introduction to Politics
- POL S 211 - Introduction to History of Political Theory
- POL S 212 - Introduction to Contemporary Political Theory
- POL S 235 - Introduction to Comparative Politics
- POL S 237 - Introduction to Chinese Politics
- POL S 250 - The Politics of Gender
- ~~POL S 260~~
- POL S 261 - International Relations
- ~~POL S 266~~
- POL S 299 - Citizenship for Democracy
- POL S 304 - Modern Political Theory
- POL S 327 - Indigenous Politics in Canada
- POL S 329 - Global Indigenous Politics
- POL S 332 - Introduction to United States Politics and Government
- POL S 333 - Ecology and Politics
- POL S 360 - Politics of International Development
- POL S 364 - Introduction to International Political Economy
- POL S 370 - Politics of the European Union
- POL S 371 - Populism and Democracy in Central Europe
- POL S 375 - Politics of East Asia
- POL S 390 - Law and Politics
- ~~POL S 396~~
- POL S 404 - Topics in Political Theory
- POL S 417 - Topics in Human Rights
- POL S 425 - Ethnicity, Immigration and Social Policy
- POL S 441 - Gender and Public Policy
- POL S 442 - The Canadian State and Identity Politics
- POL S 443 - Globalization, Ethnic Politics and the Nation-State
- POL S 444 - Global Critical Race Theory
- POL S 445 - Topics in Globalization and Governance
- POL S 448 - Gender Politics and Mass Media
- POL S 452 - Politics in the Middle East and North Africa
- POL S 455 - Topics in Gender and Politics
- POL S 458 - United States Foreign Policy
- POL S 459 - Topics in International Politics

- PHARM 453 - Intercultural Exploration of Pharmacy and Health
- PHIL 202 - Indian Philosophy
- PHIL 203 - Islamic Philosophy
- PHIL 209 - The Human Person: Philosophical Issues
- PHIL 270 - Political Philosophy
- PHIL 339 - Contemporary World Views and Christianity
- PHIL 355 - Environmental Ethics
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- POL S 458 - United States Foreign Policy

- POL S 460 - Global Security
- POL S 461 - International Relations of the Middle East
- POL S 468 - International Organization
- POL S 469 - Ethics in International Relations
- POL S 477 - Islam, Modernity, and Democracy
- POL S 479 - NGO Governance and Management
- POL S 486 - Topics in European Politics
- POL S 487 - Topics in European Union Politics
- R SOC 355 - Rural Communities and Global Economies
- R SOC 365 - Sociology of Environment and Development
- R SOC 443 - Resilience and Global Change
- R SOC 450 - Environmental Sociology
- R SOC 460 - Perspectives on Traditional Knowledge
- RELIG 205 - Introduction to Judaism
- RELIG 212 - Introduction to Christianity
- RELIG 220 - Introduction to Islam
- RELIG 230 - Introduction to Hinduism
- RELIG 240 - Introduction to Buddhism
- RELIG 320 - The Qur'an
- RELIG 333 - Modern Yoga
- RELIG 343 - Zen/Chan Buddhism
- RELIG 345 - Tantric Traditions
- RELIG 375 - Approaches to the Study of Religion
- REN R 100 - Forests: Ecology, Use and Society
- REN R 205 - Wildlife Biodiversity and Ecology
- REN R 260 - History and Fundamentals of Environmental Protection and Conservation
- REN R 322 - Forest Ecosystems
- REN R 333 - Wetland Sciences and Management
- REN R 360 - Soil and Water Conservation
- REN R 364 - Principles of Managing Natural Diversity
- REN R 365 - Ecology of Northern Landscapes
- REN R 376 - Fisheries and Wildlife Management
- REN R 427 - Science Policy and Canada's North
- REN R 440 - Disturbance Ecology Fundamentals
- REN R 446 - Climates and Ecosystems
- REN R 450 - Environmentally Sustainable Agriculture
- REN R 452 - Forest Watershed Management
- REN R 462 - Parks, Ecology, and Society
- REN R 464 - Conservation and Management of Endangered Species
- REN R 466 - Climate Change and the North
- REN R 468 - Conservation of Genetic Resources
- REN R 469 - Biodiversity Analysis
- REN R 473 - Northern Resource Management
- REN R 474 - Utilization of Wildlife Resources
- RLS 100 - Life, Leisure, and the Pursuit of Happiness

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- RLS 130 - Collaborative Skills and Processes for Community Recreation and Leisure - RLS 223 - Leisure and Human Behavior - RLS 263 - Principles of Tourism - RLS 463 - Issues in Tourism Development - RLS 465 - Natural Area Tourism - SC PO 101 - Introduction au gouvernement - SC PO 261 - Relations internationales I - SC PO 262 - Relations internationales II - SCAND 213 - Scandinavian Life and Civilization I: History, Culture, and Society - SCAND 214 - Scandinavian Life and Civilization II: Literature, Film, and Music - SCAND 326 - Scandinavian Children's Literature - SCAND 343 - Scandinavia Through Folklore - SCAND 356 - Women in Scandinavian Literature and Popular Culture - SCAND 399 - Special Topics - SCSOC 301 - Musique et société - SCSOC 311 - Histoire de la pensée politique et sociale I - SEM 417 - Managing the Work Force: International Perspectives - SEM 435 - Managing International Enterprises - SLAV 222 - Euromaidan: Origins and Aftermath of the Ukrainian Revolution - SLAV 299 - Special Topics - SLAV 320 - Ukrainian Canadian Culture - SLAV 399 - Special Topics - SLAV 475 - Slavic Languages and Cultures in the Community - SLAV 499 - Special Topics - SOC 269 - Introductory Sociology of Globalization - SOC 291 - Introduction to Environmental Sociology - SOC 302 - Topics in Sociology * - SOC 343 - Social Movements - SOC 369 - Sociology of Globalization - SOC 370 - Racism and Decolonization - SOC 402 - Topics in Sociology * - SOC 425 - Sociology of Terrorism - SOC 496 - Human Rights in International Perspective - SOCIE 260 - Inégalité et stratification sociales - SOCIE 369 - Sociologie de la mondialisation - SOCIE 348 - Sociologie des média et de l'information - SOCIE 412 - Sociologie du développement - ~~SPAN 299~~ - SPAN 320 - Introduction to Literary Analysis - SPAN 321 - Foundational Fictions of Spanish America - SPAN 323 - Latin American Literature and the Environment - SPAN 325 - Introduction to Cinema	- RLS 130 - Collaborative Skills and Processes for Community Recreation and Leisure - RLS 223 - Leisure and Human Behavior - RLS 263 - Principles of Tourism - RLS 463 - Issues in Tourism Development - RLS 465 - Natural Area Tourism - SC PO 101 - Introduction au gouvernement - SC PO 261 - Relations internationales I - SC PO 262 - Relations internationales II - SCAND 213 - Scandinavian Life and Civilization I: History, Culture, and Society - SCAND 214 - Scandinavian Life and Civilization II: Literature, Film, and Music - SCAND 326 - Scandinavian Children's Literature - SCAND 343 - Scandinavia Through Folklore - SCAND 356 - Women in Scandinavian Literature and Popular Culture - SCAND 399 - Special Topics - SCSOC 301 - Musique et société - SCSOC 311 - Histoire de la pensée politique et sociale I - SEM 417 - Managing the Work Force: International Perspectives - SEM 435 - Managing International Enterprises - SLAV 222 - Euromaidan: Origins and Aftermath of the Ukrainian Revolution - SLAV 299 - Special Topics - SLAV 320 - Ukrainian Canadian Culture - SLAV 399 - Special Topics - SLAV 475 - Slavic Languages and Cultures in the Community - SLAV 499 - Special Topics - SOC 269 - Introductory Sociology of Globalization - SOC 291 - Introduction to Environmental Sociology - SOC 302 - Topics in Sociology * - SOC 343 - Social Movements - SOC 369 - Sociology of Globalization - SOC 370 - Racism and Decolonization - SOC 402 - Topics in Sociology * - SOC 425 - Sociology of Terrorism - SOC 496 - Human Rights in International Perspective - SOCIE 260 - Inégalité et stratification sociales - SOCIE 369 - Sociologie de la mondialisation - SOCIE 348 - Sociologie des média et de l'information - SOCIE 412 - Sociologie du développement - SPAN 320 - Introduction to Literary Analysis - SPAN 321 - Foundational Fictions of Spanish America - SPAN 323 - Latin American Literature and the Environment - SPAN 325 - Introduction to Cinema - SPAN 333 - Reading Popular Culture

- SPAN 333 - Reading Popular Culture
- SPAN 341 - The 'Roaring Twenties' in Transatlantic Perspective
- SPAN 373 - Spanish as a World Language
- SPAN 399 - Special Topics in Literature/Culture
- SPAN 405 - Exercises in Translation: Spanish into English
- SPAN 406 - Exercises in Translation: English into Spanish
- SPAN 425 - Hispanic Filmmakers
- SPAN 441 - Reading Colonial Culture
- SPAN 475 - Spanish in Society
- SPAN 499 - Special Topics in Literature/Culture
- WGS 102 - Gender and Social Justice
- WGS 244 - Critical Disability Studies
- WGS 260 - Women and War
- WGS 310 - Gender and Social Justice in Contemporary Africa
- WGS 360 - Race, Class, and Gender
- WGS 390 - Environmental Feminisms and Social Justice

Notes

1. Maximum of 3 units from any given course can be used for the certificate.
2. No more than 3 of the 12 units may be transfer credits from other postsecondary institutions.

3. Students must meet the necessary prerequisites, co-requisites, and/or restrictions for courses used to satisfy the 9 units set out in 9 units selected from.

4. * Course/Section Clarifications:

ALES 391 is applicable only for sections that are a part of the Field Course in Agriculture and Food Production (Alberta/Hiroshima Exchange Program).

CSL 480 is applicable under the following conditions: For students in the Faculty of Pharmacy and Pharmaceutical Sciences, please ensure you are registered in the appropriate section for your Faculty, as approved by the Faculty's Associate Dean (Undergraduate Programs). For students outside of the Faculty of Pharmacy and Pharmaceutical Sciences, please obtain information on the eligibility of other sections from Community Service Learning, University of Alberta at cslinfo@ualberta.ca.

EDFX 425 and EDFX 450, are applicable only for international sections.

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- SPAN 499 - Special Topics in Literature/Culture
- SUST 201 - Introduction to Sustainability
- SUST 202 – Global Sustainable Development and the SDGs
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KRLS 440/KRLS 441 or equivalent, as verified in writing by the Play Around the World Program Director, will be applicable. MEAS 300, MUSIC 144, MUSIC 444 and MUSIC 365 are applicable only for sections that are part of the Education Abroad Program in Ghana. NURS 425, NURS 485 and NURS 498 are applicable only for sections with the variable title: International. SOC 302 is applicable only for sections with the variable title: Anti-Racism and Racial Injustice. SOC 402 is applicable only for sections with the variable titles: The Commons and Climate Justice, Indigenous Settler Relations, Migration & Public Policy, or Gender, Race & Culture.	KRLS 440/KRLS 441 or equivalent, as verified in writing by the Play Around the World Program Director, will be applicable. MEAS 300, MUSIC 144, MUSIC 444 and MUSIC 365 are applicable only for sections that are part of the Education Abroad Program in Ghana. NURS 425, NURS 485 and NURS 498 are applicable only for sections with the variable title: International. SOC 302 is applicable only for sections with the variable title: Anti-Racism and Racial Injustice. SOC 402 is applicable only for sections with the variable titles: The Commons and Climate Justice, Indigenous Settler Relations, Migration & Public Policy, or Gender, Race & Culture.

Reviewed/Approved by:

REQUIRED: Faculty Council (or delegate) and approval date. Approved: UAAC September 29, 2022
OPTIONAL: Other internal faculty approving bodies, consultation groups, or departments, and approval dates.

Calendar Change Request Form
for Program and Regulation Changes
See the Calendar Guide for tips on how to complete this form.

UNIVERSITY OF ALBERTA

Faculty (& Department or Academic Unit):	Engineering
Contact Person:	Don Raboud
Level of change: (choose one only)	● Undergraduate
Type of change request: (check all that apply)	● Editorial
For which term is this intended to take effect?	Fall 2023
Does this proposal have corresponding course changes? (Should be submitted at the same time)	No

Rationale

Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

For a number of years, qualifying year students in Engineering can take either ENGL 199 or ENCMP 100 in the Fall term, and then the other course in the Winter term. The program does not specifically require ENGL 199 in the Fall term and ENCMP 100 in the Winter term as currently shown in the Calendar.

This change updates the calendar to more accurately reflect when students can take these courses.

Calendar Copy

URL in current Calendar (or "New page")
https://calendar.ualberta.ca/preview_program.php?catoid=36&poid=42207

Current Copy: ~~Removed language~~	**Proposed Copy:** New language
# Program Requirements ## Term 1 • CHEM 103 - Introductory University Chemistry I • ENGG 100 - Success in Engineering • ENGG 130 - Engineering Mechanics • ENGL 199 - English for Engineering Students • MATH 100 - Calculus I	# Program Requirements ## Term 1 • CHEM 103 - Introductory University Chemistry I • ENGG 100 - Success in Engineering • ENGG 130 - Engineering Mechanics • ENGL 199 - English for Engineering Students (see Note 2)

- PHYS 130 - Wave Motion, Optics, and Sound

Term 2

- CHEM 105 - Introductory University Chemistry II
- ENCMP 100 - Computer Programming for Engineers
- ENGG 160 - Introduction to Engineering Design, Communication, and Profession
- EN PH 131 - Mechanics
- MATH 101 - Calculus II
- MATH 102 - Applied Linear Algebra

Note

1. Students accepted into the Honors Mathematics stream replace MATH 100 and MATH 101 with MATH 117 and MATH 118.

- MATH 100 - Calculus I
- PHYS 130 - Wave Motion, Optics, and Sound

Term 2

- CHEM 105 - Introductory University Chemistry II
- ENCMP 100 - Computer Programming for Engineers (see Note 2)
- ENGG 160 - Introduction to Engineering Design, Communication, and Profession
- EN PH 131 - Mechanics
- MATH 101 - Calculus II
- MATH 102 - Applied Linear Algebra

Notes

1. Students accepted into the Honors Mathematics stream replace MATH 100 and MATH 101 with MATH 117 and MATH 118.

2. ENGL 199 can be taken in Term 2 and ENCMP 100 can be taken in Term 1 instead.

Reviewed/Approved by:

Approved by Pierre Mertiny, Associate Dean – Undergraduate Programs, and Donald Raboud, Associate Dean - Students.

UNIVERSITY OF ALBERTA

Faculty (& Department or Academic Unit):	Engineering, Chemical & Materials Engineering
Contact Person:	Tony Yeung
Level of change: (choose one only) [?]	● Undergraduate
For which term will this change take effect?	Fall 2023

Rationale

Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

MAT E 335 is a core course in Materials Engineering [taken by Traditional students in Term 5 (Fall) and Co-op students in Term 5 (Fall)]. The instructors feel that the Calendar description needs to be updated to correctly reflect the contents of the course. No change to unit value, approved hours, prerequisites, or Learning Outcomes.

Course Template

Current: Removed language	Proposed: New language
MAT E 335 - Phase Transformations I **Course Career** Undergraduate **Units** 3.5 **Approved Hours** 3-1S-0 **Fee index** 8 **Faculty** Engineering **Department** Chemical&Materials Engineering **Typically Offered** first term **Description** Atomic mechanisms of solid state diffusion and diffusion in multicomponent and multiphase systems. ~~Thermodynamics of mass transfer, and microstructure evolution in liquid-solid and vapor-solid transformations. Interfaces in crystals, interphase boundaries and phase shapes. Applications in solidification processes, casting, welding, vapour deposition and sputtering methods~~. Prerequisites: MAT E 211, and 204 or 301.	**MAT E 335 - Phase Transformations I** **Course Career** Undergraduate **Units** 3.5 **Approved Hours** 3-1S-0 **Fee index** 8 **Faculty** Engineering **Department** Chemical&Materials Engineering **Typically Offered** first term **Description** Solid phases and phase diagrams. Atomic mechanisms of solid state diffusion and diffusion in multicomponent and multiphase systems. Thermodynamics and kinetics of diffusional and diffusionless solid state transformations. Applications in alloy heat treating and surface treatment. Prerequisites: MAT E 211, and 204 or 301.

Reviewed/Approved by:

CME Department Council: September 15, 2022
Faculty APC: November 9, 2022
Faculty ECC: November 29, 2022

UNIVERSITY OF ALBERTA

Faculty (& Department or Academic Unit):	Engineering, Chemical & Materials Engineering
Contact Person:	Tony Yeung
Level of change: (choose one only) [?]	● Undergraduate
For which term will this change take effect?	Fall 2023

Rationale

Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

MAT E 336 is a core course in Materials Engineering [taken by Traditional students in Term 6 (Winter) and Co-op students in Term 7 (Winter)]. The instructors feel that the Calendar description needs to be updated to correctly reflect the contents of the course. No change to unit value, approved hours, prerequisite, or Learning Outcomes.

Course Template

Current: Removed language	Proposed: New language
MAT E 336 - Phase Transformations II **Course Career** Undergraduate **Units** 3.5 **Approved Hours** 3-1S-0 **Fee index** 8 **Faculty** Engineering **Department** Chemical&Materials Engineering **Typically Offered** second term **Description** Diffusional and diffusionless solid state transformations. Applications in: alloy heat treating, surface treatment, and ceramics. Prerequisite: MAT E 335.	**MAT E 336 - Phase Transformations II** **Course Career** Undergraduate **Units** 3.5 **Approved Hours** 3-1S-0 **Fee index** 8 **Faculty** Engineering **Department** Chemical&Materials Engineering **Typically Offered** second term **Description** Thermodynamics of mass transfer and microstructure evolution in liquid-solid and vapour-solid transformations. Applications in solidification processes , casting, welding, vapour deposition and sputtering methods. Prerequisite: MAT E 335.

Reviewed/Approved by:

CME Department Council: September 15, 2022
Faculty APC: November 9, 2022
Faculty ECC: November 29, 2022

UNIVERSITY OF ALBERTA

Faculty (& Department or Academic Unit):	Engineering, Chemical & Materials Engineering
Contact Person:	Tony Yeung
Level of change: (choose one only) [?]	● Undergraduate
For which term will this change take effect?	Fall 2023

Rationale
Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

MAT E 362 and MAT E 473 are core courses taken by Materials Engineering students *in the same semester* [Term 6 (Winter) for Traditional students, and Term 7 (Winter) for Co-op students]. The instructors feel that the experimental component in MAT E 473 is ill-defined, and that this component should be moved to MAT E 362 (a lab course). This results in an increase in unit value (and approved hours) for MAT E 362, and a commensurate decrease in MAT E 473. There will be no change to the pre/co-requisites for either course.

Course Template

Current: Removed language	Proposed: New language
MAT E 362 - Materials Engineering Laboratory II **Course Career** Undergraduate **Units** 2.3 **Approved Hours** 1-1S-3/2 **Fee index** 5 **Faculty** Engineering **Department** Chemical&Materials Engineering **Typically Offered** second term **Description** Technical report writing. Advanced materials processing, characterization, and testing. Stability of particulate dispersions. Prerequisites: MAT E 361.	**MAT E 362 - Materials Engineering Laboratory II** **Course Career** Undergraduate **Units** 2.8 **Approved Hours** 1-1S-5/2 **Fee index** 5 **Faculty** Engineering **Department** Chemical&Materials Engineering **Typically Offered** second term **Description** Technical report writing. Advanced materials processing, characterization, and testing. Prerequisites: MAT E 361.

Reviewed/Approved by:

CME Department Council: September 15, 2022
Faculty APC: November 9, 2022
Faculty ECC: November 29, 2022

![University of Alberta logo] **UNIVERSITY OF ALBERTA**

Calendar Change Request Form
for Course Changes
See the [Calendar Guide](#) for tips on how to complete this form.

Faculty (& Department or Academic Unit):	Engineering, Chemical & Materials Engineering
Contact Person:	Tony Yeung
Level of change: (choose one only) [?]	● Undergraduate
For which term will this change take effect?	Fall 2023

Rationale
Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

MAT E 362 and MAT E 473 are core courses taken by Materials Engineering students *in the same semester* [Term 6 (Winter) for Traditional students, and Term 7 (Winter) for Co-op students]. The instructors feel that the experimental component in MAT E 473 is ill-defined, and that this component should be moved to MAT E 362 (a lab course). This results in an increase in unit value (and approved hours) for MAT E 362, and a commensurate decrease in MAT E 473. There will be no change to the pre/co-requisites for either course.

Course Template

Current: Removed language	Proposed: New language
MAT E 473 - Processing of Materials **Course Career** Undergraduate **Units** 4 (four) **Approved Hours** 3-1S-1 **Fee index** 8 **Faculty** Engineering **Department** Chemical&Materials Engineering **Typically Offered** either term **Description** Conversion of raw materials to products. Microstructural evolution and structure-property-processing relationships in engineering materials (metals and alloys, polymers, ceramics, composites) as a function of processing methods (shaping, joining, and surface treatment). Heat treating of metals and alloys. Prerequisite: CH E 314. Corequisites: MAT E 336 and 351.	**MAT E 473 - Processing of Materials** **Course Career** Undergraduate **Units** 3.5 **Approved Hours** 3-1S-0 **Fee index** 8 **Faculty** Engineering **Department** Chemical&Materials Engineering **Typically Offered** either term **Description** Conversion of raw materials to products. Microstructural evolution and structure-property-processing relationships in engineering materials (metals and alloys, polymers, ceramics, composites) as a function of processing methods (shaping, joining, and surface treatment). Heat treating of metals and alloys. Prerequisite: CH E 314. Corequisites: MAT E 336 and 351.

Reviewed/Approved by:

CME Department Council: September 15, 2022
Faculty APC: November 9, 2022
Faculty ECC: November 29, 2022

UNIVERSITY OF ALBERTA

Faculty (& Department or Academic Unit):	Engineering, Chemical & Materials Engineering
Contact Person:	Tony Yeung
Level of change: (choose one only) [?]	● Undergraduate
For which term will this change take effect?	Fall 2023

Rationale

Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

MAT E 491 is an Elective course. We propose to change the course title to better represent the course contents. No change to unit value, approved hours, Calendar description or Learning Outcomes.

Course Template

Current: Removed language	Proposed: New language
MAT E 491 - Solid State Physics of Materials **Course Career** Undergraduate **Units** 3.5 **Approved Hours** 3-1S-0 **Fee index** 8 **Faculty** Engineering **Department** Chemical&Materials Engineering **Typically Offered** either term or Spring/Summer **Description** Classical mechanics and its limitations; basic quantum mechanics; band theory; band diagrams for metals, insulators; Semiconductor and dielectric materials, piezoelectrics and thermoelectrics, and magnetic materials; Intrinsic and doped semiconductors; Optical properties of materials; Light-matter interactions, Prerequisite: PHYS 130, MAT E 202, or by consent of instructor.	**MAT E 491 – Properties and Physics of Functional Materials** **Course Career** Undergraduate **Units** 3.5 **Approved Hours** 3-1S-0 **Fee index** 8 **Faculty** Engineering **Department** Chemical&Materials Engineering **Typically Offered** either term or Spring/Summer **Description** Classical mechanics and its limitations; basic quantum mechanics; band theory; band diagrams for metals, insulators; Semiconductor and dielectric materials, piezoelectrics and thermoelectrics, and magnetic materials; Intrinsic and doped semiconductors; Optical properties of materials; Light-matter interactions, Prerequisite: PHYS 130, MAT E 202, or by consent of instructor.

Reviewed/Approved by:

CME Department Council: September 15, 2022
Faculty APC: November 9, 2022
Faculty ECC: November 29, 2022

UNIVERSITY OF ALBERTA

Calendar Change Request Form for Program and Regulation Changes

See the Calendar Guide for tips on how to complete this form.

Faculty (& Department or Academic Unit):	Medicine + Dentistry, Biomedical Engineering	
Contact Person:	Alan Wilman	
Level of change (choose one only)	☐	Undergraduate
	☑	Graduate
Type of change request (check all that apply)	☑	Program
	☐	Regulation
For which term is this intended to take effect?	ASAP	
Does this proposal have corresponding course changes? (Should be submitted at the same time)	No.	

Rationale

The Dept of Biomedical Engineering (BME) would like to change the text of our Grad Program Requirement for the MSc program by eliminating the required course list. There is no change in the number of courses required. This change requires the deletion of one sentence, with no additions.

We wish to remove the list of required courses for 4 reasons:

The MSc course list is very outdated, currently more than half of the required courses are no longer taught.

Our PhD program removed the course list many years ago, so we would like to match with the MSc now..

The required list is no longer relevant given the wide breadth of BME student backgrounds and research topics.

Required courses should be set by the supervisory committee.

Calendar Copy

https://calendar.ualberta.ca/preview_program.php?catoid=34&poid=38215&returnto=10333

Current	**Proposed**
The Degree of MSc (Biomedical Engineering) [Graduate] **Program Requirements**	**The Degree of MSc (Biomedical Engineering) [Graduate]** **Program Requirements**
The requirements for this degree consist of coursework and a thesis. Required courses depend on the undergraduate background of the student; however, normally a minimum of ★9 in graduate courses must be	The requirements for this degree consist of coursework and a thesis. Required courses depend on the undergraduate background of the student; however, ~~normally~~ a minimum of ★9 in graduate courses must be

completed. ~~Of the required courses, a minimum ★6 must be obtained through credit in~~ BME 513~~, 529,~~ BME 530~~, 541,~~ BME 553~~, BME 564, 575, BME 579, 583, BME 599, and~~ BME 630~~, or EE BE 512, 540~~. The ~~remaining~~ courses are determined by the student's supervisory committee and are relevant to the chosen area of research. Undergraduate courses taken for graduate credit carry only half the course weight assigned to that course. The minimum period of residence is two four-month terms of full-time attendance at the University of Alberta.	completed. The courses are determined by the student's supervisory committee and are relevant to the chosen area of research. Undergraduate courses taken for graduate credit carry only half the course weight assigned to that course. The minimum period of residence is two four-month terms of full-time attendance at the University of Alberta.

Reviewed/Approved by:

REQUIRED: Faculty Council (or delegate) and approval date, including any partner faculties for combined programs.

Department approval: Jan 20, 2022.

Faculty of Engineering: GPC Sept 7, 2022; APC Sept 14, 2022

Faculty of Medicine & Dentistry: Faculty Learning Committee Sept 16, 2022, Grad Program Committee Sept 26, 2022

FGSR:

GPST Oct 3, 2022

PRC: Nov. 10, 2022

FGSR Council: Dec. 7, 2022

Calendar Change Request Form
for Program and Regulation Changes
See the Calendar Guide for tips on how to complete this form.

UNIVERSITY OF ALBERTA

Faculty (& Department or Academic Unit):	Kinesiology, Sport, & Recreation (KSR)
Contact Person:	Angela Bayduza, PhD - Associate Dean, Undergraduate Programs
Level of change: (choose one only)	☑ Undergraduate
	☐ Graduate
Type of change request: (check all that apply)	☑ Program
	☐ Regulation
For which term is this intended to take effect?	Fall 2023
Does this proposal have corresponding course changes? (Should be submitted at the same time)	None

Rationale

Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

The Faculty of Education has made changes to their 4 year Elementary Education degree program that affect years 4 and 5 of KSR's BKin/BEd elementary route program. Because these Faculty of Education changes have already been approved through governance, KSR needs to submit these calendar changes to match/reflect the changes made by the Faculty of Education.

Calendar Copy

URL in current Calendar (or "New page") https://calendar.ualberta.ca/preview_program.php?catoid=36&poid=42795	
Current Copy: Removed language	**Proposed Copy:** New language
Year 4 (30 units) **Fall Term: Course Requirements** • EDEL 305 - Language Arts in the Elementary School • EDPY 302 - Learning and Development in Childhood	**Year 4 (30 units)** **Fall Term: Course Requirements** • EDEL 305 - Language Arts in the Elementary School **OR** • EDEL 316 - Communication Through Mathematics Education • EDPY 302 - Learning and Development in Childhood

- Aboriginal and Indigenous Histories and Culture [See Education Courses (9 units).] (3 units)
- Open option. (3 units)

3 units chosen from

~~────────────────~~

- ~~EDEL 316 - Communication Through Mathematics Education~~
- ~~EDEL 321 - Introduction to Curriculum and Pedagogy in Elementary School Physical Education~~

Winter Term: Introductory Professional Term (15 units)

Courses in the IPT are normally taken concurrently.

- EDEL 316 - Communication Through Mathematics Education **OR**
- ~~EDEL 321 - Introduction to Curriculum and Pedagogy in Elementary School Physical Education~~
- EDFX 325 - Elementary Route: Introductory Field Experience
- EDPY 303 - Educational Assessment

3 units chosen from

~~────────────────~~

- ~~EDEL 302 - Curriculum and Pedagogy in Elementary School Art~~
- ~~EDEL 325 - Curriculum and Pedagogy in Elementary School Music~~
- ~~EDEL 330 - Curriculum and Pedagogy in Elementary School Science~~
- ~~EDEL 335 - Curriculum and Pedagogy in Elementary School Social Studies~~

3 units chosen from

~~────────────────~~

- ~~EDEL 316 - Communication Through Mathematics Education~~

- EDEL 321 - Introduction to Curriculum and Pedagogy in Elementary School Physical Education
- Aboriginal and Indigenous Histories and Culture [See Education Courses (9 units).] (3 units)
- Open option. (3 units)

Winter Term: Introductory Professional Term (15 units)

Courses in the IPT are normally taken concurrently.

- EDEL 316 - Communication Through Mathematics Education **OR**
- EDEL 305 - Language Arts in the Elementary School
- EDFX 325 - Elementary Route: Introductory Field Experience
- EDEL 330 - Curriculum and Pedagogy in Elementary School Science **OR**
- EDEL 335 - Curriculum and Pedagogy in Elementary School Social Studies
- EDPY 303 - Educational Assessment

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- ~~EDEL 321 - Introduction to Curriculum and Pedagogy in Elementary School Physical Education~~

Year 5 (30 units)

Fall Term: Advanced Professional Term (15 units)

Courses in the APT are normally taken concurrently.

- EDFX 425 - Elementary Route: Advanced Field Experience
- EDPY 301 - Introduction to Inclusive Education: Adapting Classroom Instruction for Students with Special Needs

~~3 units chosen from~~

~~_____~~

- ~~EDEL 302 - Curriculum and Pedagogy in Elementary School Art~~
- ~~EDEL 325 - Curriculum and Pedagogy in Elementary School Music~~
- ~~EDEL 330 - Curriculum and Pedagogy in Elementary School Science~~
- ~~EDEL 335 - Curriculum and Pedagogy in Elementary School Social Studies~~

Winter Term: Course Requirements

- ~~EDEL (300-Level) Option~~
- EDEL (400-Level) Option
- EDPS 410 - Ethics and Law in Teaching
- Education Elective
- Open option

~~Removed language~~

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Year 5 (30 units)

Fall Term: Advanced Professional Term (15 units)

Courses in the APT are normally taken concurrently.

- EDFX 425 - Elementary Route: Advanced Field Experience
- EDEL 330 - Curriculum and Pedagogy in Elementary School Science **OR**
- EDEL 335 - Curriculum and Pedagogy in Elementary School Social Studies
- EDPY 301 - Introduction to Inclusive Education: Adapting Classroom Instruction for Students with Special Needs

Winter Term: Course Requirements

- EDEL 302 - Curriculum and Pedagogy in Elementary School Art **OR**
- EDEL 325 - Curriculum and Pedagogy in Elementary School Music **OR**
- EDEL 345 Introduction to Curriculum and Pedagogy in Elementary School Health Education

- EDEL (400-Level) Option
- EDPS 410 - Ethics and Law in Teaching
- Education Elective
- Open option

New language

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Reviewed/Approved by:

REQUIRED:
KSR Undergraduate Programs Committee: November 16th, 2022 approval (pending)
KSR Faculty Executive: November 22nd, 2022 approval (pending)
KSR Faculty Council: November 30th, 2022 approval (pending)

Calendar Change Request Form
for Program and Regulation Changes
See the Calendar Guide for tips on how to complete this form.

Faculty (& Department or Academic Unit):	Faculty of Medicine & Dentistry - MD Program
Contact Person:	Jodi Hawthorne (jhawthor@ualberta.ca)
Level of change: (choose one only)	☑ Undergraduate
	☐ Graduate
Type of change request: (check all that apply)	☑ Program
	☐ Regulation
For which term is this intended to take effect?	Upcoming intake (July 2023)
Does this proposal have corresponding course changes? (Should be submitted at the same time)	No

Rationale

Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

We are seeking to remove the following sentence from the University of Alberta Calendar: "At least one academic year (Sept-April or comparable) must be 30 units of course weight." We are making this request on behalf of the MD Admissions Committee.

The reason for the change is that this requirement is unnecessary, and creates barriers for multiple individuals who seek to apply to our MD Program. The requirement was instituted years ago, and we understand that its purpose was to approximate the workload of the preclinical years of the MD Program. It may serve this limited purpose, but any advantage this confers for us as an MD Program or for applicants is overshadowed by the barriers that it creates for applicants. We frequently hear from applicants who tell us that they cannot take a full course load for a full academic year. This may be because they are working full-time to support themselves and/or their families, or because they have parenting responsibilities, or because they are varsity athletes.

Applicants consider applying to medical school at diverse phases of life now, more than in past years. We want to encourage mature, well-rounded applicants who come with life experience. These individuals often tell us that they cannot return to school on a full-time basis for the purpose of fulfilling this specific application requirement. We would like to remove this barrier to these individuals' applications to our MD Program. We believe this will improve our application process and our suite of application requirements.

Calendar Copy

URL in current Calendar (or "New page")	
Current Copy: Removed language	**Proposed Copy:** New language
Doctor of Medicine (MD) **Application for Admission and Application for Readmission**	Doctor of Medicine (MD) **Application for Admission and Application for Readmission**

Only electronic applications are accepted. To access the online application for the University of Alberta go to www.admissions.ualberta.ca.

The Faculty of Medicine and Dentistry offers a four-year program leading to the degree of Doctor of Medicine. As the number of applicants greatly exceeds the number of positions available in the program, a careful selection process is carried out, as described below.

Applicants should be aware of the total length of time required to obtain a medical degree and following this a licence to practice. The usual time is normally three or four years to complete a baccalaureate degree; four years of medical studies, at which point the MD degree is awarded; and then a minimum of two years of residency before full licensure in Alberta.

Quotas

A quota exists in Medicine. 85% of the positions are reserved for Alberta residents and 15% of the positions are for Non-Alberta residents.

In addition, positions are reserved for qualified applicants from Rural communities (see section VI).

Academic Requirements

1. Students are required to obtain a baccalaureate degree, from a program recognized by the University of Alberta, prior to admission.
2. To be considered for admission, students must have achieved a minimum cumulative GPA (cGPA) of 3.3 for Alberta residents or 3.5 for Non-Alberta residents and a minimum of 60 units of course weight transferable. ~~At least one academic year (Sept-April or comparable) must be 30 units of course weight.~~ Please note transcript deadlines in Undergraduate Application Procedures.

Only electronic applications are accepted. To access the online application for the University of Alberta go to www.admissions.ualberta.ca.

The Faculty of Medicine and Dentistry offers a four-year program leading to the degree of Doctor of Medicine. As the number of applicants greatly exceeds the number of positions available in the program, a careful selection process is carried out, as described below.

Applicants should be aware of the total length of time required to obtain a medical degree and following this a licence to practice. The usual time is normally three or four years to complete a baccalaureate degree; four years of medical studies, at which point the MD degree is awarded; and then a minimum of two years of residency before full licensure in Alberta.

Quotas

A quota exists in Medicine. 85% of the positions are reserved for Alberta residents and 15% of the positions are for Non-Alberta residents.

In addition, positions are reserved for qualified applicants from Rural communities (see section VI).

Academic Requirements

1. Students are required to obtain a baccalaureate degree, from a program recognized by the University of Alberta, prior to admission.
2. To be considered for admission, students must have achieved a minimum cumulative GPA (cGPA) of 3.3 for Alberta residents or 3.5 for Non-Alberta residents and a minimum of 60 units of course weight transferable. Please note transcript deadlines in Undergraduate Application Procedures.

Reviewed/Approved by:

FoMD Faculty Learning Committee (Faculty Council-delegated Approver) – November 24, 2022

OPTIONAL: Other internal faculty approving bodies, consultation groups, or departments, and approval dates.

UNIVERSITY OF ALBERTA

Calendar Change Request Form for Program and Regulation Changes

See the Calendar Guide for tips on how to complete this form.

Faculty (& Department or Academic Unit):	**FoMD** – Department of Laboratory Medicine & Pathology (LMP)
Contact Person:	Jelena Holovati – jelena.holovati@ualberta.ca
Level of change (choose one only) [?]	☐ Undergraduate ☒ Graduate
Type of change request (check all that apply) [?]	☒ Program ☐ Regulation
For which term is this intended to take effect?	Fall 2023
Does this proposal have corresponding course changes? (Should be submitted at the same time)	Yes.

Rationale

In response to the recommendation by the FoMD Graduate Programs Committee, the Department of Laboratory Medicine and Pathology is proposing the following calendar change and clarified language to address the design flaw where a program offers MSc and PhD programs with the same courses as requirements for both the MSc and PhD. If this is the case, any students that completed an MSc in the program cannot complete the course requirements for the PhD in the same program because they have already taken one or more of the required courses. The proposed calendar changes are: (1) Remove the requirement to take LABMP 530 in the MSc and PhD programs. (2) Allow course substitution if a given course was taken in a previous degree. (3) Remove the recommendation to take LABMP 511 as this course will no longer be offered by the Department. (4) Add the clarification: Doctoral students who took INT D 710 as Master's students, take only INT D 720 as PhD students.

Calendar Copy

URL in current Calendar (or leave blank if it is a new page):
https://calendar.ualberta.ca/preview_program.php?catoid=36&poid=42620&returnto=11393

Current	**Proposed**
Master's programs	**Master's programs**
Master of Science (Laboratory Medicine and Pathology)	**Master of Science (Laboratory Medicine and Pathology)**
Program Requirements This is a thesis-based program.	**Program Requirements** This is a thesis-based program.
Students are required to complete a minimum of 9 units in graded coursework and a thesis.	Students are required to complete a minimum of 9 units in graded coursework and a thesis.
Required Coursework	**Required Coursework**

- ~~LABMP 530 – this course is normally taken in the first year~~
- ~~Two~~ 3-unit graduate-level graded courses in Laboratory Medicine and Pathology (LABMP) or approved courses in other departments
- Course requirements are approved by the Supervisor and Supervisory Committee based on the background of the student and the area of research specialization.
- Additional coursework may be required

Thesis
- Registration in 900-level THES

…

Master of Science with Specialization in Analytical and Environmental Toxicology (Laboratory Medicine and Pathology)

Program Requirements
This is a thesis-based program.

Students are required to complete a minimum of 9 units in graded coursework and a thesis.

Required Coursework
- ~~LABMP 530 – this course is normally taken in the first year~~
- LABMP 550
- One 3-unit graduate-level graded courses in Laboratory Medicine and Pathology (LABMP) or approved courses in other departments
  o LABMP 551 is recommended
- Course requirements are approved by the Supervisor and Supervisory Committee based on the background of the student and the area of research specialization.
- Additional coursework may be required

- Three 3-unit graduate-level graded courses in Laboratory Medicine and Pathology (LABMP) or approved courses in other departments
- Course requirements are approved by the Supervisor and Supervisory Committee based on the background of the student and the area of research specialization.
- Additional coursework may be required

Specific courses required for the MSc or PhD degree that have been taken to satisfy the requirements of a previous degree can be substituted with another course at the same level, subject to recommendation by the supervisor (in consultation with the supervisory committee where appropriate), and Departmental approval.

Thesis
- Registration in 900-level THES

…

Master of Science with Specialization in Analytical and Environmental Toxicology (Laboratory Medicine and Pathology)

Program Requirements
This is a thesis-based program.

Students are required to complete a minimum of 9 units in graded coursework and a thesis.

Required Coursework
- LABMP 550
- One 3-unit graduate-level graded courses in Laboratory Medicine and Pathology (LABMP) or approved courses in other departments
  o LABMP 551 is recommended
- Course requirements are approved by the Supervisor and Supervisory Committee based on the background of the student and the area of research specialization.
- Additional coursework may be required

Specific courses required for the MSc or PhD degree that have been taken to satisfy the requirements of a previous degree can be substituted with another course at the same level, subject to recommendation by the supervisor (and in consultation with the supervisory committee, where appropriate), and Departmental approval.

Thesis
Registration in 900-level THES
…

Master of Science with Specialization in Biopreservation (Laboratory Medicine and Pathology)

Program Requirements
This is a thesis-based program.

Students are required to complete a minimum of 9 units in graded coursework and a thesis.

Required Coursework
- ~~LABMP 530 – this course is normally taken in the first year~~
- LABMP 510
- One 3-unit graduate-level graded courses in Laboratory Medicine and Pathology (LABMP) or approved courses in other departments
    - o ~~LABMP 511 is recommended~~
- Course requirements are approved by the Supervisor and Supervisory Committee based on the background of the student and the area of research specialization.
- Additional coursework may be required

Thesis
- Registration in 900-level THES
…

Master of Science with Specialization in Molecular Pathology (Laboratory Medicine and Pathology)

Program Requirements
This is a thesis-based program.

Students are required to complete a minimum of 9 units in graded coursework and a thesis.

Thesis
Registration in 900-level THES
…

Master of Science with Specialization in Biopreservation (Laboratory Medicine and Pathology)

Program Requirements
This is a thesis-based program.

Students are required to complete a minimum of 9 units in graded coursework and a thesis.

Required Coursework
- LABMP 510
- One 3-unit graduate-level graded courses in Laboratory Medicine and Pathology (LABMP) or approved courses in other departments
- Course requirements are approved by the Supervisor and Supervisory Committee based on the background of the student and the area of research specialization.
- Additional coursework may be required

Specific courses required for the MSc or PhD degree that have been taken to satisfy the requirements of a previous degree can be substituted with another course at the same level, subject to recommendation by the supervisor (in consultation with the supervisory committee, where appropriate), and Departmental approval.

Thesis
- Registration in 900-level THES
…

Master of Science with Specialization in Molecular Pathology (Laboratory Medicine and Pathology)

Program Requirements
This is a thesis-based program.

Students are required to complete a minimum of 9 units in graded coursework and a thesis.

Left column:

Required Coursework
- LABMP 530 – this course is normally taken in the first year
- LABMP 581
- One 3-unit graduate-level graded courses in Laboratory Medicine and Pathology (LABMP) or approved courses in other departments
  - o LABMP 500 is recommended
- Course requirements are approved by the Supervisor and Supervisory Committee based on the background of the student and the area of research specialization.
- Additional coursework may be required

Thesis
- Registration in 900-level THES
…

Doctoral Programs

Doctor of Philosophy (Laboratory Medicine and Pathology)

Program Requirements
Students entering the program after a BSc degree are required to complete a minimum of 12 units in graded coursework and a thesis.

Students entering the program after an MSc degree are required to complete a minimum of 6 units in graded coursework and a thesis.

Required Coursework
- LABMP 530 – this course is normally taken in the first year
- One to three 3-unit graded graduate-level courses in Laboratory Medicine and Pathology (LABMP) or approved courses in other departments
- Course requirements are approved by the Supervisor and Supervisory Committee based on the background of the student and the area of research specialization.

Right column:

Required Coursework
- LABMP 581
- One 3-unit graduate-level graded courses in Laboratory Medicine and Pathology (LABMP) or approved courses in other departments
  - o LABMP 500 is recommended
- Course requirements are approved by the Supervisor and Supervisory Committee based on the background of the student and the area of research specialization.
- Additional coursework may be required

Specific courses required for the MSc or PhD degree that have been taken to satisfy the requirements of a previous degree can be substituted with another course at the same level, subject to recommendation by the supervisor (in consultation with the supervisory committee where appropriate), and Departmental approval.

Thesis
- Registration in 900-level THES
…

Doctoral Programs

Doctor of Philosophy (Laboratory Medicine and Pathology)

Program Requirements
Students entering the program after a BSc degree are required to complete a minimum of 12 units in graded coursework and a thesis.

Students entering the program after an MSc degree are required to complete a minimum of 6 units in graded coursework and a thesis.

Required Coursework
- One to three 3-unit graded graduate-level courses in Laboratory Medicine and Pathology (LABMP) or approved courses in other departments
- Course requirements are approved by the Supervisor and Supervisory Committee based on the background of the student and the area of research specialization.
- Additional coursework may be required

● Additional coursework may be required	Specific courses required for the MSc or PhD degree that have been taken to satisfy the requirements of a previous degree can be substituted with another course at the same level, subject to recommendation by the supervisor (in consultation with the supervisory committee where appropriate), and Departmental approval.

Thesis
● Registration in 900-level THES
…

Thesis
● Registration in 900-level THES
…

Ethics Requirement
Thesis-based students in the Department of Laboratory Medicine & Pathology must meet the FGSR Ethics and Academic Citizenship Training Requirement through the completion of INT D 710 (for both master's and doctoral students) and INT D 720 (for doctoral students) by the end of the first term of registration in their degree program.

Professional Development Requirement
…

Ethics Requirement
Thesis-based students in the Department of Laboratory Medicine & Pathology must meet the FGSR Ethics and Academic Citizenship Training Requirement through the completion of INT D 710 (for both master's and doctoral students) and INT D 720 (for doctoral students) by the end of the first term of registration in their degree program.

Doctoral students who completed their Master's degree at the University of Alberta and previously passed INT D 710 Ethics and Academic Citizenship are only required to take INT D 720 - Advanced Ethics and Academic Citizenship.

Professional Development Requirement
…

Doctor of Philosophy with Specialization in Analytical and Environmental Toxicology (Laboratory Medicine and Pathology)

Program Requirements
Students entering the program after a BSc degree are required to complete a minimum of 12 units in graded coursework and a thesis.

Students entering the program after an MSc degree are required to complete a minimum of 6 units in graded coursework and a thesis.

Required Coursework
● LABMP 530 – this course is normally taken in the first year
● LABMP 550
● If required, two 3-unit graded graduate-level courses in Laboratory Medicine and Pathology (LABMP) or

Doctor of Philosophy with Specialization in Analytical and Environmental Toxicology (Laboratory Medicine and Pathology)

Program Requirements
Students entering the program after a BSc degree are required to complete a minimum of 12 units in graded coursework and a thesis.

Students entering the program after an MSc degree are required to complete a minimum of 6 units in graded coursework and a thesis.

Required Coursework
● LABMP 550
● If required, two 3-unit graded graduate-level courses in Laboratory Medicine and Pathology (LABMP) or approved courses in other departments
● It is recommended that all students also complete

approved courses in other departments ● It is recommended that all students also complete LABMP 551 ● Course requirements are approved by the Supervisor and Supervisory Committee based on the background of the student and the area of research specialization. ● Additional coursework may be required	LABMP 551 ● Course requirements are approved by the Supervisor and Supervisory Committee based on the background of the student and the area of research specialization. ● Additional coursework may be required Specific courses required for the MSc or PhD degree that have been taken to satisfy the requirements of a previous degree can be substituted with another course at the same level, subject to recommendation by the supervisor (in consultation with the supervisory committee where appropriate), and Departmental approval.
Thesis ● Registration in 900-level THES …	**Thesis** ● Registration in 900-level THES …
Ethics Requirement Thesis-based students in the Department of Laboratory Medicine & Pathology must meet the FGSR Ethics and Academic Citizenship Training Requirement through the completion of INT D 710 (for both master's and doctoral students) and INT D 720 (for doctoral students) by the end of the first term of registration in their degree program.	**Ethics Requirement** Thesis-based students in the Department of Laboratory Medicine & Pathology must meet the FGSR Ethics and Academic Citizenship Training Requirement through the completion of INT D 710 (for both master's and doctoral students) and INT D 720 (for doctoral students) by the end of the first term of registration in their degree program. Doctoral students who completed their Master's degree at the University of Alberta and previously passed INT D 710 Ethics and Academic Citizenship are only required to take INT D 720 - Advanced Ethics and Academic Citizenship.
Professional Development Requirement …	**Professional Development Requirement** …
Doctor of Philosophy with Specialization in Biopreservation (Laboratory Medicine and Pathology) **Program Requirements** Students entering the program after a BSc degree are required to complete a minimum of 12 units in graded coursework and a thesis. Students entering the program after an MSc degree are required to complete a minimum of 6 units in graded coursework and a thesis.	**Doctor of Philosophy with Specialization in Biopreservation (Laboratory Medicine and Pathology)** **Program Requirements** Students entering the program after a BSc degree are required to complete a minimum of 12 units in graded coursework and a thesis. Students entering the program after an MSc degree are required to complete a minimum of 6 units in graded coursework and a thesis.

Required Coursework
- ~~LABMP 530 – this course is normally taken in the first year~~
- LABMP 510
- If required, two 3-unit graded graduate-level courses in Laboratory Medicine and Pathology (LABMP) or approved courses in other departments
- ~~It is recommended that all students also complete LABMP 511~~
- Course requirements are approved by the Supervisor and Supervisory Committee based on the background of the student and the area of research specialization.
- Additional coursework may be required

Thesis
- Registration in 900-level THES

…

Ethics Requirement
Thesis-based students in the Department of Laboratory Medicine & Pathology must meet the FGSR Ethics and Academic Citizenship Training Requirement through the completion of INT D 710 (for both master's and doctoral students) and INT D 720 (for doctoral students) by the end of the first term of registration in their degree program.

Professional Development Requirement
…

Required Coursework
- LABMP 510
- If required, two 3-unit graded graduate-level courses in Laboratory Medicine and Pathology (LABMP) or approved courses in other departments
- Course requirements are approved by the Supervisor and Supervisory Committee based on the background of the student and the area of research specialization.
- Additional coursework may be required

Specific courses required for the MSc or PhD degree that have been taken to satisfy the requirements of a previous degree can be substituted with another course at the same level, subject to recommendation by the supervisor (in consultation with the supervisory committee, where appropriate), and approval of the Department's Graduate Program Director.

Thesis
- Registration in 900-level THES

…

Ethics Requirement
Thesis-based students in the Department of Laboratory Medicine & Pathology must meet the FGSR Ethics and Academic Citizenship Training Requirement through the completion of INT D 710 (for both master's and doctoral students) and INT D 720 (for doctoral students) by the end of the first term of registration in their degree program.

Doctoral students who completed their Master's degree at the University of Alberta and previously passed INT D 710 Ethics and Academic Citizenship are only required to take INT D 720 - Advanced Ethics and Academic Citizenship.

Professional Development Requirement
…

Doctor of Philosophy with Specialization in Molecular Pathology (Laboratory Medicine and Pathology)

Program Requirements
Students entering the program after a BSc degree are required to complete a minimum of 12 units in graded coursework and a thesis.

Doctor of Philosophy with Specialization in Molecular Pathology (Laboratory Medicine and Pathology)

Program Requirements
Students entering the program after a BSc degree are required to complete a minimum of 12 units in graded coursework and a thesis.

Students entering the program after an MSc degree are required to complete a minimum of 6 units in graded coursework and a thesis.

Required Coursework
- ~~LABMP 530 – this course is normally taken in the first year~~
- LABMP 581
- If required, two 3-unit graded graduate-level courses in Laboratory Medicine and Pathology (LABMP) or approved courses in other departments
- It is recommended that all students also complete LABMP 500
- Course requirements are approved by the Supervisor and Supervisory Committee based on the background of the student and the area of research specialization.
- Additional coursework may be required

Thesis
- Registration in 900-level THES

…

Ethics Requirement
Thesis-based students in the Department of Laboratory Medicine & Pathology must meet the FGSR Ethics and Academic Citizenship Training Requirement through the completion of INT D 710 (for both master's and doctoral students) and INT D 720 (for doctoral students) by the end of the first term of registration in their degree program.

Professional Development Requirement

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Students entering the program after an MSc degree are required to complete a minimum of 6 units in graded coursework and a thesis.

Required Coursework
- LABMP 581
- If required, two 3-unit graded graduate-level courses in Laboratory Medicine and Pathology (LABMP) or approved courses in other departments
- It is recommended that all students also complete LABMP 500
- Course requirements are approved by the Supervisor and Supervisory Committee based on the background of the student and the area of research specialization.
- Additional coursework may be required

Specific courses required for the MSc or PhD degree that have been taken to satisfy the requirements of a previous degree can be substituted with another course at the same level, subject to recommendation by the supervisor (in consultation with the supervisory committee, where appropriate), and approval of the Department's Graduate Program Director.

Thesis
- Registration in 900-level THES

…

Ethics Requirement
Thesis-based students in the Department of Laboratory Medicine & Pathology must meet the FGSR Ethics and Academic Citizenship Training Requirement through the completion of INT D 710 (for both master's and doctoral students) and INT D 720 (for doctoral students) by the end of the first term of registration in their degree program.

Doctoral students who completed their Master's degree at the University of Alberta and previously passed INT D 710 Ethics and Academic Citizenship are only required to take INT D 720 - Advanced Ethics and Academic Citizenship.

Professional Development Requirement

…

Reviewed/Approved by:

FoMD Faculty Learning Committee (Faculty Council-delegated Approver) – August 31, 2022
FoMD Faculty Council (for information/suggestions/challenges) – September 16, 2022

LMP Graduate Studies Committee (GSC) – approved June 20, 2022
FoMD Graduate Programs Committee (GPC) – October 25, 2022
Graduate Program Support Team - November 28, 2022

Calendar Change Request Form for Program and Regulation Changes

See the Calendar Guide for tips on how to complete this form.

Faculty (& Department or Academic Unit):	**FoMD** – Department of Surgery/Graduate Program
Contact Person:	Tracey Zawalusky (surggrad@ualberta.ca) Dr. Fred Berry (fberry@ualberta.ca)
Level of change (choose one only) [?]	☐ Undergraduate ☒ Graduate
Type of change request (check all that apply) [?]	☒ Program ☐ Regulation
For which term is this intended to take effect?	Fall 2023
Does this proposal have corresponding course changes? (Should be submitted at the same time)	NO

Rationale

These changes will allow students pursuing a graduate degree in the Department of Surgery to meet all course requirements if required courses have been taken in a previous program.

Calendar Copy

URL in current Calendar (or leave blank if it is a new page):

https://calendar.ualberta.ca/preview_program.php?catoid=36&poid=42348&hl=%22Surgery%22&returnto=search

Current	**Proposed**
~~Removed language~~	New language
Master of Science (Surgery)	**Master of Science (Surgery)**
Program Requirements	**Program Requirements**
Students are required to complete a minimum of 11 units in coursework and a thesis.	Students are required to complete a minimum of 11 units in coursework and a thesis.
Coursework	**Coursework**
SURG 530 - Directed Reading in Biology and Medicine	SURG 530 - Directed Reading in Biology and Medicine
SURG 600 - Research Seminar	SURG 600 - Research Seminar

One 3-unit graduate level statistics course; one of the following courses offered by the School of Public Health is recommended:
 	
    ● SPH 531 - Statistical Methods in Health Research
 	
    ● SPH 519 - Biostatistics I
 	
One 3-unit graduate-level graded course
 	
Students in Clinician Investigator Program (CIP) must take MED 650 - Fundamentals for Clinical Investigators
 	
Students are encouraged to take graduate-level courses in other departments that complement their specific research area
 	
Courses are approved in consultation with the supervisory committee and the departmental graduate coordinator
	One 3-unit graduate level statistics course; one of the following courses offered by the School of Public Health is recommended:
	
	    ● SPH 531 - Statistical Methods in Health Research
	
	    ● SPH 519 - Biostatistics I
	
	One 3-unit graduate-level graded course
	
	Students in Clinician Investigator Program (CIP) must take MED 650 - Fundamentals for Clinical Investigators
	
	Students are encouraged to take graduate-level courses in other departments that complement their specific research area
	
	Courses are approved in consultation with the supervisory committee and the departmental graduate coordinator
	
	    o ==Specific courses required for the MSc degree that have been taken to satisfy the requirements of a previous degree can be substituted with another course at the same level, subject to recommendation by the supervisor (in consultation with the supervisory committee, where appropriate), and approval of the Department's Graduate Program Director.==

Reviewed/Approved by:

FoMD Faculty Learning Committee (Faculty Council-delegated Approver) – October 14, 2022 FoMD Faculty Council (for information/suggestions/challenges) – October 31, 2022
FoMD Graduate Programs Committee – September 12, 2022 Graduate Program Support Team - November 28, 2022

UNIVERSITY OF ALBERTA

Calendar Change Request Form for Program and Regulation Changes

See the Calendar Guide for tips on how to complete this form.

Faculty (& Department or Academic Unit):	**FoMD** – Department of Surgery/Graduate Program
Contact Person:	Tracey Zawalusky (surggrad@ualberta.ca) Dr. Fred Berry (fberry@ualberta.ca)
Level of change (choose one only) [?]	☐ Undergraduate ☒ Graduate
Type of change request (check all that apply) [?]	☒ Program ☐ Regulation
For which term is this intended to take effect?	Fall 2023
Does this proposal have corresponding course changes? (Should be submitted at the same time)	NO

Rationale

These changes will allow students pursuing a graduate degree in the Department of Surgery to meet all course requirements if required courses have been taken in a previous program.

Calendar Copy

URL in current Calendar (or leave blank if it is a new page):

https://calendar.ualberta.ca/preview_program.php?catoid=36&poid=42348&hl=%22Surgery%22&returnto=search

Current	Proposed
Removed language	New language
Master of Science in Surgery with a specialization in Surgical Education (Surgery)	**Master of Science in Surgery with a specialization in Surgical Education (Surgery)**
Program Requirements	**Program Requirements**
Students are required to complete a minimum of 17 units in coursework and a thesis.	Students are required to complete a minimum of 17 units in coursework and a thesis.
Coursework	**Coursework**
SURG 530 - Directed Reading in Biology and Medicine	SURG 530 - Directed Reading in Biology and Medicine

SURG 600 - Research Seminar

One 3-unit graduate level statistics course; one of the following courses offered by the School of Public Health is recommended
- SPH 531 - Statistical Methods in Health Research
- SPH 519 - Biostatistics I

One 3-unit graduate level course in research methodology, chosen from the following:
- EDEL 665 - Qualitative Research Methods in Education
- EDPY 501 - Introduction to Methods of Educational Research
- EDPY 505 - Quantitative Methods I
- EDPY 604 - Mixed Methods Approaches to Educational Research
- EDPY 605 - Quantitative Methods II

Two 3-unit graduate level courses relevant to the field of study, chosen from the following:
- EDPS 521 - Adult Learning and Development
- EDPY 524 - The Psychology of Technology-based Learning
- EDPY 597 - Special Seminars Assessment and Evaluation in the Health Sciences
- EDPY 597 - Special Seminars Integrating Technology Across the Curriculum
- EDPY 597 - Special Seminars Philosophy of Teaching
- EDPY 597 - Special Seminars Curriculum studies in the Health Sciences
- EDPY 615 - Program Evaluation

Additional courses that are deemed relevant to the research project may be approved on an individual basis.

Specific courses required for the MSc degree that have been taken to satisfy the requirements of a previous degree can be substituted with another course at the same level, subject to recommendation by the supervisor (in consultation with the supervisory committee, where appropriate), and approval of the

	==Department's Graduate Program Director.==

Reviewed/Approved by:

FoMD Faculty Learning Committee (Faculty Council-delegated Approver) – October 14, 2022 FoMD Faculty Council (for information/suggestions/challenges) – October 31, 2022
FoMD Graduate Programs Committee – September 12, 2022 Graduate Program Support Team - November 28, 2022

UNIVERSITY OF ALBERTA

Calendar Change Request Form for Program and Regulation Changes

See the Calendar Guide for tips on how to complete this form.

Faculty (& Department or Academic Unit):	**FoMD** – Department of Surgery/Graduate Program
Contact Person:	Tracey Zawalusky (surggrad@ualberta.ca) Dr. Fred Berry (fberry@ualberta.ca)
Level of change (choose one only) [?]	☐ Undergraduate ☒ Graduate
Type of change request (check all that apply) [?]	☒ Program ☐ Regulation
For which term is this intended to take effect?	Fall 2023
Does this proposal have corresponding course changes? (Should be submitted at the same time)	NO

Rationale

These changes will allow students pursuing a graduate degree in the Department of Surgery to meet all course requirements if required courses have been taken in a previous program.

Calendar Copy

URL in current Calendar (or leave blank if it is a new page):

https://calendar.ualberta.ca/preview_program.php?catoid=36&poid=42348&hl=%22Surgery%22&returnto=search

Current	Proposed
Removed language	New language
Doctor of Philosophy (Surgery)	**Doctor of Philosophy (Surgery))**
Program Requirements	**Program Requirements**
Students are required to complete a minimum of 14 units in coursework and a thesis.	Students are required to complete a minimum of 14 units in coursework and a thesis.
Coursework	**Coursework**
SURG 530 - Directed Reading in Biology and Medicine	SURG 530 - Directed Reading in Biology and Medicine
SURG 600 - Research Seminar	SURG 600 - Research Seminar

One 3-unit graduate level statistics course; one of the following courses offered by the School of Public Health is recommended • SPH 531 - Statistical Methods in Health Research • SPH 519 - Biostatistics I Two 3-unit graduate-level graded course Students in Clinician Investigator Program (CIP) must take MED 650 - Fundamentals for Clinical Investigators Students are encouraged to take graduate-level courses in other departments that complement their specific research area Courses are approved in consultation with the supervisory committee and the departmental graduate coordinator	One 3-unit graduate level statistics course; one of the following courses offered by the School of Public Health is recommended • SPH 531 - Statistical Methods in Health Research • SPH 519 - Biostatistics I Two 3-unit graduate-level graded course Students in Clinician Investigator Program (CIP) must take MED 650 - Fundamentals for Clinical Investigators Students are encouraged to take graduate-level courses in other departments that complement their specific research area Courses are approved in consultation with the supervisory committee and the departmental graduate coordinator ==Specific courses required for the MSc degree that have been taken to satisfy the requirements of a previous degree can be substituted with another course at the same level, subject to recommendation by the supervisor (in consultation with the supervisory committee, where appropriate), and approval of the Department's Graduate Program Director.==

Reviewed/Approved by:

FoMD Faculty Learning Committee (Faculty Council-delegated Approver) – October 14, 2022 FoMD Faculty Council (for information/suggestions/challenges) – October 31, 2022
FoMD Graduate Programs Committee – September 12, 2022 Graduate Program Support Team - November 28, 2022

UNIVERSITY OF ALBERTA
FACULTY OF GRADUATE STUDIES & RESEARCH

Explanatory Memo: Faculty of Nursing Calendar Updates for Master of Nursing Courses

Motion: Be it resolved that FGSR Council approve the following calendar revisions related to NURS 508, NURS 589, NURS 590, NURS 591, and NURS 900 to be implemented upon final approval, and included in the 2023-2024 calendar.	

Committee:	FGSR Council		
Meeting Date:	December 7, 2022	Item #:	9.0
Presenter:	Dianne Tapp (Associate Dean Graduate Studies, Faculty of Nursing)		
What changes/proposals are being considered:	1. NURS 508 - Health Care Technology and Innovation - Change to course title and course description 2. NURS 589 - Revision to course title 3. NURS 590 - Revision to course title 4. NURS 591 - Revision to course title 5. NURS 900 - Revision to course title and description		
Rationale	See included Calendar Change Request forms. Calendar changes requested for updating and accuracy in reflecting course offerings.		
Consultation / approval pathway and dates:	● GPST Graduate Program Support Team - August 29, 2022 ● Faculty of Nursing Caucus - September 26, 2022 ● Faculty of Nursing Graduate Education Committee - October 13, 2022 ● Faculty of Nursing Council - October 24, 2022 ● Policy Review Committee - November 10, 2022 ● FGSR Council - December 7, 2022 ● Programs Committee - January 12, 2022		
Other comments/info:			
Date Submitted:	October 25, 2022	Submitted By:	Dianne Tapp

Calendar Changes to Graduate Program Requirements

Faculty (& Department or Academic Unit):	Faculty of Nursing
Contact Person:	Dianne Tapp (Associate Dean Graduate Studies)
Type of change request: (check all that apply)	☑ Program
	☑ Regulation
For which term is this intended to take effect?	Fall 2023

Rationale

Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

NURS 508 was introduced as an elective to the MN curriculum more than a decade ago, with emphasis on health technology assessment and economic theory. Since that time, the digital health landscape has evolved dramatically, with increasing sophistication of clinical information systems and EHealth records, and emerging healthcare applications in areas such as artificial intelligence, big data, machine learning, genomics, precision medicine, wearable technologies, robotics, telehealth and virtual care. Graduate students in diverse roles in nursing and other health disciplines need to understand digitally rich healthcare environments to practice competently in their fields, and to lead health system transformation. The proposed change in title and content is intended to update this course, which will be relevant to students in all advanced focus areas in the Master of Nursing curriculum, and may be of interest to graduate students in other health science faculties.

Course Template

Current Copy: Removed language	Proposed Copy: New language
Subject & Number NURS 508	**Subject & Number NURS 508**
Title: ~~Health Care Technology and Innovation~~	Title: Leading Digital Health Transformation
Course Career: Graduate **Units**: 3 **Approved Hours**: 3 **Fee index**: 6 **Faculty**: Nursing **Department**: Nursing **Typically Offered**: either term	**Course Career**: Graduate **Units**: 3 **Approved Hours**: 3 **Fee index**: 6 **Faculty**: Nursing **Department**: Nursing **Typically Offered**: either term
Description	**Description**
~~The focus of this course is on the context of healthcare organizations and economic theory relevant to technology or innovation adoption.~~	This course focuses on the interdisciplinary fields of digital health and informatics, enabling a critical examination of the opportunities and challenges associated with the rapid and complex digital transformation of healthcare to improve health and wellness, and quality and safety of person-centric care. Emphasis displaced on understanding the landscape of digital health, its applications, and emerging trends and issues.

Reviewed/Approved by:

REQUIRED: Faculty council (or delegate) and approval date.

GPST Graduate Program Support Team - August 29, 2022
Faculty of Nursing Council - October 24, 2022
Policy Review Committee - November 10, 2022
FGSR Council - December 7, 2022
Programs Committee - January 12, 2023

OPTIONAL: Other internal faculty approving bodies, consultation groups, or departments, and approval dates.

- Faculty of Nursing Graduate Education Committee - September 8, 2022; October 13, 2022
- Faculty of Nursing Caucus - September 26, 2022

Faculty (& Department or Academic Unit):	Faculty of Nursing
Contact Person:	Dr. Dianne Tapp (Associate Dean Graduate Studies)
Level of change: (choose one only) [?]	☐ Undergraduate
	☑ Graduate
For which term will this change take effect?	Fall 2023

Rationale

Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

Major revisions were introduced to the Master of Nursing Curriculum in 2021-2022. A series of three one-credit courses (NURS 589, 590, 591) were introduced to engage master's students in a "community of inquiry" that introduces students to the nature of nursing scholarship and research in the Faculty of Nursing, and guides them to systematically choose and refine a capstone/thesis topic, explore relevant literature, and develop their project proposals. Course instructors work collaboratively and engage individual graduate supervisors as needed throughout. The proposed change in titles for these three courses is intended to distinguish these courses from a similar seminar series offered at the doctoral level.

Course Template

Current: ~~Removed language~~	Proposed: New language
Subject & Number: NURS 589	**Subject & Number:** NURS 589
Title: Community of Inquiry I ~~Engaging with Nursing Scholarship~~	**Title:** Master's Community of Inquiry I
Course Career: Graduate **Units**: 1 **Approved Hours**: 0-1S-0 **Fee index**: 2 **Faculty**: Nursing **Department**: Nursing **Typically Offered**: ~~either~~	**Course Career:** Graduate **Units:** 1 **Approved Hours:** 0-1S-0 **Fee index:** 2 **Faculty:** Nursing **Department:** Nursing **Typically Offered:** Fall
Description	**Description**
Deepen understanding of the nature of nursing scholarship and research by engaging with the work of nursing faculty researchers. Emphasis is placed on developing collaborative critical dialogue as an introduction to systematic enquiry into a topic of relevance to the student's selected area of advanced focus.	Deepen understanding of the nature of nursing scholarship and research by engaging with the work of nursing faculty researchers. Emphasis is placed on developing collaborative critical dialogue as an introduction to systematic enquiry into a topic of relevance to the student's selected area of advanced focus.

Reviewed/Approved by:

REQUIRED: Faculty Council (or delegate) and approval date.

- GPST Graduate Program Support Team - August 29, 2022
- Faculty of Nursing Council - October 24, 2022
- Policy Review Committee - November 10, 2022
- FGSR Council - December 7, 2022
- Programs Committee - January 12, 2022

OPTIONAL: Other internal faculty approving bodies, consultation groups, or departments, and approval dates.

- Faculty of Nursing Graduate Education Committee - September 7, 2022; October 13, 2022
- Faculty of Nursing Caucus - September 26, 2022

Faculty (& Department or Academic Unit):	Faculty of Nursing
Contact Person:	Dr. Dianne Tapp (Associate Dean Graduate Studies)
Level of change: (choose one only) [?]	☐ Undergraduate
	☑ Graduate
For which term will this change take effect?	Fall 2023

Rationale

Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

Major revisions were introduced to the Master of Nursing Curriculum in 2021-2022. A series of three one-credit courses (NURS 589, 590, 591) were introduced to engage master's students in a "community of inquiry" that introduces students to the nature of nursing scholarship and research in the Faculty of Nursing, and guides them to systematically choose and refine a capstone/thesis topic, explore relevant literature, and develop their project proposals. Course instructors work collaboratively and engage individual graduate supervisors as needed throughout. The proposed change in titles for these three courses is intended to distinguish these courses from a similar seminar series offered at the doctoral level.

Course Template

Current: Removed language	Proposed: New language
Subject & Number: NURS 590	**Subject & Number**: NURS 590
Title: Community of Inquiry II Research Question and Literature Review	**Title**: Master's Community of Inquiry II
Course Career: Graduate **Units**: 1 **Approved Hours**: 0-1S-0 **Fee index**: 2 **Faculty**: Nursing **Department**: Nursing **Typically Offered**: either	**Course Career**: Graduate **Units**: 1 **Approved Hours**: 0-1S-0 **Fee index**: 2 **Faculty**: Nursing **Department**: Nursing **Typically Offered**: Winter
Description	**Description**
Explore development of questions appropriate for systematic research and inquiry. Emphasis is placed on locating and exploring literature that informs the current state and limits of knowledge relevant to the student's selected advanced focus area of study. Prerequisite: NURS 589	Explore development of questions appropriate for systematic research and inquiry. Emphasis is placed on locating and exploring literature that informs the current state and limits of knowledge relevant to the student's selected advanced focus area of study. Prerequisite: NURS 589

Reviewed/Approved by:

REQUIRED: Faculty Council (or delegate) and approval date.

- GPST Graduate Program Support Team - August 29, 2022
- Faculty of Nursing Council - October 24, 2022
- Policy Review Committee - November 10, 2022
- FGSR Council - December 7, 2022
- Programs Committee - January 12, 2022

OPTIONAL: Other internal faculty approving bodies, consultation groups, or departments, and approval dates.

- Faculty of Nursing Graduate Education Committee - September 7, 2022; October 13, 2022
- Faculty of Nursing Caucus - September 26, 2022

Faculty (& Department or Academic Unit):	Faculty of Nursing
Contact Person:	Dr. Dianne Tapp (Associate Dean Graduate Studies)
Level of change: (choose one only) [?]	☐ Undergraduate
	☑ Graduate
For which term will this change take effect?	Fall 2023

Rationale

Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

Major revisions were introduced to the Master of Nursing Curriculum in 2021-2022. A series of three one-credit courses (NURS 589, 590, 591) were introduced to engage master's students in a "community of inquiry" that introduces students to the nature of nursing scholarship and research in the Faculty of Nursing, and guides them to systematically choose and refine a capstone/thesis topic, explore relevant literature, and develop their project proposals. Course instructors work collaboratively and engage individual graduate supervisors as needed throughout. The proposed change in titles for these three courses is intended to distinguish these courses from a similar seminar series offered at the doctoral level.

Course Template

Current: ~~Removed language~~	Proposed: New language
Subject & Number: NURS 591	**Subject & Number**: NURS 591
Title: Community of Inquiry III ~~– Building Collaborative Inquiry~~	**Title**: Master's Community of Inquiry III
Course Career: Graduate	**Course Career**: Graduate
Units: 1	**Units**: 1
Approved Hours: 0-1S-0	**Approved Hours**: 0-1S-0
Fee index: 2	**Fee index**: 2
Faculty: Nursing	**Faculty**: Nursing
Department: Nursing	**Department**: Nursing
Typically Offered: ~~either~~	**Typically Offered**: Spring or Fall
Description	**Description**
Build collaborative capacity in the development of systematic research and inquiry. Emphasis is placed on peer review of capstone and thesis proposal development and on strengthening communication skills for the effective articulation of ideas and arguments to and with diverse audiences. Prerequisite: NURS 590.	Build collaborative capacity in the development of systematic research and inquiry. Emphasis is placed on peer review of capstone and thesis proposal development and on strengthening communication skills for the effective articulation of ideas and arguments to and with diverse audiences. Prerequisite: NURS 590.

Reviewed/Approved by:

REQUIRED: Faculty Council (or delegate) and approval date.

- GPST Graduate Program Support Team - August 29, 2022
- Faculty of Nursing Council - October 24, 2022
- Policy Review Committee - November 10, 2022
- FGSR Council - December 7, 2022
- Programs Committee - January 12, 2022

OPTIONAL: Other internal faculty approving bodies, consultation groups, or departments, and approval dates.

- Faculty of Nursing Graduate Education Committee - September 7, 2022; October 13, 2022
- Faculty of Nursing Caucus - September 26, 2022

Faculty (& Department or Academic Unit):	Faculty of Nursing
Contact Person:	Dr. Dianne Tapp (Associate Dean Graduate Studies)
Level of change: (choose one only) [?]	☐ Undergraduate
	☑ Graduate
For which term will this change take effect?	Fall 2023

Rationale

Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

Major revisions were introduced to the Master of Nursing Curriculum in 2021-2022. A series of three one-credit courses (NURS 589, 590, 591) were introduced to engage master's students in a "community of inquiry" that introduces students to the nature of nursing scholarship and research in the Faculty of Nursing, and guides them to systematically choose and refine a capstone/thesis topic, explore relevant literature, and develop their project proposals. For course-based students, this series culminates in NURS 900 as they work closely with a faculty member who serves as their capstone supervisor while engaging in a regular weekly seminar which supports completion of the project and writing of the capstone report.

Course Template

Current: ~~Removed language~~	Proposed: New language
Subject & Number: NURS 900	**Subject & Number**: NURS 900
Title: ~~Guided Scholarly~~ Project	**Title**: Capstone Project
Course Career: Graduate **Units**: 3 **Approved Hours**: ~~UNASSIGNED~~ **Fee index**: 6 **Faculty**: Nursing **Department**: Nursing **Typically Offered**: either term	**Course Career**: Graduate **Units**: 3 **Approved Hours**: 0-3S-0 **Fee index**: 2 **Faculty**: Nursing **Department**: Nursing **Typically Offered**: either term
Description ~~A guided scholarly project which will focus~~ on areas such as clinical outcomes, evidence-based practice, quality improvement, or knowledge diffusion.	**Description** Course-based MN students complete a capstone project which focuses on areas such as clinical outcomes, evidence-based practice, quality improvement, or knowledge diffusion. Based upon an approved capstone proposal, students are guided through the process of completing the capstone project and final report.

Reviewed/Approved by:

REQUIRED: Faculty Council (or delegate) and approval date.

- GPST Graduate Program Support Team - August 29, 2022
- Faculty of Nursing Council - October 24, 2022
- Policy Review Committee - November 10, 2022
- FGSR Council - December 7, 2022
- Programs Committee - January 12, 2022

OPTIONAL: Other internal faculty approving bodies, consultation groups, or departments, and approval dates.

- Faculty of Nursing Graduate Education Committee - September 7, 2022; October 13, 2022
- Faculty of Nursing Caucus - September 26, 2022

Calendar Change Request Form

for Course Changes
See the Calendar Guide for tips on how to complete this form.

Faculty (& Department or Academic Unit):	Faculté Saint-Jean
Contact Person:	Marie Simuong / Anne Boerger
Level of change: (choose one only) [?]	☑ Undergraduate
	☐ Graduate
For which term will this change take effect?	Fall 2023

Rationale
Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

Deletion of BIOLE 221
BIOLE 221 is proposed for deletion from the catalog, as this course has never been offered since its inception in 2018 (the year BIOLE 321 was converted to BIOLE 221, and, the last time BIOLE 321 was offered was in 2013). BIOLE 221 is not the area of specialty of any of the FSJ professors. It would be more beneficial to students to have a more advanced course offered instead.

Biole 380
Update of the course description related to the prerequisite

Creation of BIOLE 341
The new course BIOLE 341 (equivalent to BIOL 341 at North Campus) will accommodate our students' need for more advanced French biology courses (300-level) and will be of interest to both ecology and medical biology students as it examines the effect of pollutants on organisms. The prerequisites for this course (BIOLE 208, PHYSICS 210, CHIM 164/261) are popular courses already offered at CSJ. The potential offering of this course was discussed with BIOLE 208 students in the Fall 2021 and 2022 semesters and students expressed interest in such a course. This proposal builds on the expertise we already have within the Saint-Jean faculty. Finally, it will be proposed to rotate BIOLE 341 with the BIOLE 380 course which will provide a new advanced course for students at no new cost to the CSJ.

Course Template

CURRENT Current: ~~Removed language~~	PROPOSED Proposed: New language
~~BIOLE 221 - Mécanismes de l'évolution~~ ~~Course Career Undergraduate~~ ~~Units 3~~ ~~Approved Hours 3-0-0~~ ~~Fee index 6~~ ~~Faculty Faculté Saint-Jean~~ ~~Department Saint-Jean~~ ~~Typically Offered l'un ou l'autre semestre~~ ~~Description~~ ~~Les principales caractéristiques du processus évolutif, incluant les données fossiles, les fondements de la génétique des populations, la sélection naturelle, l'adaptation et la spéciation. Préalable(s): BIOLE 107 et 108, ou SCI 100. Note : Ce cours n'est pas accessible aux étudiants ayant ou postulant des crédits pour BIOL 221 et BIOLE/BIOL 321.~~	Delete
BIOLE 380 - Analyse génétique des populations Course Career Undergraduate Units 3 Approved Hours 3-1S-0 Fee index 6 Faculty Faculté Saint-Jean Department Saint-Jean Typically Offered l'un ou l'autre semestre Description Application de la biologie moléculaire à l'étude de la systématique, de la structure des populations naturelles, des systèmes d'accouplement et de la criminalistique. Les sujets discutés incluent les techniques de détection de la variation génétique des populations naturelles, l'analyse phylogénétique de données moléculaires, les modèles mathématiques de la structure des populations, l'analyse de paternité et les empreintes génétiques. Préalable: BIOLE 207. BIOLE 221 est recommandé.	**BIOLE 380 - Analyse génétique des populations** Course Career Undergraduate Units 3 Approved Hours 3-1S-0 Fee index 6 Faculty Faculté Saint-Jean Department Saint-Jean Typically Offered l'un ou l'autre semestre Description Application de la biologie moléculaire à l'étude de la systématique, de la structure des populations naturelles, des systèmes d'accouplement et de la criminalistique. Les sujets discutés incluent les techniques de détection de la variation génétique des populations naturelles, l'analyse phylogénétique de données moléculaires, les modèles mathématiques de la structure des populations, l'analyse de paternité et les empreintes génétiques. Préalable: BIOLE 207. BIOLE 221 ou équivalent est recommandé.

NEW	**BIOLE 341 - Écotoxicologie**
	Course Career Undergraduate
	Units 3
	Approved Hours 3-0-0
	Fee index 6
	Faculty Faculté Saint-Jean
	Department Saint-Jean
	Typically Offered l'un ou l'autre semestre
	Description
	Survol des effets néfastes des agents chimiques et physiques sur les systèmes biologiques dans un contexte écologique. Ce cours permet de comprendre les effets biologiques et leur évaluation grâce à une approche multidisciplinaire ancrée dans les savoirs occidentaux et autochtones. Préalable(s) BIOLE 208, ZOOL 241, ou PHYSE 210, ou PHYSL 212 ou 214 et CHIM 164 ou 261; ou équivalent. Note: Ce cours n'est pas accessible aux étudiants ayant ou postulant des crédits pour BIOL 341.

Reviewed/Approved by:

REQUIRED: Faculty Council (or delegate) and approval date.
Faculté Saint-Jean Executive Committee - November 3, 2022
Faculté Saint-Jean Council - November 17, 2022

OPTIONAL: Other internal faculty approving bodies, consultation groups, or departments, and approval dates.

University of Alberta

Calendar Change Request Form

for Course Changes
See the [Calendar Guide](#) for tips on how to complete this form.

Faculty (& Department or Academic Unit):	Faculté Saint-Jean
Contact Person:	Marie Simuong
Level of change: (choose one only) [?]	☑ Undergraduate
	☐ Graduate
For which term will this change take effect?	Winter and Fall 2023

Rationale
Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

Updated psychologie courses (PSYCE 105, 258, 275, 305)
The changes are proposed to align the prerequisites of our courses with those of North Campus and the removal of the prerequisites will make these courses more accessible to students.

Course Template

CURRENT Current: ~~Removed language~~	PROPOSED Proposed: New language
PSYCE 105 - Comportement social et individuel Course Career Undergraduate Units 3 Approved Hours 3-0-1/4 Fee index 6 Faculty Faculté Saint-Jean Department Saint-Jean Typically Offered either term Description Introduction à l'étude de l'individualité humaine, de la personnalité et des processus sociaux. Le cours peut inclure l'étude de quelques aspects du développement humain normal et anormal, du jugement et du traitement psychologiques. ~~Préalable(s): PSYCE 104 ou SCI 100.~~ Peut comprendre des sections Alternative Delivery; veuillez consulter la page Fees Payment Guide dans la section University Regulations de l'annuaire.	**PSYCE 105 - Comportement social et individuel** Course Career Undergraduate Units 3 Approved Hours 3-0-1/4 Fee index 6 Faculty Faculté Saint-Jean Department Saint-Jean Typically Offered either term Description Introduction à l'étude de l'individualité humaine, de la personnalité et des processus sociaux. Le cours peut inclure l'étude de quelques aspects du développement humain normal et anormal, du jugement et du traitement psychologiques. Peut comprendre des sections Alternative Delivery; veuillez consulter la page Fees Payment Guide dans la section University Regulations de l'annuaire.

PSYCE 258 - Psychologie cognitive Course Career Undergraduate Units 3 Approved Hours 3-0-0 Fee index 6 Faculty Faculté Saint-Jean Department Saint-Jean Typically Offered l'un ou l'autre semestre Description Une introduction à l'étude des processus cognitifs. Les principaux sujets abordés: la perception, l'attention, la représentation des connaissances, la mémoire, l'apprentissage, le langage, le raisonnement, et la résolution de problèmes. Préalable(s): PSYCE 104 ou SCI 100 ==et un parmi STATQ 151 ou SCSOC 322 ou SCI 151.==	**PSYCE 258 - Psychologie cognitive** Course Career Undergraduate Units 3 Approved Hours 3-0-0 Fee index 6 Faculty Faculté Saint-Jean Department Saint-Jean Typically Offered l'un ou l'autre semestre Description Une introduction à l'étude des processus cognitifs. Les principaux sujets abordés: la perception, l'attention, la représentation des connaissances, la mémoire, l'apprentissage, le langage, le raisonnement, et la résolution de problèmes. Préalable(s): PSYCE 104 ou SCI 100.
PSYCE 275 - Cerveau et comportement Course Career Undergraduate Units 3 Approved Hours 3-0-0 Fee index 6 Faculty Faculté Saint-Jean Department Saint-Jean Typically Offered l'un ou l'autre semestre Description Introduction à la fonction du cerveau et à son rapport à la sensation, à la perception, au mouvement, à l'apprentissage, à la motivation et à la pensée. Préalable(s): PSYCE 104 ou SCI 100==, STAT 141 ou STATQ 151 ou SCI 151 et Biologie 30 ou l'équivalent.==	**PSYCE 275 - Cerveau et comportement** Course Career Undergraduate Units 3 Approved Hours 3-0-0 Fee index 6 Faculty Faculté Saint-Jean Department Saint-Jean Typically Offered l'un ou l'autre semestre Description Introduction à la fonction du cerveau et à son rapport à la sensation, à la perception, au mouvement, à l'apprentissage, à la motivation et à la pensée. Préalable(s): PSYCE 104 ou SCI 100 ==ou équivalent.==
PSYCE 305 - Sujets spéciaux en psychologie Course Career Undergraduate Units 3 Approved Hours 3-0-0 Fee index 6 Faculty Faculté Saint-Jean Department Saint-Jean Typically Offered l'un ou l'autre semestre Description Étude et discussion de sujets spéciaux ou méthodes dans un ou plusieurs domaines de la psychologie contemporaine, tels que la psychologie sociale, cognitive, du développement et de la personnalité. Préalable(s) : ==PSYCE ou PSYCH 104 ou SCI 100 et PSYCE ou PSYCH 105.== Note : Les sujets et les préalables additionnels requis (s'il y a lieu) sont annoncés avant la période d'inscription.	**PSYCE 305 - Sujets spéciaux en psychologie** Course Career Undergraduate Units 3 Approved Hours 3-0-0 Fee index 6 Faculty Faculté Saint-Jean Department Saint-Jean Typically Offered l'un ou l'autre semestre Description Étude et discussion de sujets spéciaux ou méthodes dans un ou plusieurs domaines de la psychologie contemporaine, tels que la psychologie sociale, cognitive, du développement et de la personnalité. Préalable(s) ==: PSYCE 104 ou SCI 100 , PSYCE 105 et PSYCE de niveau 200; ou équivalent.== Note : Les sujets et les préalables additionnels requis (s'il y a lieu) sont annoncés avant la période d'inscription.

Reviewed/Approved by:

REQUIRED: Faculty Council (or delegate) and approval date.

FSJ Executive Committee - November 3, 2022
FSJ Council - November 17, 2022

OPTIONAL: Other internal faculty approving bodies, consultation groups, or departments, and approval dates.

Calendar Change Request Form
for Program and Regulation Changes
See the Calendar Guide for tips on how to complete this form.

Faculty (& Department or Academic Unit):	Faculté Saint-Jean
Contact Person:	Marie Simuong
Level of change: (choose one only)	☑ Undergraduate
	☐ Graduate
Type of change request: (check all that apply)	☐ Program
	☑ Regulation
For which term is this intended to take effect?	Fall 2024
Does this proposal have corresponding course changes? (Should be submitted at the same time)	No

Rationale
Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

The categories in the classification are simply updated.

The course classification has not been updated for several years. Some courses included in the current classification have been deleted, are no longer offered or have been renamed while other courses, recently created, are not mentioned though they are relevant.

The proposed update will facilitate students' choice of courses and the task of academic advisors. It will also be useful when evaluating the admission files of transfer students from other universities. Finally, it will allow for better planning of course offerings from one year to the next.

Calendar Copy

Current Copy: ~~Removed language~~	Proposed Copy: New language
Règlements de la Faculté Saint-Jean	Règlements de la Faculté Saint-Jean

Current Copy:

Règlements de la Faculté Saint-Jean

Classification des cours
Pour répondre aux exigences de son programme d'études, l'étudiant est ~~souvent~~ obligé de choisir des cours parmi des catégories thématiques différentes. Afin de faciliter ce choix, la Faculté propose la classification suivante :

Anglais langue
ALS

Beaux-Arts et Littérature
ADRAM; ANGL; ~~LITT 228, LITT 135,~~ ~~FRANC 324,~~ ~~FRANC 330, FRANC 333, FRANC 334, FRANC 335,~~ ~~FRANC 336, FRANC 465, FRANC 466, FRANC 472, FRANC 482,~~ FRANC 484, ~~FRANC 485~~; MUSIQ.

Canadien
~~ANGL 328, ANGL 429,~~ ECONE 101, ECONE 102, ~~341~~; EDU F 235; ETCAN; HISTE 260, HISTE 261, ~~360, 366, 380,~~ HISTE 476; ~~M EDU 520, M EDU 540~~; MUSIQ 215, ~~MUSIQ 301~~; SC PO 225, SC PO 226, SC PO 423, SC PO 428; SOCIE 260, SOCIE 301, SOCIE 368 ~~, 472~~.

Francophonies
EDU F 235; ETCAN 201, ETCAN 330, ETCAN 332, ETCAN 360; ~~FRANC 465, FRANC 466, FRANC 470;~~ ~~HISTE 380;~~ HISTE 476; LINGQ 340, ~~LINGQ 370;~~ LITT 224; ~~M EDU 520, M EDU 540~~; MUSIQ 215; SOCIE 368.

Français langue
FRANC 116, FRANC 117, ~~FRANC 213~~, FRANC 216, FRANC 217, FRANC 226, FRANC 227, ~~LINGQ 130,~~ FRANC 232, ~~FRANC 305, LINGQ 331, LINGQ 332, FRANC 340,~~ FRANC 400, ~~LINGQ 370, FRANC 475, LINGQ 200, LINGQ 305, LINGQ 320, LINGQ 340.~~

~~Humanités~~
~~ANGL; ESPA; FRANC.~~

Sciences
ANATE; BIOCM; BIOLE; ~~BOTQ~~; CHIM; IMINE; INFOR; MATHQ; MICRE; PHYSE; PHYSQ; PSYCE 104, PSYCE 258, PSYCE 275, PSYCE 282, PSYCE 367, PSYCE 377, PSYCE 381, PSYCE 458, PSYCE 496; ~~SCTA~~; STATQ.

Proposed Copy:

Règlements de la Faculté Saint-Jean

Classification des cours
Pour répondre aux exigences de son programme d'études, l'étudiant est obligé de choisir des cours parmi des catégories thématiques différentes. Afin de faciliter ce choix, la Faculté propose la classification suivante :

Anglais langue
ALS

Beaux-Arts et Littérature
Beaux-Arts: ADRAM; MUSIQ.
Littérature : ANGL; FRANC 395, FRANC 484; LITT

Canadien
ECONE 101, ECONE 102, ECONE 223; EDU F 235; ETCAN; HISTE 260, HISTE 261, HISTE 460, HISTE 476; LITT 224, LITT 334, LITT 482; MUSIQ 215; SC PO 225, SC PO 226, SC PO 320, SC PO 423, SC PO 428; SCSOC 120, SCSOC 212, SCSOC 215, SCSOC 222; SOCIE 260, SOCIE 301, SOCIE 368.

Francophonies
ADRAM 302, ADRAM 403; EDU F 235; ETCAN 201, ETCAN 330, ETCAN 332, ETCAN 360; FRANC 395; HISTE 325, HISTE 476; LINGQ 340, LINGQ 305; LITT 224, LITT 228, LITT 230, LITT 233, LITT 302, LITT 305, LITT 334, LITT 335, LITT 336, LITT 403, LITT 475, LITT 482, LITT 485, LITT 486; MUSIQ 215; SOCIE 368.

Français langue
FRANC 116, FRANC 117, FRANC 216, FRANC 217, FRANC 226, FRANC 227, FRANC 232, FRANC 400; LINGQ.

Sciences
ANATE; BIOCM; BIOLE; CHIM; GENEQ; IMINE; INFOR; MATHQ; MICRE; PHYSE; PHYSQ; PSYCE 104, PSYCE 258, PSYCE 275, PSYCE 282, PSYCE

Sciences de l'éducation ~~ANDR;~~ EDU F; EDU P; EDU M; EDU S; M EDU. **Sciences sociales** ADMI; ANTHE; ECONE; ETCAN; ET RE; HISTE; LINGQ; PHILE; PSYCE 105, PSYCE 106, PSYCE 223, PSYCE 239, PSYCE 241, PSYCE 333, PSYCE 498, SC PO; SCSOC; SCSP 520; ~~SCTA~~; SOCIE.	367, PSYCE 377, PSYCE 381, PSYCE 458, PSYCE 496; STATQ; ZOOLE. **Sciences de l'éducation** EDU F; EDU P; EDU M; EDU S; M EDU. **Sciences sociales** ADMI; ANTHE; ARTE; DEVDU; ECONE; ETCAN; ET RE; HISTE; LINGQ; PHILE; PSYCE 105, PSYCE 106, PSYCE 223, PSYCE 239, PSYCE 241, PSYCE 327, PSYCE 333, PSYCE 423, PSYCE 498, SC PO; SCSOC; SOCIE.

Faculté Saint-Jean (English)
https://calendar.ualberta.ca/content.php?catoid=36&navoid=11285#classification-of-courses

Current Copy: ~~Removed language~~	**Proposed Copy:** New language
<u>Faculté Saint-Jean Regulations (English)</u> **Classification of Courses** In order to fulfill the requirements of a particular program of study, students must often choose courses from several different content areas. To facilitate this choice, the Faculté proposes the following classification: **English Language** ALS **Fine Arts and Literature** ADRAM; ANGL; ~~LITT 228, LITT 135, FRANC 324, FRANC 330, FRANC 333, FRANC 334, FRANC 335, FRANC 336, FRANC 465, FRANC 466, FRANC 472, FRANC 482,~~ FRANC 484, ~~FRANC 485~~; MUSIQ. **Canadian** ~~ANGL 328, ANGL 429,~~ ECONE 101, ECONE 102, ~~341~~; EDU F 235; ETCAN; HISTE 260, HISTE 261, ~~360, 366, 380,~~ HISTE 476; ~~M EDU 520, M EDU 540~~; MUSIQ 215, ~~MUSIQ 301~~; SC PO 225, SC PO 226, SC PO 423, SC PO 428; SOCIE 260, SOCIE 301, SOCIE 368 ~~, 472~~. **Francophonies** EDU F 235; ETCAN 201, ETCAN 330, ETCAN 332, ETCAN 360; ~~FRANC 465, FRANC 466, FRANC 470~~; ~~HISTE 380~~; HISTE 476; LINGQ 340, ~~LINGQ 370~~; LITT 224; ~~M EDU 520, M EDU 540~~; MUSIQ 215; SOCIE 368.	<u>Faculté Saint-Jean Regulations (English)</u> **Classification of Courses** In order to fulfill the requirements of a particular program of study, students must often choose courses from several different content areas. To facilitate this choice, the Faculté proposes the following classification: **English Language** ALS **Fine Arts and Literature** Fine Arts : ADRAM; MUSIQ. Literature : ANGL; FRANC 395, FRANC 484; LITT **Canadian** ECONE 101, ECONE 102, ECONE 223; EDU F 235; ETCAN; HISTE 260, HISTE 261, HISTE 460, HISTE 476; LITT 224, LITT 334, LITT 482; MUSIQ 215; SC PO 225, SC PO 226, SC PO 320, SC PO 423, SC PO 428; SCSOC 120, SCSOC 212, SCSOC 215, SCSOC 222; SOCIE 260, SOCIE 301, SOCIE 368. **Francophonies** ADRAM 302, ADRAM 403; EDU F 235; ETCAN 201, ETCAN 330, ETCAN 332, ETCAN 360; FRANC 395; HISTE 325, HISTE 476; LINGQ 340, LINGQ 305; LITT 224, LITT 228, LITT 230, LITT 233, LITT 302, LITT 305, LITT 334, LITT 335, LITT 336, LITT 403, LITT 475, LITT 482, LITT 485, LITT 486; MUSIQ 215; SOCIE 368.

French Language FRANC 116, FRANC 117, ~~FRANC 213~~, FRANC 216, FRANC 217, FRANC 226, FRANC 227, ~~LINGQ 130~~, FRANC 232, ~~FRANC 305~~, ~~LINGQ 331~~, ~~LINGQ 332~~, ~~FRANC 340~~, FRANC 400, ~~LINGQ 370~~, ~~FRANC 475~~, ~~LINGQ 200~~, ~~LINGQ 305~~, ~~LINGQ 320, LINGQ 340.~~ ~~Humanities~~ ~~ANGL; ESPA; FRANC.~~ **Sciences** ANATE; BIOCM; BIOLE; ~~BOTQ~~; CHIM; IMINE; INFOR; MATHQ; MICRE; PHYSE; PHYSQ; PSYCE 104, PSYCE 258, PSYCE 275, PSYCE 282, PSYCE 367, PSYCE 377, PSYCE 381, PSYCE 458, PSYCE 496; ~~SCTA~~; STATQ. **Education** ~~ANDR~~, EDU F, EDU M, EDU P, EDU S; M EDU. **Social Sciences** ADMI; ANTHE; ECONE; ETCAN; ET RE; HISTE; LINGQ; PHILE; PSYCE 105, PSYCE 106, PSYCE 223, PSYCE 239, PSYCE 241, PSYCE 333, PSYCE 498, SC PO; SCSOC; SCSP 520; ~~SCTA~~; SOCIE.	**French Language** FRANC 116, FRANC 117, FRANC 216, FRANC 217, FRANC 226, FRANC 227, FRANC 232, FRANC 400; LINGQ. **Sciences** ANATE; BIOCM; BIOLE; CHIM; GENEQ; IMINE; INFOR; MATHQ; MICRE; PHYSE; PHYSQ; PSYCE 104, PSYCE 258, PSYCE 275, PSYCE 282, PSYCE 367, PSYCE 377, PSYCE 381, PSYCE 458, PSYCE 496; STATQ; ZOOLE. **Education** EDU F, EDU M, EDU P, EDU S; M EDU. **Social Sciences** ADMI; ANTHE; ARTE; DEVDU; ECONE; ETCAN; ET RE; HISTE; LINGQ; PHILE; PSYCE 105, PSYCE 106, PSYCE 223, PSYCE 239, PSYCE 241, PSYCE 327, PSYCE 333, PSYCE 423, PSYCE 498, SC PO; SCSOC; SOCIE.

Faculté Saint-Jean (En Français)
https://calendar.ualberta.ca/content.php?catoid=36&navoid=11288

Current Copy: ~~Removed language~~	**Proposed Copy:** New language
Les cours **Cours offerts** Le fait que la description d'un cours figure dans cet annuaire n'implique pas nécessairement que ce cours sera offert pendant la session académique à venir. Toute information relative aux cours qui seront donnés, aux noms des professeurs qui les assureront, ou à tout autre détail, sera fournie par le Bureau du Vice-doyen aux affaires académiques de la Faculté. La description des cours de la Faculté Saint-Jean se trouve à la Course Listings sous les titres suivants : Administration (ADMI)	Les cours **Cours offerts** Le fait que la description d'un cours figure dans cet annuaire n'implique pas nécessairement que ce cours sera offert pendant la session académique à venir. Toute information relative aux cours qui seront donnés, aux noms des professeurs qui les assureront, ou à tout autre détail, sera fournie par le Bureau du Vice-doyen aux affaires académiques de la Faculté. La description des cours de la Faculté Saint-Jean se trouve à la Course Listings sous les titres suivants : Administration (ADMI)

Anatomie (ANATE)	Anatomie (ANATE)
Andragogie (ANDR)	Andragogie (ANDR)
Anglais (ANGL)	Anglais (ANGL)
Anglais langue seconde (ALS)	Anglais langue seconde (ALS)
Anthropologie (ANTHE)	Anthropologie (ANTHE)
Art dramatique (ADRAM)	Art dramatique (ADRAM)
Art de la scène (ARTSC)	Art de la scène (ARTSC)
Arts (ARTE)	Arts (ARTE)
Biochimie (BIOCH)	Biochimie (BIOCH)
Biologie (BIOLE)	Biologie (BIOLE)
Botanique (BOTQ)	Botanique (BOTQ)
Chimie (CHIM)	Chimie (CHIM)
Économie (ECONE)	==Développement durable (DEVDU)==
Éducation - Fondements (EDU F)	Économie (ECONE)
Éducation - Méthodologie et Curriculum (EDU M)	Éducation - Fondements (EDU F)
Éducation - Psychologie de l'éducation (EDU P)	Éducation - Méthodologie et Curriculum (EDU M)
Éducation - Stages (EDU S)	Éducation - Psychologie de l'éducation (EDU P)
Enseignement pratique (ENPRQ)	Éducation - Stages (EDU S)
Espagnol (ESPA)	Enseignement pratique (ENPRQ)
Études canadiennes (ETCAN)	Espagnol (ESPA)
Études interdisciplinaires (ETIN)	Études canadiennes (ETCAN)
Études de la religion (ET RE)	Études interdisciplinaires (ETIN)
Famille (FA MI)	Études de la religion (ET RE)
Français (FRANC)	Famille (FA MI)
Français pour éducateur (trice) (FR ED)	Français (FRANC)
Génétique (GENEQ)	Français pour éducateur (trice) (FR ED)
Histoire (HISTE)	Génétique (GENEQ)
Humanités (HUME)	Histoire (HISTE)
Immunologie (IMINE)	Humanités (HUME)
Informatique (INFOR)	Immunologie (IMINE)
Linguistique (LINGQ)	Informatique (INFOR)
Littérature (LITT)	Linguistique (LINGQ)
Maîtrise en sciences de l'éducation (M EDU)	Littérature (LITT)
Mathématiques (MATHQ)	Maîtrise en sciences de l'éducation (M EDU)
Microbiologie (MICRE)	Mathématiques (MATHQ)
Musique (MUSIQ)	Microbiologie (MICRE)
Philosophie (PHILE)	Musique (MUSIQ)
Physiologie (PHYSE)	Philosophie (PHILE)
Physique (PHYSQ)	Physiologie (PHYSE)
Psychologie (PSYCE)	Physique (PHYSQ)
Science politique (SC PO)	Psychologie (PSYCE)
Sciences de la terre et de l'atmosphère (SCTA)	Science politique (SC PO)
Sciences sociales (SCSOC)	Sciences de la terre et de l'atmosphère (SCTA)
Sciences sociopolitiques (SCSP)	Sciences sociales (SCSOC)
Sociologie (SOCIE)	Sciences sociopolitiques (SCSP)
Statistique (STATQ)	Sociologie (SOCIE)
Zoologie (ZOOLE)	Statistique (STATQ)
	Zoologie (ZOOLE)

Faculté Saint-Jean (English)
https://calendar.ualberta.ca/content.php?catoid=36&navoid=11287

Current Copy: <mark>~~Removed language~~</mark>	Proposed Copy: <mark>New language</mark>
<u>Faculté Saint-Jean Courses (English)</u> **Course Availability** The appearance of a course description, in this Calendar, does not constitute any guarantee that the course will be offered in the forthcoming session. Information as to which courses will be offered, the names of the instructors, and all further details must be sought from the office of the Associate Dean (Academic). Faculté Saint-Jean courses can be found in Course Listings, under the following subject headings: Administration (ADMI) Anatomie (ANATE) Andragogie (ANDR) Anglais (ANGL) Anglais langue seconde (ALS) Anthropologie (ANTHE) Art dramatique (ADRAM) Art de la scène (ARTSC) Arts (ARTE) Biochimie (BIOCH) Biologie (BIOLE) Botanique (BOTQ) Chimie (CHIM) Économie (ECONE) Éducation - Fondements (EDU F) Éducation - Méthodologie et Curriculum (EDU M) Éducation - Psychologie de l'éducation (EDU P) Éducation - Stages (EDU S) Enseignement pratique (ENPRQ) Espagnol (ESPA) Études canadiennes (ETCAN) Études interdisciplinaires (ETIN) Études de la religion (ET RE) Famille (FA MI) Français (FRANC) Français pour éducateur (trice) (FR ED) Génétique (GENEQ) Histoire (HISTE) Humanités (HUME) Immunologie (IMINE) Informatique (INFOR) Linguistique (LINGQ) Littérature (LITT) Maîtrise en sciences de l'éducation (M EDU) Mathématiques (MATHQ) Microbiologie (MICRE) Musique (MUSIQ) Philosophie (PHILE) Physiologie (PHYSE) Physique (PHYSQ) Psychologie (PSYCE)	<u>Faculté Saint-Jean Courses (English)</u> **Course Availability** The appearance of a course description, in this Calendar, does not constitute any guarantee that the course will be offered in the forthcoming session. Information as to which courses will be offered, the names of the instructors, and all further details must be sought from the office of the Associate Dean (Academic). Faculté Saint-Jean courses can be found in Course Listings, under the following subject headings: Administration (ADMI) Anatomie (ANATE) Andragogie (ANDR) Anglais (ANGL) Anglais langue seconde (ALS) Anthropologie (ANTHE) Art dramatique (ADRAM) Art de la scène (ARTSC) Arts (ARTE) Biochimie (BIOCH) Biologie (BIOLE) Botanique (BOTQ) Chimie (CHIM) <mark><u>Developpement durable (DEVDU)</u></mark> Économie (ECONE) Éducation - Fondements (EDU F) Éducation - Méthodologie et Curriculum (EDU M) Éducation - Psychologie de l'éducation (EDU P) Éducation - Stages (EDU S) Enseignement pratique (ENPRQ) Espagnol (ESPA) Études canadiennes (ETCAN) Études interdisciplinaires (ETIN) Études de la religion (ET RE) Famille (FA MI) Français (FRANC) Français pour éducateur (trice) (FR ED) Génétique (GENEQ) Histoire (HISTE) Humanités (HUME) Immunologie (IMINE) Informatique (INFOR) Linguistique (LINGQ) Littérature (LITT) Maîtrise en sciences de l'éducation (M EDU) Mathématiques (MATHQ) Microbiologie (MICRE)

Science politique (SC PO) Sciences de la terre et de l'atmosphère (SCTA) Sciences sociales (SCSOC) Sciences sociopolitiques (SCSP) Sociologie (SOCIE) Statistique (STATQ) Zoologie (ZOOLE)	Musique (MUSIQ) Philosophie (PHILE) Physiologie (PHYSE) Physique (PHYSQ) Psychologie (PSYCE) Science politique (SC PO) Sciences de la terre et de l'atmosphère (SCTA) Sciences sociales (SCSOC) Sciences sociopolitiques (SCSP) Sociologie (SOCIE) Statistique (STATQ) Zoologie (ZOOLE)

Reviewed/Approved by:

REQUIRED: Faculty Council (or delegate) and approval date. FSJ Executive Committee - November 3, 2022 FSJ Council - November 17, 2022
OPTIONAL: Other internal faculty approving bodies, consultation groups, or departments, and approval dates.

University of Alberta

Calendar Change Request Form
for Program and Regulation Changes
See the [Calendar Guide](#) for tips on how to complete this form.

Faculty (& Department or Academic Unit):	Faculté Saint-Jean
Contact Person:	Marie Simuong
Level of change: (choose one only)	☑ Undergraduate
	☐ Graduate
Type of change request: (check all that apply)	☐ Program
	☑ Regulation
For which term is this intended to take effect?	Ongoing beginning in January 2024
Does this proposal have corresponding course changes? (Should be submitted at the same time)	N/A

Rationale

Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

The Faculté Saint-Jean is proposing the removal of winter intake for Arts and Sciences programs at CSJ.

The number of students who enroll in the Winter Term is generally very low. Students who enroll in the Winter Term are unable to take the majority of the courses they would normally be taking, as these courses are typically only offered in the Fall. Some of these students take these courses at North Campus in the Spring or during the Summer.

The removal of winter admissions will certainly have a positive impact on Fall enrollment. We will have more students in our core courses and also in our 300- and 400- level courses.

Winter admissions are not financially viable and present challenges for student rosters.

Calendar Copy

URL in current Calendar (or "New page") https://calendar.ualberta.ca/content.php?catoid=36&navoid=11384#application-for-readmission-or-internal-transfer

Current Copy: <mark>Removed language</mark>	Proposed Copy: <mark>New language</mark>

Faculté Saint-Jean Admission Deadlines

Please note [Mar 9, 2022]: ERRATUM. The deadlines for Admission and Readmission to the BA and BSc Programs have been corrected. See Addenda and Errata for more information.

Current Copy:

	Admission		Readmission		Other Requirements
	Application	Documents	Application	Documents	
BA and BSc Programs					
Fall Term	March 1	Postsecondary transfer applicant - March 15 (See Note 1) June 15 (See Note 2)	March 1	March 15 (See Note 1) June 15 (See Note 2)	
		High School applicant - March 15 (See Note 1) August 1 (See Note 2)			
Winter Term	~~November 15~~	~~November 15~~	~~November 15~~	~~November 15~~	
Spring/Summer	No admission		No admission		

Notes
1. All previously completed course work and course registration of current year.
2. Final results of current year.

Proposed Copy:

	Admission		Readmission		Other Requirements
	Application	Documents	Application	Documents	
BA and BSc Programs					
Fall Term	March 1	Postsecondary transfer applicant - March 15 (See Note 1) June 15 (See Note 2)	March 1	March 15 (See Note 1) June 15 (See Note 2)	
		High School applicant - March 15 (See Note 1) August 1 (See Note 2)			
Winter Term	No admission	No admission	No admission	No admission	
Spring/Summer	No admission		No admission		

Notes
1. All previously completed course work and course registration of current year.
2. Final results of current year.

Reviewed/Approved by:

REQUIRED: Faculty Council (or delegate) and approval date. FSJ Executive Committee - November 3, 2022 FSJ Council - November 17, 2022
OPTIONAL: Other internal faculty approving bodies, consultation groups, or departments, and approval dates. Consultation with the Office of the Provost : Carley Roth, Suzanne French

UNIVERSITY OF ALBERTA

Calendar Change Request Form
for Course Changes

See the Calendar Guide for tips on how to complete this form.

Faculty (& Department or Academic Unit):	Science; Dept. of Physics
Contact Person:	Kirk Kaminsky (kaminsky@ualberta.ca)
Level of change: (choose one only) [?]	☑ Undergraduate
	☐ Graduate
For which term will this change take effect?	Fall 2023

Rationale

Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

Differential equations theory requires several concepts and computational skills from linear algebra. In particular: Fourier series, solutions of systems of ODEs, the Sturm-Liouville problem/orthogonal functions (and the subsequent application of these ideas to the PDE component of the course) all require prior exposure to the eigensystem problem and an introduction to inner products and orthogonality. However, as these concepts are covered only near the end of a first linear algebra course, it would be more appropriate for a first linear algebra course to be a prerequisite rather than a corequisite.

Otherwise editorial changes to make the description more precise (first order ODEs and PDEs need to be explicitly referenced) yet shorter. Additionally, systems and nonlinear ODEs which are outside the main line of development from what must be covered (i.e. linear ODEs and PDEs) has been moved to the end of the description and flagged as time-permitting.

Course Template

Current: ~~Removed language~~	Proposed: New language
Subject & Number MA PH 251 **Title Differential Equations for Physics** **Course Career** **Units: 3** **Approved Hours: 3-1s-0** **Fee index: 6** **Faculty: Science** **Department: Physics** **Typically Offered: Fall term** **Description** Differential equations occur throughout ~~undergraduate~~ physics and being able to solve them is a critical mathematical skill for ~~all~~ physicists. The first part of the course emphasizes solution techniques to linear, second order ordinary differential equations, including series solutions and an introduction to ~~trigonometric~~ Fourier series ~~via inhomogeneous equations. Nonlinear and~~	**Subject & Number MA PH 251** **Title Differential Equations for Physics** **Course Career** **Units: 3** **Approved Hours: 3-1s-0** **Fee index: 6** **Faculty: Science** **Department: Physics** **Typically Offered: Fall term** **Description** Differential equations occur throughout physics and being able to solve them is a critical mathematical skill for physicists. The first part of the course emphasizes solution techniques to first-order and linear, second-order ordinary differential equations, including series and Frobenius solutions, and an introduction to Fourier and orthogonal series and Sturm-Liouville problems. The second part of

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~~systems of ordinary differential equations will also be discussed~~. The second part of the course introduces partial differential equations with a ~~focus on the three classical linear second order partial differential equations of mathematical physics: the heat equation, the wave equation and Laplace's equation, and techniques for solving them including separation of variables, Fourier series and the d'Alembert solution of the wave equation.~~ Examples from physics will be emphasized throughout. Prerequisite: MATH 146 or equivalent. Corequisite: MATH 214 or equivalent~~, and one of MATH 102 or 125 or 127.~~ Note: Credit may be obtained for only one of MA PH 251, MATH 201, MATH 334 or MATH 336.

</td>
<td>

the course introduces partial differential equations with a study of quasilinear first-order equations, and the linear second-order wave, heat and Laplace equations, and solution techniques including the method of characteristics and separation of variables. Examples from physics will be emphasized throughout. Prerequisite: MATH 146 or equivalent and one of MATH 102 or 125 or 127. Corequisite: MATH 214 or 217. Note: Credit may be obtained for only one of MA PH 251, MATH 201, MATH 334 or MATH 336.

</td>
</tr>
</table>

Reviewed/Approved by:

REQUIRED: Faculty Council (or delegate) and approval date. Approved by Faculty Council: November 29, 2022
OPTIONAL: Approved by Physics Department Council, 2022-11-24

CALENDAR CHANGE REQUEST FORM

Department: Mathematical and Statistical Sciences

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1. **Course changes**

CURRENT	PROPOSED
MATH 100 - Calculus I	**MATH 100 - Calculus <mark>for Engineering</mark> I**
MATH 101 - Calculus II	**MATH 101 - Calculus <mark>for Engineering</mark> II**
MATH 209 - Calculus III	**MATH 209 - Calculus <mark>for Engineering</mark> III**

Rationale for change: The renaming will make it clear to the students that those courses are for those enrolled in the Faculty of Engineering.

CURRENT	PROPOSED
MATH 144 - Calculus for the Physical Sciences I	**MATH 144 - Calculus for the <mark>Mathematical and</mark> Physical Sciences I**
MATH 146 - Calculus for the Physical Sciences II	**MATH 146 - Calculus for the <mark>Mathematical and</mark> Physical Sciences II**

Rationale for change: Some students who are not particularly interested in the Physical or Life Sciences, or in Economics, end up taking Honors Calculus I (MATH 117), which often turns out to be a bad decision. These students who are not ready for Honors Calculus I will see MATH 144 as the right choice.

CURRENT	PROPOSED
MATH <mark>215 - ~~Intermediate~~</mark> Calculus IV	**MATH <mark>315</mark> - Calculus IV**
Course Career Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Science **Department** Mathematical & Statistical Sci **Typically Offered** either term	**Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Science **Department** Mathematical & Statistical Sci **Typically Offered** either term

Description	Description
Vector calculus. Line and surface integrals. The divergence, Green's, and Stokes' theorems. Differential forms. Prerequisite: One of MATH 102, 125 or 127, and either MATH 214 or MATH 217. ~~Note~~: This course may not be taken for credit if credit has already been obtained in MATH 209 or 317.	Vector calculus. Line and surface integrals. The divergence, Green's, and Stokes' theorems. Differential forms. Prerequisite: One of MATH 102, 125 or 127, and either MATH 214 or MATH 217. <mark>Notes: Credit can be obtained in at most one of MATH 215 and MATH 315.</mark> This course may not be taken for credit if credit has already been obtained in MATH 209 or 317.

Rationale for the change: The content of this course has already been revised and it has been taught at a higher level than in the past, thus justifying a higher numbering.

CURRENT	PROPOSED
MATH 214 - ~~Intermediate~~ Calculus III	MATH 214 - Calculus III
MATH 217 - Honors ~~Advanced~~ Calculus ~~I~~	MATH 217 - Honors Calculus <mark>III</mark>
MATH 300 - Advanced Boundary Value Problems ~~I~~	MATH 300 - Advanced Boundary Value Problems
MATH 317 - Honors ~~Advanced~~ Calculus ~~II~~	MATH 317 - Honors Calculus <mark>IV</mark>
MATH 328 - ~~Algebra: Introduction to~~ Group Theory	MATH 328 - Group Theory
MATH 334 - ~~Introduction to~~ Differential Equations	MATH 334 - <mark>Ordinary</mark> Differential Equations
MATH 372 - Mathematical Modelling ~~I~~	MATH 372 - Mathematical Modelling
MATH 373 - ~~Mathematical Programming and Optimization I~~	MATH 373 - <mark>Introduction to Optimization</mark>
MATH 381 - Numerical Methods ~~I~~	MATH 381 - Numerical Methods
MATH 417 - ~~Honors Real Variables I~~	MATH 417 - <mark>Real Analysis</mark>
MATH 418 - ~~Honors Real Variables II~~	MATH 418 - <mark>Linear Analysis</mark>

MATH 428 - ~~Algebra:~~Advanced Ring Theory	**MATH 428 - Advanced Ring Theory**
MATH 429 - ~~Algebra:~~Advanced Group Theory	**MATH 429 - Advanced Group Theory**
MATH 436 - Intermediate Partial Differential Equations ~~I~~	**MATH 436 - Intermediate Partial Differential Equations**

Rationale for change: Simplification of the names of some courses. MATH 372, 373, 381 and 436 do not have a part II anymore. The new names for MATH 417 and MATH 418 give a better idea of the content of those courses.

CURRENT	PROPOSED
STAT 265 - Statistics I	**STAT 265 - Probability and Statistics I**
STAT 266 - Statistics II	**STAT 266 - Probability and Statistics II**

Rationale for change: The new names reflect better the content of those courses.

CURRENT	PROPOSED
MA PH 464 - Group Theory in Physics **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Science **Department** Mathematical & Statistical Sci **Typically Offered** either term **Description** Symmetries in physics; basic concepts of group theory and representation theory; finite groups; continuous groups; orthogonal and unitary groups; Lie groups; spinor representations; Lorentz and Poincare groups. Prerequisite: MATH 225 or MATH 227.	**MA PH 364 - Group Theory in Physics** **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Science **Department** Mathematical & Statistical Sci **Typically Offered** either term **Description** Symmetries in physics; basic concepts of group theory and representation theory; finite groups; continuous groups; orthogonal and unitary groups; Lie groups; spinor representations; Lorentz and Poincare groups. Prerequisite: MATH 225 or MATH 227. Note: Credit can be obtained in at most one of MA PH 364 and MA PH 464.

Rationale for change: This course has been taught more at the 300-level, so the new numbering is more appropriate.

Calendar Change Request Form
for Course Changes

See the [Calendar Guide](#) for tips on how to complete this form.

UNIVERSITY OF ALBERTA

Faculty (& Department or Academic Unit):	Science / Computing Science
Contact Person:	Kenny Wong
Level of change: (choose one only) [?]	☑ Undergraduate
	☐ Graduate
For which term will this change take effect?	Fall 2023

Rationale

Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

Updates made for courses referred to in the proposed CS AI Option (CMPUT 367, 466) and the proposed Applied Data Science Certificate (CMPUT 191, 195, 200). Exclusion added to CMPUT 261 since its content overlaps with the old version of CMPUT 366. Co-requisite of CMPUT 201 for CMPUT 229 changed to prerequisite, to better prepare students for CMPUT 229. After consultations with ECE, removed Arduino content from CMPUT 274/275. Added/changed CMPUT 303/403, algorithmic problem solving courses for technical interviews or competitive programming. Added new CMPUT 461 course.

Course Template

Current: ~~Removed language~~	Proposed: New language
Subject & Number **Title** **Course Career** **Units** **Approved Hours** **Fee index** **Faculty** **Department** **Typically Offered** **Description**	**Subject & Number** **Title** **Course Career** **Units** **Approved Hours** **Fee index** **Faculty** **Department** **Typically Offered** **Description**
CMPUT 191 - Introduction to Data Science **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-3 **Fee index** 6 **Faculty** Science **Department** Computing Science **Typically Offered** either term	**CMPUT 191 - Introduction to Data Science** **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-3 **Fee index** 6 **Faculty** Science **Department** Computing Science **Typically Offered** either term

Introduction to data acquisition, basic data manipulation (cleaning, outlier detection), analysis (regression, clustering, classification), basic statistics and machine learning tools, information visualization to communicate information from data. Prerequisite: Math 30-1. This course cannot be taken for credit if credit has been obtained in CMPUT ~~114, 174, 274, or SCI 100~~.	Introduction to data acquisition, basic data manipulation (cleaning, outlier detection), analysis (regression, clustering, classification), basic statistics and machine learning tools, information visualization to communicate information from data. Prerequisite: Math 30-1. This course cannot be taken for credit if credit has been obtained in CMPUT 174, 195, or 274.
	CMPUT 195 - Introduction to Principles and Techniques of Data Science **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-3 **Fee index** 6 **Faculty** Science **Department** Computing Science **Typically Offered** either term This course introduces data science to students with prior computing experience. It covers the basics of data acquisition, manipulation, transformation, and cleaning, as well as data analysis (e.g., regression, clustering, classification) and visualization. Students learn principles and techniques of efficient data-driven communication and decision-making in various domains using industry-standard tools. Credit cannot be obtained for both CMPUT 191 and CMPUT 195. Prerequisite: CMPUT 174 or 274, or consent of the instructor.
CMPUT 200 - Ethics of Data Science and Artificial Intelligence **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-3 **Fee index** 6 **Faculty** Science **Department** Computing Science **Typically Offered** either term This course focuses on ethics issues in Artificial Intelligence (AI) and Data Science (DS). The main themes are privacy, fairness/bias, and explainability in DS. The objectives are to learn how to identify and measure these aspects in outputs of algorithms, and how to build algorithms that correct for these issues. The course will follow a case-studies based approach, where we will examine these aspects by considering real-world case studies for each of these ethics issues. The concepts will be introduced through a humanities perspective ~~before~~ a technical treatment including implementation work. Prerequisite: CMPUT 174 or 274~~. Co-requisite: CMPUT 191~~.	**CMPUT 200 - Ethics of Data Science and Artificial Intelligence** **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-3 **Fee index** 6 **Faculty** Science **Department** Computing Science **Typically Offered** either term This course focuses on ethics issues in Artificial Intelligence (AI) and Data Science (DS). The main themes are privacy, fairness/bias, and explainability in DS. The objectives are to learn how to identify and measure these aspects in outputs of algorithms, and how to build algorithms that correct for these issues. The course will follow a case-studies based approach, where we will examine these aspects by considering real-world case studies for each of these ethics issues. The concepts will be introduced through a humanities perspective by using case studies with an emphasis on a technical treatment including implementation work. Prerequisite: one of CMPUT 191 or CMPUT 195, or one of CMPUT 174 or CMPUT 274 and one of STAT 141, STAT 151, STAT 235, STAT 265, SCI 151, MATH 181, or CMPUT 267, or consent of the instructor.

CMPUT 229 - Computer Organization and Architecture I

Course Career Undergraduate
Units 3
Approved Hours 3-0-3
Fee index 6
Faculty Science
Department Computing Science
Typically Offered either term

Number representation, computer architecture and organization, instruction-set architecture, assembly-level programming, procedures, stack frames, memory access through pointers, exception handling, computer arithmetic, floating-point representation, datapath, control logic, pipelining, memory hierarchy, virtual memory. Prerequisite: ~~CMPUT 175 or 274. Corequisite: one of~~ CMPUT 201 or 275. Credit may be obtained in only one of CMPUT 229, E E 380 or ECE 212.

CMPUT 229 - Computer Organization and Architecture I

Course Career Undergraduate
Units 3
Approved Hours 3-0-3
Fee index 6
Faculty Science
Department Computing Science
Typically Offered either term

Number representation, computer architecture and organization, instruction-set architecture, assembly-level programming, procedures, stack frames, memory access through pointers, exception handling, computer arithmetic, floating-point representation, datapath, control logic, pipelining, memory hierarchy, virtual memory. Prerequisite: CMPUT 201 or 275. Credit may be obtained in only one of CMPUT 229, E E 380 or ECE 212.

CMPUT 261 - Introduction to Artificial Intelligence

Course Career Undergraduate
Units 3
Approved Hours 3-0-3
Fee index 6
Faculty Science
Department Computing Science
Typically Offered either term

Introduction to artificial intelligence focusing on techniques for building intelligent software systems and agents. Topics include search and problem-solving techniques, knowledge representation and reasoning, reasoning and acting under uncertainty, machine learning and neural networks. Prerequisites: one of STAT 141, 151, 235, or 265, or SCI 151. Corequisites: CMPUT 204 or 275.

CMPUT 261 - Introduction to Artificial Intelligence

Course Career Undergraduate
Units 3
Approved Hours 3-0-3
Fee index 6
Faculty Science
Department Computing Science
Typically Offered either term

Introduction to artificial intelligence focusing on techniques for building intelligent software systems and agents. Topics include search and problem-solving techniques, knowledge representation and reasoning, reasoning and acting under uncertainty, machine learning and neural networks. Prerequisites: one of STAT 141, 151, 235, or 265, or SCI 151. Corequisites: CMPUT 204 or 275. Credit cannot be obtained for CMPUT 261 if credit has already been obtained for CMPUT 366, except with permission of the Department.

CMPUT 274 - Introduction to Tangible Computing I

Course Career Undergraduate
Units 3
Approved Hours 0-6L-0
Fee index 6
Faculty Science
Department Computing Science
Typically Offered either term

This is part 1 of a 2 sequence intensive problem-based introduction to Computing Science. In part 1, the key concepts of procedural programming, basic algorithm design and analysis (lists, queues, trees, sorting, searching)~~, and reactive interfacing with the world~~ are learned by solving a series of problems using ~~the Arduino platform and C/C++~~. ~~The use of a~~

CMPUT 274 - Introduction to Tangible Computing I

Course Career Undergraduate
Units 3
Approved Hours 0-6L-0
Fee index 6
Faculty Science
Department Computing Science
Typically Offered either term

This is part 1 of a 2 sequence intensive problem-based introduction to Computing Science. In part 1, the key concepts of procedural programming, basic algorithm design and analysis (lists, queues, trees, sorting, searching) are learned by solving a series of problems using Python. Development is done using the Linux operating system. Prerequisites: Math 30 or 31. Note: this

~~resource-limited processor with no operating system opens up the inner workings of computing.~~ Development is done using the Linux operating system ~~with the exposed compiler tool chain~~. Prerequisites: ~~No specific programming experience or discrete-math background is assumed.~~ Math 30 or 31. Note: this course is taught in studio-style, where lectures and labs are blended into 3 hour sessions, twice a week. Enrollment is limited by the capacity of the combined lecture/lab facilities. Credit cannot be obtained for CMPUT 274 if one already has credit for any of CMPUT 174, 175, or 201, except with permission of the Department.	course is taught in studio-style, where lectures and labs are blended into 3 hour sessions, twice a week. Enrollment is limited by the capacity of the combined lecture/lab facilities. Credit cannot be obtained for CMPUT 274 if one already has credit for any of CMPUT 174, 175, or 201, except with permission of the Department.
CMPUT 275 - Introduction to Tangible Computing II **Course Career** Undergraduate **Units** 3 **Approved Hours** 0-6L-0 **Fee index** 6 **Faculty** Science **Department** Computing Science **Typically Offered** either term This is part 2 of a 2 sequence intensive introduction to Computing Science. Part 2 expands to add object-oriented programming, ~~a higher level language (Python)~~, and more complex algorithms and data structures such as shortest paths in graphs; ~~caching, memoization,~~ and dynamic programming; client-server style computing; recursion~~, and limited distributed of computation tasks between the Arduino platform and the traditional desktop in order to explore design tradeoffs~~. Prerequisite: CMPUT 274. Note: this course is taught in studio-style, where lectures and labs are blended into 3 hour sessions, twice a week. Enrollment is limited by the capacity of the combined lecture/lab facilities. Credit cannot be obtained for CMPUT 275 if one already has credit for any of CMPUT 174, 175, or 201, except with permission of the Department.	**CMPUT 275 - Introduction to Tangible Computing II** **Course Career** Undergraduate **Units** 3 **Approved Hours** 0-6L-0 **Fee index** 6 **Faculty** Science **Department** Computing Science **Typically Offered** either term This is part 2 of a 2 sequence intensive introduction to Computing Science. Part 2 expands to add object-oriented programming, with C++, and more complex algorithms and data structures such as shortest paths in graphs; divide and conquer and dynamic programming; client-server style computing; and recursion. Prerequisite: CMPUT 274. Note: this course is taught in studio-style, where lectures and labs are blended into 3 hour sessions, twice a week. Enrollment is limited by the capacity of the combined lecture/lab facilities. Credit cannot be obtained for CMPUT 275 if one already has credit for any of CMPUT 174, 175, or 201, except with permission of the Department.
	CMPUT 303 - Algorithmics in Practice **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Science **Department** Computing Science **Typically Offered** either term This course is focused on algorithmic problems, where a solution involves properly understanding a written description, designing an efficient algorithm to solve the problem, and then correctly implementing the solution. Students will use previous knowledge in algorithms, data structures, and mathematical reasoning to solve problems in addition to learning new algorithms and data structures. Lectures are shared with CMPUT 403. Credit cannot be obtained for both CMPUT 303 and CMPUT 403. Prerequisites: One of CMPUT 201 or CMPUT 275, CMPUT 204.

CMPUT 367 – Intermediate Machine Learning

Course Career Undergraduate
Units 3
Approved Hours 3-0-0
Fee index 6
Faculty Science
Department Computing Science
Typically Offered either term

This course in machine learning focuses on higher-dimensional data and a broader class of nonlinear function approximation approaches. Topics include: optimization approaches (constrained optimization, hessians, matrix solutions), kernel machines, neural networks, dimensionality reduction, latent variables, feature selection, more advanced methods for assessing generalization (cross-validation, bootstrapping), introduction to non-iid data and missing data. Prerequisites: CMPUT 204 and 267; one of MATH 115, 118, 136, 146, or 156.

CMPUT 367 – Intermediate Machine Learning

Course Career Undergraduate
Units 3
Approved Hours 3-0-0
Fee index 6
Faculty Science
Department Computing Science
Typically Offered either term

This course in machine learning focuses on higher-dimensional data and a broader class of nonlinear function approximation approaches. Topics include: optimization approaches (constrained optimization, hessians, matrix solutions), kernel machines, neural networks, dimensionality reduction, latent variables, feature selection, more advanced methods for assessing generalization (cross-validation, bootstrapping), introduction to non-iid data and missing data. Credit cannot be obtained for both CMPUT 367 and CMPUT 466. Prerequisites: CMPUT 204 and 267; one of MATH 115, 118, 136, 146, or 156.

CMPUT 403 – Practical Algorithmics

Course Career Undergraduate
Units 3
Approved Hours 3-0-0
Fee index 6
Faculty Science
Department Computing Science
Typically Offered either term

The essence of computing science is in solving problems by computation. This course is interested in algorithmic problems that can be solved within at most several hours by well prepared people, where a solution involves properly understanding a written description, designing an efficient algorithm to solve the problem, and then correctly implementing the solution. Prerequisites: CMPUT 204 and any 300-level Computing Science course, or consent of the instructor.

CMPUT 403 – Algorithmics in Competitive Programming

Course Career Undergraduate
Units 3
Approved Hours 3-1S-0
Fee index 6
Faculty Science
Department Computing Science
Typically Offered either term

This course is focused on algorithmic problems that can be solved within at most several hours by well-prepared people, where a solution involves properly understanding a written description, designing an efficient algorithm to solve the problem, and then correctly implementing the solution. Students will use algorithms, data structures, and mathematical reasoning to solve problems. Lectures are shared with CMPUT 303. CMPUT 403 covers additional material relevant to advanced programming contests. Credit cannot be obtained for both CMPUT 303 and CMPUT 403. Prerequisites: One of CMPUT 201 or CMPUT 275, CMPUT 204, and any 300-level Computing Science course, or consent of the instructor.

CMPUT 461 - Introduction to Natural Language Processing

Course Career Undergraduate
Units 3
Approved Hours 3-0-3
Fee index 6
Faculty Science
Department Computing Science
Typically Offered either term

Natural language processing (NLP) is a subfield of artificial intelligence concerned with the interactions between computers

	and human languages. This course is an introduction to NLP, with the emphasis on writing programs to process and analyze texts, covering both foundational aspects and applications of NLP. The course aims at a balance between classical and statistical methods for NLP, including methods based on machine learning. Prerequisites: 201 or 275, and any 300-level Computing Science course.
CMPUT 466 - Machine Learning **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-3 **Fee index** 6 **Faculty** Science **Department** Computing Science **Typically Offered** either term Learning is essential for many real-world tasks, including recognition, diagnosis, forecasting and data-mining. This course covers a variety of learning scenarios (supervised, unsupervised and partially supervised), as well as foundational methods for regression, classification, dimensionality reduction and modeling. Techniques such as kernels, optimization and probabilistic graphical models will typically be introduced. It will also provide the formal foundations for understanding when learning is possible and practical. Prerequisites: CMPUT 204 or 275; MATH 125; CMPUT 267 or MATH 214; or consent of the instructor.	**CMPUT 466 - Machine Learning** **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-3 **Fee index** 6 **Faculty** Science **Department** Computing Science **Typically Offered** either term Learning is essential for many real-world tasks, including recognition, diagnosis, forecasting and data-mining. This course covers a variety of learning scenarios (supervised, unsupervised and partially supervised), as well as foundational methods for regression, classification, dimensionality reduction and modeling. Techniques such as kernels, optimization and probabilistic graphical models will typically be introduced. It will also provide the formal foundations for understanding when learning is possible and practical. Credit cannot be obtained for both CMPUT 367 and CMPUT 466. Prerequisites: CMPUT 204 or 275; MATH 125; CMPUT 267 or MATH 214; or consent of the instructor.

Reviewed/Approved by:

REQUIRED: Faculty Council (or delegate) and approval date.
OPTIONAL: Other internal faculty approving bodies, consultation groups, or departments, and approval dates. Department of Computing Science Approved by Department Council, October 31, 2022. Approved by Faculty Council: November 29, 2022

UNIVERSITY OF ALBERTA

Calendar Change Request Form for Program and Regulation Changes

See the Calendar Guide for tips on how to complete this form.

Faculty (& Department or Academic Unit):	Faculty of Science	
Contact Person:	Gerda de Vries, Associate Dean (Undergraduate)	
Level of change (choose one only)	☑	Undergraduate
	☐	Graduate
Type of change request (check all that apply)	☐	Program
	☑	Regulation
For which term is this intended to take effect?	Fall 2023	
Does this proposal have corresponding course changes? (Should be submitted at the same time)	No	

Rationale

The BSc/BEd Combined Degrees Program requirements page is being updated to reflect the removal of specific course load requirements for all programs in the Faculty of Science.

Calendar Copy

URL in current Calendar (or leave blank if it is a new page):
https://calendar.ualberta.ca/preview_program.php?catoid=36&poid=42373&returnto=11345

Current	Proposed
BSc (Specialization in Science and Education)/BEd (Secondary) Combined Degrees Program [Science]	**BSc (Specialization in Science and Education)/BEd (Secondary) Combined Degrees Program [Science]**
⬅ Return to: Faculty of Science - Programs	⬅ Return to: Faculty of Science - Programs

The Faculties of Science and Education offer a combined degrees program that is more highly structured than a BSc followed by a BEd After Degree (a six year route). It provides less flexibility in course choice and scheduling than taking the degrees sequentially because it is designed to meet the minimum requirements of both degrees in five years. In addition, it must meet teacher certification requirements within this time frame.

To accommodate the variety in subject studies needed in secondary school teaching, students in the BSc (Specialization in Science and Education)/BEd (Secondary) program will select both a major/minor from the following areas:

> **Biological Sciences:** Biology, Botany, Entomology, Genetics, Immunology and Infection, Marine Science, Microbiology, Neuroscience, Paleontology, Pharmacology, Physiology, Zoology.
> **Physical Sciences:** Astronomy, Chemistry, Mathematical Physics, Physics.
> **Mathematical Sciences:** Computing Science, Mathematics, Statistics.

Admission

Students apply to the Faculty of Science for admission to the BSc (Specialization in Science and Education)/BEd (Secondary) program and normally spend the first two years of the five-year combined degrees program registered in the Faculty of Science. [See BSc/BEd—BSc (Specialization in Science and Education) and BEd (Secondary) Combined Degree].

Selection of Courses

Note: For success in your chosen program, ensure you have satisfied the pre/corequisite requirements for all courses. Departments have the right to remove students from courses for failing to present a passing grade (or higher, where stipulated) in the prerequisite course(s) and/or for failing to be enrolled in the corequisite course(s). Please see the Faculty of Science's High School Admission website for more information.

The following regulations govern the BSc (Specialization in Science and Education)/BEd (Secondary) program:

1. A student's program must be approved by an advisor in the appropriate Faculty prior to the start of each Fall/Winter.

2. Within the 150-unit program, a student must complete a minimum of 72 units in Science (see details of courses), 48 units in Education and 18 units in Arts.
3. In the major, at least 12 units must be in 300-level or higher courses taken while registered in the BSc (Specialization in Science and Education)/BEd (Secondary) program at the University of Alberta.
4. In the minor, at least 6 units must be in 300-level or higher courses taken while registered in the BSc (Specialization in Science and Education)/BEd (Secondary) program at the University of Alberta.
5. No more than 42 units at the 100-level are permitted in the BSc (Specialization in Science and Education)/BEd (Secondary) program.

Course Load Requirements

To complete the 150 units and graduate in five years, students must take a full course load of 30 units in each Fall/Winter of the program. The minimum load for students in the BSc (Specialization in Science and Education)/BEd (Secondary) program is at least 24 units in each Fall/Winter. A course load of less than 24 units requires annual approval by both the Dean of Education and the Dean of Science.

Academic Standing and Graduation

The following regulations govern the combined degrees program:

1. Continuation in the combined degrees program requires a GPA of at least 2.3 on 24 units in each Fall/Winter of the five-year program.
2. Graduation from the combined degrees program requires a minimum GPA of 2.3 in the declared major.
3. Students who fail to achieve a minimum GPA of 2.3 in their major at the end of Year 2 in the program will not be promoted to the Faculty of Education.
4. A student who fails to attain the standard necessary for continuation or graduation may appeal to be granted one further Fall/Winter to achieve the required standing and requires the written approval of the Dean of Science and the Dean of Education.
5. Students who cannot attain the standard

2. Within the 150-unit program, a student must complete a minimum of 72 units in Science (see details of courses), 48 units in Education and 18 units in Arts.
3. In the major, at least 12 units must be in 300-level or higher courses taken while registered in the BSc (Specialization in Science and Education)/BEd (Secondary) program at the University of Alberta.
4. In the minor, at least 6 units must be in 300-level or higher courses taken while registered in the BSc (Specialization in Science and Education)/BEd (Secondary) program at the University of Alberta.
5. No more than 42 units at the 100-level are permitted in the BSc (Specialization in Science and Education)/BEd (Secondary) program.

Course Load Requirements

The BSc/BEd combined degrees program is designed to be a five-year program. To graduate in five years, students should take a full course load of 30 units in each Fall/Winter of the program. Students may extend their program beyond five years by taking a reduced course load.

Academic Standing and Graduation

The following regulations govern the combined degrees program:

1. Continuation in the combined degrees program requires a minimum 2.3 GPA in each Fall/Winter.
2. Graduation from the combined degrees program requires a minimum GPA of 2.3 in the declared major.
3. Students who fail to achieve a minimum GPA of 2.3 in their major at the end of Year 2 in the program will not be promoted to the Faculty of Education.
4. A student who fails to attain the standard necessary for continuation or graduation may appeal to be granted one further Fall/Winter to achieve the required standing and requires the written approval of the Dean of Science and the Dean of Education.
5. Students who cannot attain the standard

necessary for continuation or graduation in the combined degrees program will be required to withdraw from the program. Such students may apply to transfer to a different BSc program in the Faculty of Science or the BEd program in the Faculty of Education.

6. Normally, a student transferring from the combined degrees program to a BEd program after Year 2 or 3 should be able to complete the degree in one or two years. However, transfer to a BSc program must be made after Year 2 at the latest to avoid loss of credit.

7. The BSc (Specialization in Science and Education) degree With Distinction is awarded when students achieve a GPA of at least 3.5 on the last 60 units if the student was enrolled in at least (24 units) during each Fall/Winter of the last two years.

Residence Requirement

A student transferring into the combined degrees program with transfer credit normally will be required to complete at least 90 units (normally the last 90 units) while registered in the combined degrees program.

~~Time Limits for Completion of Program~~

~~The combined degrees program is a five-year program. A student may complete the requirements of the combined degree over a period longer than five years or meet the requirements in a shorter time by attending Spring/Summer. An extension beyond six years is not normally permitted and requires the written approval of the Dean of Science and the Dean of Education.~~

~~Science Chart 1~~ BSc (Specialization in Science and Education)/BEd

Note: Year 1 and Year 2 are completed in the Faculty of Science. Years 3, 4 and 5 are completed in the Faculty of Education.

- Biological Sciences Major/Mathematical Sciences Minor (150 units)
- Biological Sciences Major/Physical Sciences Minor (150 units)
- Mathematical Sciences Major/Biological Sciences Minor (150 units)

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necessary for continuation or graduation in the combined degrees program will be required to withdraw from the program. Such students may apply to transfer to a different BSc program in the Faculty of Science or the BEd program in the Faculty of Education.

6. Normally, a student transferring from the combined degrees program to a BEd program after Year 2 or 3 should be able to complete the degree in one or two years. However, transfer to a BSc program must be made after Year 2 at the latest to avoid loss of credit.

7. The BSc (Specialization in Science and Education) degree With Distinction is awarded when students achieve a GPA of at least 3.5 on the last 60 units if the student was enrolled in at least (24 units) during each Fall/Winter of the last two years.

Residence Requirement

A student transferring into the combined degrees program with transfer credit normally will be required to complete at least 90 units (normally the last 90 units) while registered in the combined degrees program.

BSc (Specialization in Science and Education)/BEd (Secondary) Combined Degrees Program Requirements

Note: Year 1 and Year 2 are completed in the Faculty of Science. Years 3, 4 and 5 are completed in the Faculty of Education.

- Biological Sciences Major/Mathematical Sciences Minor (150 units)
- Biological Sciences Major/Physical Sciences Minor (150 units)
- Mathematical Sciences Major/Biological Sciences Minor (150 units)

- Mathematical Sciences Major/Physical Sciences Minor (150 units)
- Physical Sciences Major/Biological Sciences Minor, Chemistry Concentration (150 units)
- Physical Sciences Major/Biological Sciences Minor, Physics Concentration (150 units)
- Physical Sciences Major/Mathematical Sciences Minor (150 units)

Return to: Faculty of Science - Programs

- Mathematical Sciences Major/Physical Sciences Minor (150 units)
- Physical Sciences Major/Biological Sciences Minor, Chemistry Concentration (150 units)
- Physical Sciences Major/Biological Sciences Minor, Physics Concentration (150 units)
- Physical Sciences Major/Mathematical Sciences Minor (150 units)

Return to: Faculty of Science - Programs

Reviewed/Approved by:

REQUIRED: Faculty Council (or delegate) and approval date, including any partner faculties for combined programs.
Faculty of Science: October 7, 2022

Other consultation groups, departments, or internal faculty approving bodies and approval dates.
Faculty of Education: Thursday December 1, 2022

FINAL Item No. 5

Governance Executive Summary
Action Item

Agenda Title	Course Exclusions from the Exploration Credits Policy, Faculty of Arts

Motion

THAT the GFC Programs Committee approve, with delegated authority from General Faculties Council, the attached list of Faculty of Arts courses for exclusion from the Exploration Credits policy.

Item

Action Requested	☒ Approval ☐ Recommendation
Proposed by	Robert Wood, Dean, Faculty of Arts
Presenter(s)	Rebecca Nagel, Associate Dean (Undergraduate), Faculty of Arts

Details

Office of Administrative Responsibility	Provost and Vice-President (Academic)
The Purpose of the Proposal is (*please be specific*)	The Faculty of Arts requests that the courses listed in this proposal be excluded from the Exploration Credits policy.
Executive Summary (*outline the specific item – and remember your audience*)	Most undergraduate courses in the Faculty of Arts are open to all undergraduate students at the University of Alberta. Therefore Arts is comfortable with allowing students to take almost all Arts courses for Exploration Credits.
	The Exploration Credits policy allows students to take courses for Exploration Credits only if they are "open electives" in a student's program. Depending on a student's choices, there could be up to 75 units of "open electives" in the Arts BA degree. There has always been a lot of flexibility in the Arts BA and we do not want to change that.
	We are requesting that certain courses be excluded. After the Exploration Credits policy becomes established and well-understood, some of these exclusions may prove to be unnecessary and then we will ask for them to be reversed. For now, we are concerned to mitigate the risks for students of taking a course as an "open elective" and then deciding to change their program. A student who has taken a foundational course for Exploration Credits may be shut out of further study in that area.
	We used the Calendar change process in the Faculty of Arts in order to collect requests for exclusion and formally review requests in Department Councils and Arts Academic Affairs. Arts Academic Affairs is the standing committee of Arts Faculty Council which approves course and minor program changes with delegated authority from Arts Faculty Council. Arts Academic Affairs has elected members from across the Faculty as well as undergraduate and graduate students.
	The Calendar change forms in the attachment describe the particular reasons given by Departments for requesting exclusions for the courses in the list below. The reasons include: to preserve student access to high-demand pre-requisite or core courses, to protect student success

	by ensuring students meet certain standards in common pre-requisite courses, and to protect partnerships with community stakeholders. ART 134 Art Fundamentals DES 135 Design Fundamentals CSL 100 An Introduction to Community Engagement CSL 200 Theory and Practice in Community Service-Learning CSL 350 Selected Topics in Community Service-Learning CSL 360 Community Service-Learning Practicum CSL 370 Topics in Community Issues CSL 480 Individual Study in Community Service-Learning ECON 299 Quantitative Methods in Economics ECON 384 Intermediate Microeconomic Theory II ECON 385 Intermediate Macroeconomic Theory II ECON 399 Introductory Econometrics ENGL 102 Introduction to Critical Analysis ENGL 103 Case Studies in Research ENGL 125 Indigenous Literatures FS 100 Introduction to Film Study SOC 210 Introduction to Social Statistics SOC 212 Classical Social Theory SOC 315 Introduction to Social Methodology SOC 335 Themes in Contemporary Social Theory We used the Calendar change forms purely for the purpose of collecting information for the governance process. We are <u>not</u> asking for the course descriptions to be changed at this point. We expect that the Course Catalogue will have a standard phrase for any course which is excluded from the Exploration Credits policy. It is our understanding that the Office of the Registrar will manage the storage and display of the list of courses excluded from the Exploration Credits Policy. Arts Undergraduate Student Services will work with the Office of the Registrar to ensure that students are aware of the policy and the exclusions list.
Supplementary Notes and context	*<This section is for use by University Governance only to outline governance process.>*

Engagement and Routing (Include meeting dates)

Item No. 5

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]>	*Those who are actively **participating***: • Arts Undergraduate Student Services • Arts Undergraduate Programs Committee • Arts Dean's Executive Council
	*Those who have been **consulted***: • Office of the Registrar – April, September, and December 2022 • Provost's Office (Vice-Provost, Programs) - November and December 2022
	*Those who have been **informed***: • Arts Chairs Council – November 2021; May, July, and September 2022
Approval Route (Governance) (including meeting dates)	Arts Academic Affairs – November 1, 2022 Programs Support Team – December 15, 2022 GFC Programs Committee – January 12, 2023

Strategic Alignment

Alignment with *For the Public Good*		
Alignment with Core Risk Area	Please note below the specific institutional risk(s) this proposal is addressing.	
	☒ Enrolment Management ☐ Faculty and Staff ☐ Funding and Resource Management ☐ IT Services, Software and Hardware ☐ Leadership and Change ☐ Physical Infrastructure	☒ Relationship with Stakeholders ☐ Reputation ☐ Research Enterprise ☐ Safety ☒ Student Success
Legislative Compliance and jurisdiction	GFC Programs Committee	

Attachments (each to be numbered 1 - <>)

1. Calendar course change forms -- pages 1 - 15

Prepared by: Rebecca Nagel, Associate Dean (Undergraduate), Faculty of Arts, rebecca.nagel@ualberta.ca.

This package contains: Undergraduate - Courses

Faculty approval date:

AAC Date: November 1,2022

Faculty of Arts	**Art & Design**
Level of change (choose one only)	☒ Undergraduate ☐ Graduate
Contact Person:	Susan Colberg
Department/Unit Approval Date:	24 October 2022

Rationale for change (Indicate other consultation groups, departments, units or faculties)

This change will preserve equitable access to resource-intensive studio courses which are the pre-requisite for high-demand programs in Art & Design (Fine Arts).

Calendar Copy

Current: ~~Removed language~~ (Include all parts of course)	**Proposed:** New language
ART 134 - Art Fundamentals Course Career Undergraduate Units 3 Approved Hours 0-6L-0 Fee index 6 Faculty Arts Department Art & Design Typically Offered either term Description Studio-based exploration of both visual and conceptual Fine Art concerns in two- and three-dimensions. Note: ART 134 and DES 135 are required prerequisites for senior level ART or DES courses. Not open to students with credit in ART 131 or 132.	ART 134 - Art Fundamentals Course Career Undergraduate Units 3 Approved Hours 0-6L-0 Fee index 6 Faculty Arts Department Art & Design Typically Offered either term Description Studio-based exploration of both visual and conceptual Fine Art concerns in two- and three-dimensions. Note: ART 134 and DES 135 are required prerequisites for senior level ART or DES courses. Not open to students with credit in ART 131 or 132. Ineligible for Exploration Credits

UNIVERSITY OF ALBERTA

Faculty of Arts	Art & Design
Level of change (choose one only)	☒ Undergraduate ☐ Graduate
Contact Person:	Susan Colberg
Department/Unit Approval Date:	24 October 2022

Rationale for change (Indicate other consultation groups, departments, units or faculties)

To preserve equitable access to resource-intensive studio courses which are the pre-requisite for high-demand programs in Art & Design (Fine Arts).

Calendar Copy

Current: ~~Removed language~~ (Include all parts of course)	Proposed: New language
DES 135 - Design Fundamentals Course Career Undergraduate Units 3 Approved Hours 0-6L-0 Fee index 6 Faculty Arts Department Art & Design Typically Offered either term Description Studio-based introduction to the conceptual and practical concerns of the design disciplines. Two- and three-dimensional design-related studies. Note: ART 134 and DES 135 are required prerequisites for senior level ART or DES courses. Not open to students with credit in ART 131 or ART 132.	DES 135 - Design Fundamentals Course Career Undergraduate Units 3 Approved Hours 0-6L-0 Fee index 6 Faculty Arts Department Art & Design Typically Offered either term Description Studio-based introduction to the conceptual and practical concerns of the design disciplines. Two- and three-dimensional design-related studies. Note: ART 134 and DES 135 are required prerequisites for senior level ART or DES courses. Not open to students with credit in ART 131 or ART 132. Ineligible for Exploration Credits

Faculty of Arts	**Community Service-Learning**
Level of change (choose one only)	X Undergraduate ☐ Graduate
Contact Person:	David Peacock
Department/Unit Approval Date:	10/14/2022

Rationale for change (Indicate other consultation groups, departments, units or faculties)

Exclusion from Exploration Credit Program: We believe that allowing students to declare the CSL courses as exploration credits would undermine the credibility and reputation of the CSL certificate and overall program, both within the academy and community. The main concern would be that students would look at the CSL courses and program as a means to access volunteer opportunities only and the link between course/academic knowledge and community experience/practice would be severed. CSL is more than a volunteering hub for students.   We need to build in academic learning and community projects/experiences within every course. CSL does this through the process of critical reflection, essential to the pedagogy. We could not guarantee the same engagement with course materials and community projects if students are completing them as CR/NC. That means students might not be as engaged with community partners and then we would not be able to quality assure our students to community partners in the same way. We need to maintain these relationships for the good of the program.

Calendar Copy

Current: ~~Removed language~~ (Include all parts of course)	**Proposed:** New language
CSL 100 - An Introduction to Community Engagement **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Arts **Department** Community Service-Learning **Typically Offered** either term **Description** An interdisciplinary introduction to community and civic engagement for students interested in preparing the groundwork for undertaking further experiential educational opportunities (e.g., Internships, Study Abroad, CSL).	CSL 100 - An Introduction to Community Engagement **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Arts **Department** Community Service-Learning **Typically Offered** either term **Description** An interdisciplinary introduction to community and civic engagement for students interested in preparing the groundwork for undertaking further experiential educational opportunities (e.g., Internships, Study Abroad, CSL). Not eligible for exploration credits.

CSL 200 - Theory and Practice in Community Service-Learning
 Course Career Undergraduate
 Units 3
 Approved Hours 3-0-0
 Fee index 6
 Faculty Arts
 Department Community Service-Learning
 Typically Offered either term

Description
An in-depth exploration of theories and practices of civic engagement and community change for students who have already completed a course with a CSL component and who wish to extend their volunteer experience. Prerequisite: Completion of a course with a CSL component or consent of instructor. Note: For information about courses in programs and departments across the Faculty of Arts that offer a CSL component, see the link on the CSL website, www.csl.ualberta.ca . Not open to students with credit in CSL 300.

CSL 350 - Selected Topics in Community Service-Learning
Course Career Undergraduate
Units 1-6
Approved Hours UNASSIGNED
Fee index VAR
Faculty Arts
Department Community Service-Learning
Typically Offered variable

Description
Content varies from year to year. Topics and credit value announced prior to registration period. Prerequisite: consent of instructor. This course may require payment of additional student instructional support fees. Refer to the Tuition and Fees page in the University Regulations section of the Calendar.

CSL 360 - Community Service-Learning Practicum
Course Career Undergraduate
Units 1-6
Approved Hours UNASSIGNED
Fee index VAR
Faculty Arts

CSL 200 - Theory and Practice in Community Service-Learning
 Course Career Undergraduate
 Units 3
 Approved Hours 3-0-0
 Fee index 6
 Faculty Arts
 Department Community Service-Learning
 Typically Offered either term

Description
An in-depth exploration of theories and practices of civic engagement and community change for students who have already completed a course with a CSL component and who wish to extend their volunteer experience. Prerequisite: Completion of a course with a CSL component or consent of instructor. Note: For information about courses in programs and departments across the Faculty of Arts that offer a CSL component, see the link on the CSL website, www.csl.ualberta.ca . Not open to students with credit in CSL 300. ==Not eligible for exploration credits.==

CSL 350 - Selected Topics in Community Service-Learning
Course Career Undergraduate
Units 1-6
Approved Hours UNASSIGNED
Fee index VAR
Faculty Arts
Department Community Service-Learning
Typically Offered variable

Description
Content varies from year to year. Topics and credit value announced prior to registration period. Prerequisite: consent of instructor. This course may require payment of additional student instructional support fees. Refer to the Tuition and Fees page in the University Regulations section of the Calendar. ==Not eligible for exploration credits.==

CSL 360 - Community Service-Learning Practicum
Course Career Undergraduate
Units 1-6
Approved Hours UNASSIGNED
Fee index VAR

Department Community Service-Learning
Typically Offered variable

Description
Course content varies from year to year but will include a significant service component. Topics and credit value announced prior to registration period. Prerequisite: consent of instructor. Corequisite: CSL 350 or other approved course. This course may require payment of an additional miscellaneous fee. Refer to the Tuition and Fees page in the University Regulations section of the Calendar.

CSL 370 - Topics in Community Issues
Course Career Undergraduate
Units 3
Approved Hours VARIABLE
Fee index 6
Faculty Arts
Department Community Service-Learning
Typically Offered either term

Description
Content varies from year to year. Prerequisite: consent of Program. Repeatable if topic(s) vary.

CSL 480 - Individual Study in Community Service-Learning
Course Career Undergraduate
Units 3
Approved Hours UNASSIGNED
Fee index 6
Faculty Arts
Department Community Service-Learning
Typically Offered variable

Description
Individual study opportunity on topics for which no specific course is currently offered. Prerequisites: Consent of Community Service - Learning Director, consent of instructor, and completion of a 3 credit course with a CSL component.

Faculty Arts
Department Community Service-Learning
Typically Offered variable

Description
Course content varies from year to year but will include a significant service component. Topics and credit value announced prior to registration period. Prerequisite: consent of instructor. Corequisite: CSL 350 or other approved course. This course may require payment of an additional miscellaneous fee. Refer to the Tuition and Fees page in the University Regulations section of the Calendar. Not eligible for exploration credits.

CSL 370 - Topics in Community Issues
Course Career Undergraduate
Units 3
Approved Hours VARIABLE
Fee index 6
Faculty Arts
Department Community Service-Learning
Typically Offered either term

Description
Content varies from year to year. Prerequisite: consent of Program. Repeatable if topic(s) vary. Not eligible for exploration credits.

CSL 480 - Individual Study in Community Service-Learning
Course Career Undergraduate
Units 3
Approved Hours UNASSIGNED
Fee index 6
Faculty Arts
Department Community Service-Learning
Typically Offered variable

Description
Individual study opportunity on topics for which no specific course is currently offered. Prerequisites: Consent of Community Service - Learning Director, consent of instructor, and completion of a 3 credit course with a CSL component. Not eligible for exploration credits.

UNIVERSITY OF ALBERTA

Faculty of Arts	Economics
Level of change (choose one only)	Undergraduate
Contact Person:	Chelsi Hudson
Department/Unit Approval Date:	2022-09-27

Rationale for change (Indicate other consultation groups, departments, units or faculties)

- These are the core courses for which a letter grade is needed. Students who are not Economics majors but considering an Economics major need to ensure that they can meet the standard in order to succeed at higher levels. Letter grades in core courses are needed for (i) graduate school applications, as admission committees typically use these grades as a sign of the student's potential. (ii) undergraduate research grant applications, (iii) job applications for economist positions in government and NGOs, and (iv) recommendation letters, as letter writers typically refer to grades in core courses. In addition, core course grades need to be a part of the 2.3 GPA requirement to maintain program quality and the standards of the B.A. in Economics degree.
- 299: adjustments to restrictions on courses to reflect current practices and removing an antirequisite - students benefit from taking more STAT classes in Economics

Calendar Copy

ECON 299 Quantitative Methods in Economics Course Career Undergraduate Units 3 Approved Hours 3-0-1 Fee index 6 Faculty Arts Department Economics Typically Offered either term Description Introduction to the use of statistical methods in economics with computer applications. Prerequisites: ECON 101 and 102, STAT 161 or equivalent, and MATH 154 or equivalent. ~~Note: Designed for students taking Economics as a major subject of concentration. Department permission must be obtained by other students wishing to take this course. ECON 299 or equivalent must be taken before ECON 399. Not open to students with credit in STAT 265 and 266.~~	ECON 299 Quantitative Methods in Economics Course Career Undergraduate Units 3 Approved Hours 3-0-1 Fee index 6 Faculty Arts Department Economics Typically Offered either term Description Introduction to the use of statistical methods in economics with computer applications. Prerequisites: ECON 101 and 102, STAT 161 or equivalent, and MATH 154 or equivalent. Not eligible for exploration credits.

ECON 384

Intermediate Microeconomic Theory II

Course Career Undergraduate
Units 3
Approved Hours 3-0-0
Fee index 6
Faculty Arts
Department Economics
Typically Offered either term

Description
Designed for majors and Honors students in Economics. Extensions and applications of microeconomic theory: intertemporal choice, risk, uncertainty and expected utility; oligopoly and game theory; externalities, public goods, adverse selection, moral hazard, and asymmetric information; general equilibrium. Prerequisites: ECON 109, ECON 281 and 299 or equivalent, and MATH 156 or equivalent.

ECON 385

Intermediate Macroeconomic Theory II

Course Career Undergraduate
Units 3
Approved Hours 3-0-0
Fee index 6
Faculty Arts
Department Economics
Typically Offered either term

Description
Designed for majors and Honors students in Economics. Theories of stabilization policy; expectations; the government budget constraint; inflation and unemployment; business cycles and growth; theories of aggregate consumption, investment, money demand, and money supply. Prerequisites: ECON 109, ECON 281, 282 and 299 or equivalent, and MATH 156 or equivalent.

ECON 384

Intermediate Microeconomic Theory II

Course Career Undergraduate
Units 3
Approved Hours 3-0-0
Fee index 6
Faculty Arts
Department Economics
Typically Offered either term

Description
Designed for majors and Honors students in Economics. Extensions and applications of microeconomic theory: intertemporal choice, risk, uncertainty and expected utility; oligopoly and game theory; externalities, public goods, adverse selection, moral hazard, and asymmetric information; general equilibrium. Prerequisites: ECON 109, ECON 281 and 299 or equivalent, and MATH 156 or equivalent. Not eligible for exploration credits.

ECON 385

Intermediate Macroeconomic Theory II

Course Career Undergraduate
Units 3
Approved Hours 3-0-0
Fee index 6
Faculty Arts
Department Economics
Typically Offered either term

Description
Designed for majors and Honors students in Economics. Theories of stabilization policy; expectations; the government budget constraint; inflation and unemployment; business cycles and growth; theories of aggregate consumption, investment, money demand, and money supply. Prerequisites: ECON 109, ECON 281, 282 and 299 or equivalent, and MATH 156 or equivalent. Not eligible for exploration credits.

ECON 399

Introductory Econometrics

Course Career Undergraduate
Units 3
Approved Hours 3-0-1
Fee index 6
Faculty Arts
Department Economics
Typically Offered either term

Description
An elementary treatment of the major topics in econometrics with emphasis on applied regression methods. Prerequisites: ECON 109, ECON 281, 282 and 299 or equivalent, and MATH 156 or equivalent. Note: Not open to students with credit in AREC 313.

UNIVERSITY OF ALBERTA

Calendar Change Request Form - **Course Changes**

Faculty of Arts	**English and Film Studies**
Level of change (choose one only)	☒ Undergraduate ☐ Graduate
Contact Person:	Eddy Kent, Acting Director of UGrad Programs
Department/Unit Approval Date:	Dept Council 29 September 2022

Rationale

Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

In response to the Exploration Credits initiative, EFS requests that the following courses be excluded:

FS 100 - Introduction to Film Study

Rationale:
Demand for FS 100 is already too high. This year we have FS Majors who could not enroll in a Fall 2022 section of FS 100. As FS 100 is a prerequisite for senior level courses, these students are subsequently unable to take any further FS courses this academic year. Normally, our FS Majors take one or two senior-level FS courses in the Winter semester of their first year. Now, because they were unable to enroll in FS 100, their pathway through their degree is obstructed.

Calendar Copy

Current: ~~Removed language~~ (include all parts of course)	**Proposed:** <mark>New language</mark>
FS 100 - Introduction to Film Study Course Career Undergraduate Units 3 Approved Hours 3-0-2.5 Fee index 6 Faculty Arts Department English and Film Studies Typically Offered either term Description Introduction to basic formal concepts in film analysis including mise-en-scène, cinematographic properties, editing, and sound, as well as narrative qualities.	**FS 100 - Introduction to Film Study** Course Career Undergraduate Units 3 Approved Hours 3-0-2.5 Fee index 6 Faculty Arts Department English and Film Studies Typically Offered either term Description Introduction to basic formal concepts in film analysis including mise-en-scène, cinematographic properties, editing, and sound, as well as narrative qualities. <mark>Not eligible to be taken for Exploration Credit</mark>

UNIVERSITY OF ALBERTA

Calendar Change Request Form - **Course Changes**

Faculty of Arts	English and Film Studies
Level of change (choose one only)	☒ Undergraduate ☐ Graduate
Contact Person:	Eddy Kent, Acting Director of UGrad Programs
Department/Unit Approval Date:	Dept Council 29 September 2022

Rationale

Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

In response to the Exploration Credits initiative, EFS requests that the following courses be excluded:

ENGL 102 - Introduction to Critical Analysis
ENGL 103 - Case Studies in Research
ENGL 125 - Indigenous Literatures

Rationale:
Demand for our junior ENGL courses (especially ENGL 102 and ENGL 103) is overwhelmingly high. For example, sections of our junior English courses are capped at 40. We offer over 60 sections each of ENGL 102 and ENGL 103 every year. In August 2022, the average waitlist length for each section was 68. There are, literally, thousands of students already waiting to take these courses. Anything – however small – that adds to enrolment pressures must be refused until this aspect of our program is properly resourced.

Calendar Copy

Current: ~~Removed language~~ (include all parts of course)	Proposed: New language
ENGL 102 - Introduction to Critical Analysis Course Career Undergraduate Units 3 Approved Hours VARIABLE Fee index 6 Faculty Arts Department English and Film Studies Typically Offered either term Description Introduces methods of critical analysis through a range of literature written in English, broadly conceived, from different historical periods and cultural locations. Not to be taken by students with *6 in approved junior English.	ENGL 102 - Introduction to Critical Analysis Course Career Undergraduate Units 3 Approved Hours VARIABLE Fee index 6 Faculty Arts Department English and Film Studies Typically Offered either term Description Introduces methods of critical analysis through a range of literature written in English, broadly conceived, from different historical periods and cultural locations. Not to be taken by students with *6 in approved junior English. Not eligible to be taken for Exploration Credit.
ENGL 103 - Case Studies in Research Course Career Undergraduate Units 3 Approved Hours VARIABLE Fee index 6 Faculty Arts	ENGL 103 - Case Studies in Research Course Career Undergraduate Units 3 Approved Hours VARIABLE Fee index 6 Faculty Arts

Department English and Film Studies
Typically Offered either term

Description
This variable content course introduces methods of literary research as an in-depth process through one or more case studies. Not to be taken by students with *6 in approved junior English. This course can only be taken once for credit. Note: refer to the Class Schedule and the Department of English and Film Studies website for specific topics.

ENGL 125 - Indigenous Literatures
Course Career Undergraduate
Units 3
Approved Hours VARIABLE
Fee index 6
Faculty Arts
Department English and Film Studies
Typically Offered either term

Description
An introduction to Indigenous literatures in North America, from their earliest oral forms to their contemporary variations. Not to be taken by students with *6 in approved junior English. Note: Sections reserved for students in the TYP Program include a 3 hour seminar component in addition to the 3 hour lecture component.

Faculty of Arts	Sociology
Level of change (choose one only)	☒ Undergraduate ☐ Graduate
Contact Person:	Alison Dunwoody
Department/Unit Approval Date:	October 19, 2022

Rationale for change (Indicate other consultation groups, departments, units or faculties)

The Department is seeking to exclude several courses as exploration credits. Specifically, our required 200- and 300-level courses (SOC 210, 212, 315, and 335) are in high demand and must be excluded to ensure our students can meet their program requirements and to ensure that students completing these courses have the required background to successfully complete more advanced courses. In addition, we believe that all 400-level courses should be excluded. Such advanced courses should not be seen as "exploratory" and given their small size, having students taking these courses as exploration credits can adversely affect the dynamics in these intensely interactive courses. This change request has been approved Department Council. Please note that SOC 444 and 477 are not currently listed in the Calendar but will be reactivated in the 2023-2024 Calendar once they are scheduled.

Calendar Copy

Current: Removed language (Include all parts of course)	Proposed: New language
SOC 210 - Introduction to Social Statistics Course Career Undergraduate Units 3 Approved Hours 3-0-2 Fee index 6 Faculty Arts Department Sociology Typically Offered either term Description Statistical reasoning and techniques used by sociologists to summarize data and test hypotheses. Topics include describing distributions, cross-tabulations, scaling, probability, correlation/regression and non-parametric tests. Prerequisite: SOC 100 or consent of instructor. Note: This course is intended primarily for students concentrating in Sociology SOC 212 - Classical Social Theory	SOC 210 - Introduction to Social Statistics Course Career Undergraduate Units 3 Approved Hours 3-0-2 Fee index 6 Faculty Arts Department Sociology Typically Offered either term Description Statistical reasoning and techniques used by sociologists to summarize data and test hypotheses. Topics include describing distributions, cross-tabulations, scaling, probability, correlation/regression and non-parametric tests. Prerequisite: SOC 100 or consent of instructor. Note: This course is intended primarily for students concentrating in Sociology. Ineligible for exploration credits. SOC 212 - Classical Social Theory

Course Career Undergraduate
Units 3
Approved Hours 3-0-0
Fee index 6
Faculty Arts
Department Sociology
Typically Offered either term

Description
The foundational contributions and relevance of the works of Marx, Weber, Durkheim and others to sociology and social theory. Course emphasizes close reading of primary texts to cultivate reading, writing and reasoning skills. Prerequisite: SOC 100 or consent of the instructor.

SOC 315 - Introduction to Social Methodology

Course Career Undergraduate
Units 3
Approved Hours 3-0-2
Fee index 6
Faculty Arts
Department Sociology
Typically Offered either term

Description
Research design, data collection, and data processing strategies used by sociologists. Topics include research values and ethics, reliability and validity, experimentation, survey research techniques, historical methods, field research, and content analysis. Prerequisite: SOC 210 or consent of instructor.

SOC 335 - Themes in Contemporary Social Theory

Course Career Undergraduate
Units 3
Approved Hours 3-0-0
Fee index 6
Faculty Arts
Department Sociology
Typically Offered either term

Description
Major theoretical questions through analysis of works by contemporary theorists. Prerequisite: SOC

Course Career Undergraduate
Units 3
Approved Hours 3-0-0
Fee index 6
Faculty Arts
Department Sociology
Typically Offered either term

Description
The foundational contributions and relevance of the works of Marx, Weber, Durkheim and others to sociology and social theory. Course emphasizes close reading of primary texts to cultivate reading, writing and reasoning skills. Prerequisite: SOC 100 or consent of the instructor. Ineligible for exploration credits.

SOC 315 - Introduction to Social Methodology

Course Career Undergraduate
Units 3
Approved Hours 3-0-2
Fee index 6
Faculty Arts
Department Sociology
Typically Offered either term

Description
Research design, data collection, and data processing strategies used by sociologists. Topics include research values and ethics, reliability and validity, experimentation, survey research techniques, historical methods, field research, and content analysis. Prerequisite: SOC 210 or consent of instructor. Ineligible for exploration credits.

SOC 335 - Themes in Contemporary Social Theory

Course Career Undergraduate
Units 3
Approved Hours 3-0-0
Fee index 6
Faculty Arts
Department Sociology
Typically Offered either term

Description
Major theoretical questions through analysis of works by contemporary theorists. Prerequisite: SOC

212 or consent of the instructor. Not open to students with credit in SOC 332, 333, or 334.	212 or consent of the instructor. Not open to students with credit in SOC 332, 333, or 334. <mark>Ineligible for exploration credits.</mark>

212 or consent of the instructor. Not open to students with credit in SOC 332, 333, or 334.	212 or consent of the instructor. Not open to students with credit in SOC 332, 333, or 334. <mark>Ineligible for exploration credits.</mark>

UNIVERSITY OF ALBERTA

FINAL Item No. 6

Governance Executive Summary
Action Item

Agenda Title	Bachelor of Science in Dental Hygiene Academic Standing Regulations, Faculty of Medicine and Dentistry

Motion

THAT the GFC Programs Committee approve, with delegated authority from General Faculties Council, the proposed changes to academic standing regulations and application for readmission information for the Bachelor of Science (Dental Hygiene) Program, as proposed by the Faculty of Medicine and Dentistry and as set forth in Attachment 1, to take effect for Fall 2023.

Item

Action Requested	☒ Approval ☐ Recommendation
Proposed by	Brenda Hemmelgarn, Dean, Faculty of Medicine and Dentistry Paul Major, Chair, School of Dentistry, Faculty of Medicine and Dentistry
Presenter(s)	Rachelle Pratt, Acting Director, Dental Hygiene Program, School of Dentistry Ava Chow, Co-Chair, Admissions Committee, School of Dentistry

Details

Office of Administrative Responsibility	Provost and Vice-President (Academic)
The Purpose of the Proposal is (*please be specific*)	The purpose of this proposal is to clarify academic standing regulations as they pertain to progression in the Bachelor of Science (Dental Hygiene) Program, as to when a Requirement to Withdraw may take place, and the regulations regarding application for readmission to the Dental Hygiene Program, should a student have previously been Required to Withdraw from the Program.
Executive Summary (*outline the specific item – and remember your audience*)	The following summary adds clarity and context to the proposed Calendar changes as they pertain to academic standing, repeated years and the requirement to withdraw in the Dental Hygiene Program. The Dental Hygiene program is structured as a "lock step" program. A lock step program is one in which students are admitted as a cohort, and take their courses together in a specified sequence, offered only once per year. Courses are offered in a sequence, whereby the knowledge, skills and attitudes build throughout the years. Academic and practical experiences are mapped throughout the three years of the Dental Hygiene Program in a continuous manner, not as discrete experiences. The development of psychomotor skills requires practice and continuity. This begins in the first year of the program with the development of foundational skills and intensifies each year with the

	final year of the program dedicated primarily to clinical practice. Long lapses in learning inhibit this development.
	It is necessary for students to attain didactic knowledge and psychomotor skills concurrently and sequentially to advance to safe practice within the clinical environment.
	Particularly in the clinical setting, skills must be continuously learned, practiced and evaluated to develop competent patient care. The quality of patient care cannot be compromised as a result of disjointed learning.
	In the event that a student were to modify the currently developed program of study, the student may not be able to satisfy the attainment of the competencies of a beginning dental hygiene practitioner as set forth by the Commission on Dental Accreditation Canada.
	Because of the rigorous nature of the Dental Hygiene Program, a student must be able to accept the physical, emotional, and mental demands of the program and function effectively under stress. It is necessary to adapt to changing environments, and function in the face of uncertainties that are inherent in the care of patients and working in the complex healthcare environment.
	There is increased financial, emotional and physical risk to the student if permitted to repeat more than one academic year.
	The previous Calendar language did not explicitly address these concerns.
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](#)>	*Those who are actively **participating**:* ● Dr. Sharon Compton, Director, Dental Hygiene Program (on sabbatical) ● Ms. Rachelle Pratt, Acting Director, Dental Hygiene Program, School of Dentistry ● Dr. Ava Chow, Co-Chair, Admissions Committee, School of Dentistry ● Ms. Melanie Grams, Admissions Officer, School of Dentistry
	*Those who have been **consulted**:* ● FoMD Faculty Learning Committee – approval – August 2, 2022 ● FoMD Faculty Council Committee (for review) – August 25, 2022 ● Undergraduate Program Support Team (UPST) – September 29, 2022 and December 15, 2022 *Those who have been **informed**:* ● Dental Hygiene Advisory Committee - November 28, 2022
Approval Route (Governance)	

(including meeting dates)	

Strategic Alignment

Alignment with *For the Public Good*	These changes will ensure that students have a cohesive learning experience and that their development as safe and competent health care providers can be monitored and evaluated appropriately. This is critical to safeguard public interest.	
Alignment with Core Risk Area	Please note below the specific institutional risk(s) this proposal is addressing.	
	☒ Enrolment Management ☐Faculty and Staff ☐Funding and Resource Management ☐IT Services, Software and Hardware ☐Leadership and Change ☐Physical Infrastructure	☒ Relationship with Stakeholders ☒ Reputation ☐Research Enterprise ☐Safety ☒ Student Success
Legislative Compliance and jurisdiction	Cite reference to relevant legislation, policy, and governance committee(s) [title only is required].	

Attachments (each to be numbered 1 - <>)

1. Dental Hygiene Calendar Change (Academic Standing and Application for Readmission) (page(s) 1 – 4)

Prepared by: Melanie Grams, Admissions Officer, School of Dentistry, mgrams@ualberta.ca

Calendar Change Request Form for Program and Regulation Changes

See the Calendar Guide for tips on how to complete this form.

Faculty (& Department or Academic Unit):	Dental Hygiene, School of Dentistry, FoMD	
Contact Person:	Melanie Grams (mgrams@ualberta.ca)	
Level of change (choose one only)	☑	Undergraduate
	☐	Graduate
Type of change request (check all that apply)	☑	Program
	☑	Regulation
For which term is this intended to take effect?	Fall 2023	
Does this proposal have corresponding course changes? (Should be submitted at the same time)	No	

Rationale

Academic Standing & Admission Update:
Upon review of the description in these two sections, it was not clear when a student would be required to withdraw, or if a student who has been required to withdraw, can reapply to the program. These statements add clarity to the Academic Standing and Admission details for dental hygiene students/applicants.

Calendar Copy:

URL in current Calendar (or leave blank if it is a new page): https://calendar.ualberta.ca/content.php?catoid=36&navoid=11249#:~:text=the%20DDS%20program.-,Bachelor%20of%20Science%20(Dental%20Hygiene),-Academic%20Standing	
Bachelor of Science (Dental Hygiene) **Academic Standing** Decisions regarding academic standing and promotion to the next year or graduation are made by the Faculty of Medicine and Dentistry Academic Standing and Promotion Committee based on the recommendations of the Department of Dentistry Academic Standing Committee. Recommendations for promotion and graduation are based on a grade of at least D in each subject and a GPA of at least 2.0.	Bachelor of Science (Dental Hygiene) **Academic Standing** Decisions regarding academic standing and promotion to the next year or graduation are made by the Faculty of Medicine and Dentistry Academic Standing and Promotion Committee based on the recommendations of the Department of Dentistry Academic Standing Committee. A student may not proceed to any subsequent year of the Dental Hygiene program or graduate unless they have passed all courses for that academic year. Recommendations for promotion and graduation are based on a grade of at least D in each subject and a GPA of at least 2.0.

Students may not re-register for credit more than once in any failed course required within the dental hygiene program. This includes any University or equivalent University-transferrable course work.

With Distinction: awarded to graduating students who have obtained an average GPA of not less than 3.5 during the final 60 credits of course work.

Repetition of a Year

Students in the Dental Hygiene program are not permitted to repeat any year, except for exceptional cases as determined by the Faculty of Medicine and Dentistry Academic Standing and Promotion Committee based on the recommendations of the Department of Dentistry Academic Standing Committee. ~~Repeating students are considered for awards, if taking a full course load.~~

A ~~failed student who repeats the failed year~~ may retain credit for passed courses, other than laboratory and clinical courses, only at the discretion of the Faculty of Medicine and Dentistry Academic Standing and Promotion Committee acting on the advice of the Dental Hygiene Program. During the repeated year, a grade of at least C+ is required for Dental Hygiene courses.

~~A Special Category repeating dental hygiene student; has achieved a minimum GPA of 2.7 in the year requiring repetition; has clinical/practicum deficiencies in no more than one clinical course and is advised that the deficiency could be corrected within a four-month period of instruction; and has successfully completed all written examinations in the~~

With Distinction: awarded to graduating students who have obtained an average GPA of not less than 3.5 during the final 60 credits of course work.

Conditional Standing and Academic Probation

Students in the Dental Hygiene program are not permitted to repeat any year, except for exceptional cases as determined by the Faculty of Medicine and Dentistry Academic Standing and Promotion Committee based on the recommendations of the Department of Dentistry Academic Standing Committee. Students not meeting the requirements to continue in the program, but granted permission to repeat the year will be assigned Conditional Standing and placed on Academic Probation. These students will be considered for awards, if taking a full course load. To clear Conditional Standing and Academic Probation and to qualify for promotion or graduation, the student must achieve a minimum GPA of 2.3 at the end of the probationary year. Students who fail to meet this requirement will be Required to Withdraw.

A student with Conditional Standing on Academic Probation may retain credit for passed courses, other than laboratory and clinical courses, only at the discretion of the Faculty of Medicine and Dentistry Academic Standing and Promotion Committee acting on the advice of the Dental Hygiene Program. A student with Conditional Standing and on Academic Probation may be required to participate in a modified program of study. During the repeated year, a grade of at least C+ is required for Dental Hygiene courses.

A student with Conditional Standing and on Academic Probation, in any single year of the program, will only be allowed to repeat one year. If the student is unable to achieve a minimum conditional standing GPA of 2.3, or does not meet the promotional standards for subsequent years, they will be required to withdraw from the program.

Special Category Students

Students presenting deficiencies in their final year of clinical course work will be considered Special Category students. These students must have achieved a minimum GPA of 2.7 in their final year, and have clinical/practicum deficiencies in no more than one clinical course. Any clinical/practicum deficiencies must be corrected within a four-month period of remedial instruction. These students must have successfully

~~Dental Hygiene program.~~	completed all written examinations in the Dental Hygiene Program. Special Category students who do not meet these requirements for graduation will be required to withdraw from the Dental Hygiene program.

URL in current Calendar (or leave blank if it is a new page):
https://calendar.ualberta.ca/content.php?catoid=36&navoid=11300#bachelor-of-science-dental-hygiene:~:text=Degree%20Completion%20Program.-,Bachelor%20of%20Science%20(Dental%20Hygiene).-Application%20for%20Admission

Bachelor of Science (Dental Hygiene) **Application for Admission and Application for Readmission** Only electronic applications will be accepted. To access the online application for the University of Alberta please visit www.admissions.ualberta.ca. For detailed application and program information please visit www.dentistry.ualberta.ca. **Enrolment:** Enrolment is limited to an annual quota of 42 students. Of the 42 positions available 90% will be reserved for qualified Alberta residents, and up to 10% for qualified non-Alberta residents. No non-resident shall be admitted to the Dental Hygiene Program who is less qualified than any Alberta resident who is denied admission to that Program (see Residence Requirements).	Bachelor of Science (Dental Hygiene) **Application for Admission** Only electronic applications will be accepted. To access the online application for the University of Alberta please visit www.admissions.ualberta.ca. For detailed application and program information please visit www.dentistry.ualberta.ca. **Enrolment:** Enrolment is limited to an annual quota of 42 students. Of the 42 positions available 90% will be reserved for qualified Alberta residents, and up to 10% for qualified non-Alberta residents. No non-resident shall be admitted to the Dental Hygiene Program who is less qualified than any Alberta resident who is denied admission to that Program (see Residence Requirements). **Application for Readmission** Readmission to the Dental Hygiene Program is not guaranteed and is based on the following: 1. An applicant must complete the online application process as detailed in the program information 2. A review by the School of Dentistry Admissions Committee of the reasons for withdrawal and of the student's academic record. 3. An applicant who has been required to withdraw from the Dental Hygiene Program must present a minimum of one year of 27 units of University transferable course weight (Fall/Winter Academic year) with a GPA of at least 2.7. 4. Applicants must be competitive for readmission within the applicant pool. 5. An applicant must also satisfy any other conditions as specified by the Faculty of Medicine and Dentistry Academic Standing and Promotion Committee at the time of withdrawal. Should a student be readmitted subsequent to being required to withdraw from the Dental Hygiene Program, they

	<mark>will be readmitted to Year 2 of the program. They will be required to formally attend, participate in and successfully complete all courses and assessments in Year 2 of the Program.</mark>
Indigenous Applicants: The Faculty of Medicine and Dentistry is committed to the recruitment, retention and graduation of Indigenous students. All Indigenous applicants who meet the academic eligibility requirements as outlined in Bachelor of Science (Dental Hygiene) and who are successful in the Indigenous admissions process will be recommended by the Indigenous Admissions Subcommittee to the School of Dentistry Admissions Committee for admission. Students who are of Aboriginal identity within the meaning of the Constitution Act, 1982, Section 35(2) will be considered in this category. Indigenous student applicants and prospective students should contact the Administrator, Indigenous Health Initiatives Program, Faculty of Medicine and Dentistry for individual counseling and career planning.See also Admission of Indigenous Applicants. Because the number of candidates who meet the minimum requirements for admission far exceeds the quota, it should be understood that eligibility does not guarantee admission. Admission is determined on a competitive basis. [...]	**Indigenous Applicants:** The Faculty of Medicine and Dentistry is committed to the recruitment, retention and graduation of Indigenous students. All Indigenous applicants who meet the academic eligibility requirements as outlined in Bachelor of Science (Dental Hygiene) and who are successful in the Indigenous admissions process will be recommended by the Indigenous Admissions Subcommittee to the School of Dentistry Admissions Committee for admission. Students who are of Aboriginal identity within the meaning of the Constitution Act, 1982, Section 35(2) will be considered in this category. Indigenous student applicants and prospective students should contact the Administrator, Indigenous Health Initiatives Program, Faculty of Medicine and Dentistry for individual counseling and career planning.See also <u>Admission of Indigenous Applicants</u>. Because the number of candidates who meet the minimum requirements for admission far exceeds the quota, it should be understood that eligibility does not guarantee admission. Admission is determined on a competitive basis. [...]

Reviewed/Approved by:

FoMD Faculty Learning Committee (Faculty Council-delegated Approver) – August 2, 2022 FoMD Faculty Council (for information/suggestions/challenges) – August 25, 2022
Other consultation groups, departments, or internal faculty approving bodies and approval dates.

FINAL Item No. 7

Governance Executive Summary
Action Item

Agenda Title	Practicum Restructure and Program Changes, Faculty of Kinesiology, Sport, and Recreation

Motion

THAT the GFC Programs Committee approve, with delegated authority from General Faculties Council, the proposed changes to existing Practicum Requirements for the BKin, BScKin, and BARST programs, as submitted by the Faculty of Kinesiology, Sport, and Recreation (KSR), and as set forth in Attachments 1-7, to be published in the 2023-2024 Calendar and take effect in the 2024-2025 academic year.

Item

Action Requested	☒ Approval ☐ Recommendation
Proposed by	Kyra Pyke, Dean, Faculty of KSR
Presenter(s)	Angela Bayduza, Associate Dean (Undergraduate Programs), KSR

Details

Office of Administrative Responsibility	Provost and Vice-President (Academic)
The Purpose of the Proposal is (*please be specific*)	The proposal is before the committee to ensure that all Academic Regulations related to academic standing requirements for this program are listed in the Calendar, with precision, clarity, and consistency.
Executive Summary (*outline the specific item – and remember your audience*)	In January of 2021, the Faculty of KSR began the Practicum Requirement Restructure project with the primary goals of conducting a thorough review of the current Practicum Requirement structure across three Undergraduate Degree Programs (BARST, BKin, BScKin) and making necessary changes for maximum improvement. The Faculty's Practicum framework and delivery structure has existed in its current form for at least two decades or more and had not been reviewed or updated to this degree for a significant period of time.

In the current practicum structure, students are provided with one singular or macro level experience matched with a practicum placement partner and are tasked with completing 30-35 hours per week of unpaid work across the practicum semester with this one singular experience, for completion of up to 15 credit units. The nature of work in placements often requires students to make themselves available to be scheduled days, evenings, and/or weekends to meet the required hours of their placement while receiving meaningful mentorship. Within the current practicum structure, students complete practicum placements just prior to or nearing the end of the degree program with a completion of 90 credit units requirement.

As a result of an extensive review of the current KSR Practicum requirement structure, critical ethical, equity, accessibility, and inclusivity concerns and considerations for students with this current model of delivery have become clear. As well, a lack of culturally diverse and multi population-based experiences offered and made available to each individual student through the current Practicum structure of delivery are problematic and also need to be addressed. |

The review of the current KSR Practicum requirement structure has highlighted a need to move forward with a new, updated delivery structure that is solidly based upon the following seven principles:

1) Emphasis and alignment given to a strong Indigenous Initiatives, Equity, Diversity, and Inclusion lens and focus, to address equity & accessibility barriers, in current KSR "practicum" structure
2) High density, rich, deep, meaningful, learning outcomes-based opportunities and alignment with the Work Integrated Learning (WIL) principles of Field Placements
3) Increase variety and breadth of experiences for students in both contexts & populations that is inclusive of choices between both micro (part-time/short term) intensive hands-on experiences and continued macro (longer term) intensive practical, "In the Field Learning" (IFL) experiences, relevant to student subjects of study.
4) Exposure to professional practice opportunities earlier in and across more of the degree program
5) Professional practice experiences more deeply connected to theory, curriculum, degree core coursework, and credit completion through a laddered or scaffolded course-based approach
6) Greater choice, flexibility, and accessibility for the student in the completion of the degree requirement.
7) Provision of a delivery structure, model, and/or foundation for future innovation and evolution for completion of this program requirement, that is nimbler and more responsive to change.

The proposed new In the Field Learning experiences, will include both micro (variable; ~1-4 hrs/ week or ~15-60 hrs/term) and macro level (variable; ~8-12 hrs/week or ~120-180 hrs/term) experiences. These experiences will be developed with the objective of challenging students to respond to the needs they see and purposefully find solutions in application of their knowledge and training in meeting these challenges within placements. Providing applied, active learning experiences focused on cultural sensitivity in a breadth of diverse populations and lived experiences, will be a driving factor within the proposed changes. An increased number of richer, deeper learning experiences for KSR students will be developed across an increased number of populations eventually KSR students will be working with professionally.

The proposed new delivery structure incorporates, much earlier in the degree program (courses are restricted to students who have completed a minimum of 45 units), student engagement in career exploration, understanding of professional requirements and potential certifying bodies more consistently and fully, attainment of multiple and more diverse work-integrated learning experiences, and improvement of students' personal awareness as to what is required of them in their next steps after completion of their undergraduate program, what their professional identity is, and how that identity is present within one's career path.

| | The new In the Field Learning delivery model will also focus on the provision of high density, rich, and applied outcomes-based learning and learning opportunities much more closely aligned with the Work Integrated Learning (WIL) principles of Field Placements, providing a mix and variety of short-term micro, as well as macro, intensive hands-on practical experiences, in a multiple of settings with a variety of populations relevant to their subjects of study and career pathways. This proposed top-down WIL approach integrates a greater connection of WIL (Experiential Learning-EL/Community Service Learning-CSL) in academic focused courses, from the point of completion of 45 credits (1.5 yr of program) all the way through to degree completion. In this way, students will be better able to understand how each of the individual courses offered throughout their program and in connection to WIL/EL/CSL electives, develop skills that are transferable across their degree and beyond into their careers.

This proposed model of In the Field Learning attempts to provide greater width and number of in the field learning experiences while at the same time offer increased flexibility to students in support of program completion, accessibility, and inclusivity, and applied, active engaged outcome-based learning through much broader sampling of populations and culturally diverse In the Field Learning opportunities they will be exposed to and may choose to complete. |
| 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](#)> | *Those who are actively **participating**:*
• Angela Bayduza, Associate Dean (Undergraduate Programs), KSR
• Nicole Lazorek, Manager, Academic Programs, KSR
• Student Service Office staff, KSR
• Christine Legault, Faculty Manager, KSR |
| | *Those who have been **consulted & informed**:*
• KSR Leadership Team: April 4th, 2022; August 8, 2022; October 18th, 2022
• KSR Academic Council: April, 26th, 2022
• KSR UG Students (upon completion of practicum): June 10, 2022
• KSRSS Council: October 16th, 2022
• KSRSS GFC Student Representative: October 24, 2022
• Undergraduate Program Support Team (Undergraduate & Non-Credit): June 2, 2022; August 25, 2022 consultation
• Dr. Karsten Mundel, Provost Fellow, Experiential and Work-Integrated Learning & Associate Professor: June 13, 2022
• Norma Rodenburg, Deputy Registrar, Office of the Registrar: June 13, 2022
• Dr. Beverley Temple, Professor, Associate Dean, Undergrad Studies, Faculty of Nursing: June 20, 2022
• Dr. Florence Glanfield, Vice-Provost Indigenous Programming & Research: July 14, 2022
• Rebecca Liaw, University Calendar Editor: October 25, 2022 |

	• Joan Matthews White, Head Athletic Therapist, Athletics, Student Services, Dean of Students, UofA ongoing • Michael Scarlett, Work Physiology Laboratory & Firefighter Fitness Testing Unit, KSR ongoing • Jen Leo, Director, The Steadward Centre for Personal & Physical Achievement, KSR ongoing	
Approval Route (Governance) (including meeting dates)	● KSR Undergraduate Programs Committee: April 6th, 2022 consultation; June 1st, 2022 consultation; September 7, 2022 consultation; November 16th, 2022 approval ● KSR Faculty Executive: Sept 21st, 2022, consultation; November 22nd, 2022, approval ● KSR Faculty Council: Sept 28th, 2022, consultation; November 30th, 2022, approval	

Strategic Alignment

Alignment with *For the Public Good*	OBJECTIVE 1: Build a diverse, inclusive community of exceptional undergraduate and graduate student from Edmonton, Alberta, Canada, and the world. OBJECTIVE 21: Encourage continuous improvement in administrative, governance, planning, and stewardship systems, procedures, and policies that enable students, faculty, staff, and the institution as a whole to achieve shared strategic goals.	
Alignment with Core Risk Area	Please note below the specific institutional risk(s) this proposal is addressing.	
	☐ Enrolment Management ☒ Faculty and Staff ☐ Funding and Resource Management ☐ IT Services, Software and Hardware ☐ Leadership and Change ☐ Physical Infrastructure	☒ Relationship with Stakeholders ☐ Reputation ☐ Research Enterprise ☐ Safety ☒ Student Success
Legislative Compliance and jurisdiction	Post-Secondary Learning Act (PSLA) Programs Committee Terms of Reference	

Attachments (each to be numbered 1 - 7)

1. Attachment 1 (pages 5-9) titled "KSR Practicum Requirement Restructure Executive Summary"
2. Attachment 2 (pages 10-14) titled "KSR.Calendar Change Request Form for Program Changes-Regulations.General Information Practicum.Fall 2024 Implementation"
3. Attachment 3 (pages 15-23) titled "KSR.Calendar Change Request Form for Program Changes.BARST.Practicum Changes.Fall 2024 Implementation"
4. Attachment 4 (pages 24-32) titled "KSR.Calendar Change Request Form for Program Changes.BKin.Practicum Changes.Fall 2024 Implementation"
5. Attachment 5 (pages 33-38) titled "KSR.Calendar Change Request Form for Program Changes.BScKin. Practicum Changes.Fall 2024 Implementation"
6. Attachment 6 (pages 39-46) titled "KSR.Calendar Change Request Form for Course Changes.IFL (new courses) and Practicum (course deletions).Fall 2024 Implementation"
7. Attachment 7 (pages 47-50) titled "KSR.Calendar Change Request Form for Program Changes.UG Research Certificate Changes.Fall 2024 Implementation"

Prepared by: Angela Bayduza, Associate Dean (Undergraduate Programs), Faculty of Kinesiology, Sport, and Recreation; email - ksradu@ualberta.ca

Attachment 1
KSR Practicum Requirement Restructure Executive Summary

PROPOSED CHANGES TO
Faculty of Kinesiology, Sport, and Recreation (KSR)
Practicum Requirement Restructure
Executive Summary
Prepared by:
Angela Bayduza, Associate Teaching Professor and Associate Dean (Undergraduate Programs), Faculty of KSR (ksradu@ualberta.ca)

Preamble
In January of 2021, the Faculty of KSR began the Practicum Requirement Restructure project with the primary goals of conducting a thorough review of the current Practicum Requirement structure across three Undergraduate Degree Programs (BARST, BKin, BScKin) and making necessary changes for maximum improvement. The Faculty's Practicum framework and delivery structure has existed in its current form for at least two decades or more and had not been reviewed or updated to this degree for a significant period of time.

The purpose of this executive summary is to provide University Governance committees with further background information for discussion and decision making regarding the proposed changes to the Practicum Requirement for KSR undergraduate students in three of KSR undergraduate degree programs (BARST, BKin, BScKin). Students enrolled in the fourth KSR undergraduate degree program, the BKinBEd Combined Degrees program, complete their professional practice experience in the Faculty of Education during their 4th and 5th years of their degree program.

Existing KSR Practicum Structure
In the current practicum structure, students are provided with one singular or macro level experience matched with a practicum placement partner and are tasked with completing 30-35 hours per week of unpaid work across the practicum semester with this one singular experience, for completion of up to 15 credit units. The nature of work in placements often requires students to make themselves available to be scheduled days, evenings, and/or weekends in order to meet the required hours of their placement while receiving meaningful mentorship. Within the current practicum structure, students complete practicum placements just prior to or nearing the end of the degree program with a completion of 90 credit units requirement.

Results of Review of Current KSR Practicum Structure
As a result of an extensive review of the current KSR Practicum requirement structure, critical ethical, equity, accessibility, and inclusivity concerns and considerations for students with this current model of delivery have become clear. As well, a lack of culturally diverse and multi population-based experiences offered and made available to each individual student through the current Practicum structure of delivery are problematic and also need to be addressed.

The review of the current KSR Practicum requirement structure has highlighted a need to move forward with a new, updated delivery structure that is solidly based upon the following seven principles:
- Emphasis and alignment given to a strong Indigenous Initiatives, Equity, Diversity, and Inclusion lens and focus, to address equity & accessibility barriers, in current KSR "practicum" structure
- High density, rich, deep, meaningful, learning outcomes based opportunities and alignment with the Work Integrated Learning (WIL) principles of Field Placements
- Increase variety and breadth of experiences for students in both contexts & populations that is inclusive of choices between both micro (part-time/short term) intensive hands-on experiences and continued macro (longer term) intensive practical, "In the Field Learning" (IFL) experiences, relevant to student subjects of study.
- Exposure to professional practice opportunities earlier in and across more of the degree program

- Professional practice experiences more deeply connected to theory, curriculum, degree core coursework, and credit completion through a laddered or scaffolded course-based approach
- Greater choice, flexibility, and accessibility for the student in the completion of the degree requirement.
- Provision of a delivery structure, model, and/or foundation for future innovation and evolution for completion of this program requirement, that is nimbler and more responsive to change.

New Proposed KSR In Field Learning Structure

The proposed new In the Field Learning experiences, will include both micro (variable; ~1-4 hrs/ week or ~15-60 hrs/term) and macro level (variable; ~8-12 hrs/week or ~120-180 hrs/term) experiences. These experiences will be developed with the objective of challenging students to respond to the needs they see and purposefully find solutions in application of their knowledge and training in meeting these challenges within placements. Providing applied, active learning experiences focused on cultural sensitivity in a breadth of diverse populations and lived experiences, will be a driving factor within the proposed changes. An increased number of richer, deeper learning experiences for KSR students will be developed across an increased number of populations eventually KSR students will be working with professionally.

The proposed new delivery structure incorporates, much earlier in the degree program (courses are restricted to students who have completed a minimum of 45 units), student engagement in career exploration, understanding of professional requirements and potential certifying bodies more consistently and fully, attainment of multiple and more diverse work-integrated learning experiences, and improvement of students' personal awareness as to what is required of them in their next steps after completion of their undergraduate program, what their professional identity is, and how that identity is present within one's career path.

The new In the Field Learning delivery model will also focus on the provision of high density, rich, and applied outcomes-based learning and learning opportunities much more closely aligned with the Work Integrated Learning (WIL) principles of Field Placements, providing a mix and variety of short term micro, as well as macro, intensive hands-on practical experiences, in a multiple of settings with a variety of populations relevant to their subjects of study and career pathways. This proposed top-down WIL approach integrates a greater connection of WIL (Experiential Learning-EL/Community Service Learning-CSL) in academic focused courses, from the point of completion of 45 credits (1.5 yr of program) all the way through to degree completion. In this way, students will be better able to understand how each of the individual courses offered throughout their program and in connection to WIL/EL/CSL electives, develop skills that are transferable across their degree and beyond into their careers.

This proposed model of In the Field Learning attempts to provide greater width and number of in the field learning experiences while at the same time offer increased flexibility to students in support of program completion, accessibility and inclusivity, and applied, active engaged outcome-based learning through much broader sampling of populations and culturally diverse In the Field Learning opportunities they will be exposed to and may choose to complete.

<u>BARST</u>
- In Field Learning Component: A group of courses totalling completion of a minimum of 9 units to a maximum of 12 units.
- The total course units taken in Open Options and In Field Learning courses in year 4 must equal 6 units.
- Students are encouraged to contact the KSR Student Services Office and consult with an Academic Advisor for assistance in program building and course selection of Faculty Options in the completion of program requirements as well in selecting appropriate Open Options to support, prepare for, and meet In Field Learning course prerequisites and placement requirements.
- Students approved to take the Advanced Project in lieu of In Field Learning would normally take the approved coursework and research-based Directed Study in Year 4.

- A maximum of 15 units in In Field Learning course offerings may be credited toward the BARST degree program.
- In Field Learning courses are restricted to students who have completed a minimum of 45 units toward the BARST degree program.

BKin
- In Field Learning Component: A group of courses totalling completion of a minimum of 9 units to a maximum of 12 units.
- Students who elect to complete the minimum 9 units of the In Field Learning Component will complete 21 units of major course options. Students who elect to complete the maximum 12 units of the In Field Learning Component will complete 18 units of a combination of major required and optional course options.
- A maximum of 15 units of In Field Learning course offerings may be credited toward the BKin degree program.
- In Field Learning courses are restricted to students who have completed a minimum of 45 units toward the BKin degree program.

BScKin
- In Field Learning Component: A group of courses totalling a minimum of 9 units to a maximum of 12 units.
- Students who elect to complete the minimum 9-units of the In Field Learning Component will complete 15 units/credits of Open Options. Students who elect to complete the maximum 12 units of the In Field Learning Component will complete 12 units of Open Options.
- The total course units taken in Open Options and In Field Learning courses in year 4 must equal 12 units.
- A maximum of 15 units in In Field Learning course offerings may be credited toward the BSc in Kinesiology degree program.
- In Field Learning courses are restricted to students who have completed a minimum of 45 units toward the BSc in Kinesiology degree program.

Implementation Plan
Faculty and administrative staff will continue to work together closely to implement the proposed changes, ensuring forms, policies, processes are correctly and appropriately updated, procedural changes are made, student service office staff continue to be kept informed and engaged in the process, students receive frequent communication and updates, and placement partners are given ample direction and information in collaborating with the Faculty to achieve the objectives of the new proposed In Field Learning program requirement structure.

Administration processes within the KSR Student Services Office will need to be established to ensure current students already enrolled in programming are provided the opportunity and option to transition to the new delivery model if appropriate. As well, a phased approach to course deletions (indicated in the proposal package), during the teach out phase, will be taken to ensure that students who either can not or do not want to transition to the new delivery model can continue and complete their current degree programs.

These proposed program, regulation, and course changes to the Practicum requirement structure will have impact upon administration resource needs that are in line with the challenges the Faculty of KSR is experiencing with the current Practicum delivery model. Academic Instructors, who currently are assigned to the Practicum Seminar, will need to be assigned to individual courses in the new In Field Learning delivery model and will need to be more fully engaged in the oversight and quality assurance of the In the Field Learning experiences unique to each course offering through teaching service directly related to the course they are assigned to. As well, relationship building with both current and new placement partners, to coordinate high quality micro and macro work integrated experiences for KSR students will be centrally positioned as a large focus and responsibility of a newly envisioned KSR Practicum Advisor position, along with realigned

administrative support needs to be addressed there. The number of micro and macro placements developed for offering to KSR students will also need to be closely managed and directly connected in this management to undergraduate enrollment demands across all three programs. As well, undergraduate enrollment management in the Faculty will need to be directly connected to available capacity in the number of micro and macro placements developed for offering in partnership with the Faculty of KSR and its students. With the proposed changes also comes the necessity to implement program-level controls on admission.

The new proposed practicum framework will require minor changes in the way KSR programs are presented in the Academic Calendar. However, these changes will require close collaboration with the Calendar Editor, Governance, and the Registrar as the proposed changes begin to move towards implementation.

The Faculty communication plan will include the use and enhancement of undergraduate pages on the Faculty of KSR webpage. Utilizing the KSR biweekly undergraduate newsletter, constant and inclusive engagement with the KSR Student Society group, and multiple In Field Learning and academic advisement information sessions, the Faculty will employ a multipronged approach in sharing important information regarding the proposed changes. Developing and maintaining strong recruitment and advisement strategies will be essential to this communication plan. Dissemination of information will also occur through various faculty governance and non governance committees and course instructors.

Teach Out Plan
The expected date of implementation of the new proposed In Field Learning Requirement is Fall 2024. Inclusion of this notation in the Academic Calendar in Fall 2023 will be of critical importance for recruitment purposes, in the Faculty communication efforts, and for increased readiness for implementation in Fall 2024.

There may need to be some calendar changes within this suite of proposals that can be implemented as soon as the changes are approved. However, others may need to be in the calendar a full year before they can be implemented. For example, students are eligible to follow the program requirements published in the calendar year they were admitted to the Faculty of KSR. To ensure both continuing and new students are accommodated in terms of the year of program they are eligible to follow, KSR will begin by submitting the new In Field Learning courses for implementation into the calendar immediately and begin use of the new course codes for those students eligible for completion once Fall 2024 begins. At the same time, the faculty will also delay submission of the deletion of the old Practicum courses and course codes as the teach out phase continues and as long as needed to assist students in completion of their programs if they remain on the old Practicum structure program. Although some students may find the new proposed In Field Learning structure appealing and transitioning to advantageous for them, many students will not and continue to choose to follow the old Practicum structure requirements. To accommodate both new and continuing students, the Faculty of KSR will ensure all necessary courses are offered for students in continuation and completion of their programs or acceptable accommodations will be made.

As is the case in all program changes made within the Faculty of KSR, Academic Advisors will also be continuously consulted and familiar with all calendar year versions of KSR Undergraduate programs and submission of program change submissions throughout the teach out phase.

Required Calendar Changes
The following table lists the associated proposed calendar changes in an attempt to provide an organized reference of the multiple resultant calendar program changes that will be required in order to implement the new In Field Learning delivery model and requirements within the three Faculty of KSR undergraduate programs.

Below you will find links to Google documents for the six associated calendar changes required for implementation of the proposed new In Field Learning requirement structure:

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Item No. 7

KSR.Calendar Change Request Form for Program Changes-Regulations.General Information Practicum.Fall 2024 Implementation	Indicates the general statement in calendar of the change in wordage from "Practicum" to use of "In Field Learning" and proposed objectives for KSR students.
KSR.Calendar Change Request Form for Program Changes.BARST.Practicum Changes.Fall 2024 Implementation	Indicates proposed changes to the BARST undergraduate degree program to reflect implementation of new In Field Learning delivery model and objectives.
KSR.Calendar Change Request Form for Program Changes.BKin.Practicum Changes.Fall 2024 Implementation	Indicates proposed changes to the BKin undergraduate degree program to reflect implementation of new In Field Learning delivery model and objectives.
KSR.Calendar Change Request Form for Program Changes.BScKin.Practicum Changes.Fall 2024 Implementation	Indicates proposed changes to the BScKin undergraduate degree program to reflect implementation of new In Field Learning delivery model and objectives.
KSR.Calendar Change Request Form for Course Changes.IFL (new courses) and Practicum (course deletions).Fall 2024 Implementation	Indicates the associated courses deletions from old "Practicum" structure and the course additions for new proposed "In Field Learning" structure.
KSR.Calendar Change Request Form for Program Changes.UG Research Certificate Changes.Fall 2024 Implementation	Indicates associated changes to the UG Research Certificate to align with the new proposed "In Field Learning" structure.

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Attachment 2
KSR.Calendar Change Request Form for Program Changes-Regulations.General Information Practicum.Fall 2024 Implementation

Calendar Change Request Form for Program and Regulation Changes

See the Calendar Guide for tips on how to complete this form.

Faculty (& Department or Academic Unit):	FoKSR
Contact Person:	Angela L. Bayduza, KSR Associate Dean, Undergraduate Programs ksradu@ualberta.ca
Level of change (choose one only) [?]	• Undergraduate • Graduate
Type of change request (check all that apply) [?]	• Program • Regulation
For which term is this intended to take effect?	Fall 2024
Does this proposal have corresponding course changes? (Should be submitted at the same time)	Yes

Rationale

The following proposed changes to the KSR Practicum are in response to the needs of current and future students in implementing solutions to prioritize diversity and provide more flexible pathways to students within more meaningful, rich, rigorous, purposeful, career focused, and culturally sensitive work integrated learning experiences. Currently, there are critical ethical, equity, accessibility, and inclusivity considerations for students with the current KSR "Practicum" model of delivery as well as a lack of culturally diverse and multi population-based experiences offered and available to each individual student.

As the Faculty of KSR continues its strong response to the TRC calls to action in decolonizing and Indigenizing programming, the proposed changes to Practicum will have a dedicated focus on Indigenous Knowledges, ethical engagement and collaboration with Indigenous communities, and strong grounding in kinesiology related issues (sport, exercise, recreation, physical activity, health and wellness, etc.) experienced by Indigenous Peoples of Canada. The proposed new In the Field Learning experiences, at both a micro and macro level, will challenge students to respond to the needs they see and purposefully find solutions in application of their knowledge and training in meeting these challenges. Providing applied, active learning experiences focused on cultural sensitivity in a breadth of diverse populations and lived experiences, will be a driving factor within the proposed changes.

In addressing the lack of culturally diverse and multi population-based experiences offered to each individual student within their current work integrated opportunities, the proposed changes provide an enhanced opportunity to continue to build already existing partnerships with community associations and organizations as well as build others. Through KSRs ongoing partnerships with such community organizations and professional certifying/registration bodies (i.e., Indigenous Sport Council of Alberta-ISCA; Alberta Kinesiology Association-AKA; Alberta Recreation and Parks-ARPA, to name just a few), at the level of each proposed IFL course, richer, deeper learning experiences for KSR students can be developed with not only these associations but also the populations they serve and eventually KSR students will be working with professionally.

Key equity, accessibility, and inclusivity considerations within the proposed changes to "practicum" in the Faculty of KSR are the completion requirements of the current delivery models. The current student completing the Faculty of KSR practicum program structure comes from a privileged background, likely still living at home, or has other significant support such as family to pay for their accommodations and costs of daily living during the practicum semester. In the current practicum structure, where students who are matched with practicum placement partners, students are tasked with completing 30-35 hours per week of unpaid work across the practicum semester, for completion of up to 15 credit units. Students, as a result of this degree program requirement, have little time or flexibility to attend to other financial responsibilities by working in a paid position outside of their practicum commitment. In addition to this, the nature of work in some placements requires students to be available to be scheduled days, evenings, and weekends to meet the required hours of their placement while receiving meaningful mentorship. This further reduces the student's ability to work in a paid role as it makes scheduling paid shifts difficult.

Another driver of the update to the KSR practicum structure is that the career paths available to graduates of the Faculty's degree programs, where the practicum is required, are very diverse. The current delivery structure places completion of the practicum at the end of the degree program (90 credit units completed) when students have not yet had an opportunity to complete a thorough exploration of the different career paths available to them. This places a lot of pressure on the student to choose the "right" or most "advantageous" practicum at the very end of their program, instead of emphasizing the connection of theory into practice, very early in and across the degree program.

The proposed new delivery structure incorporates, much earlier in the degree program, student engagement in career exploration, understanding of professional requirements and potential certifying bodies more consistently and fully, attainment of multiple and more diverse work-integrated learning experiences, and improvement of students' personal awareness as to what is required of them in their next steps after completion of their undergraduate program, what their professional identity is, and how that identity is present within one's career path.

Finally, within the significant ask of students completing practicum in the current practicum structure where placements are unpaid with an average work week of 30-35 hours, it has become apparent that this time completion expectation of students is often not being filled with meaningful skills, professional development, and/or intensive applied learning for the student. Often within these large, macro experiences, significant amounts of this time is being filled with entry-level labour that should otherwise be completed by a paid employee of the placement organization. In other words, practicum organizations are asking skilled student labour to fill their placement hours and practicum requirements with tasks not connected strongly to learning outcomes or experiential, applied program learning. As a result, these students are left without a rigorous, purposeful, career focused work integrated learning experience.

The proposed new structure will respond to the needs of current and future students, implement solutions to prioritize diversity, and provide more flexible pathways for students to receive meaningful, rich, rigorous, purposeful, career focused, work integrated, and culturally responsive learning experiences. The new In the Field Learning delivery model will focus on the provision of high density, rich, and applied outcomes based learning and learning opportunities much more closely aligned with the Work Integrated Learning (WIL) principles of Field Placements. In this new delivery model, students will be provided a mix and variety of short term, micro, as well as macro intensive hands-on practical experiences, in a multiple of settings with a variety of populations relevant to their subjects of study and career pathways (reference: CEWIL Canada - What is Work Integrated Learning (WIL)).

This proposed top-down WIL approach integrates a greater connection of WIL (Experiential Learning-EL/Community Service Learning-CSL) in academic focused courses, from the point of completion of 45 credits (1.5 yr of program) all the way through to degree completion. In this way, students will be better able to understand how each of the individual courses offered throughout their program and in connection to

WIL/EL/CSL electives, develop skills that are transferable across their degree and beyond into their careers. This proposed model of In the Field Learning provides greater flexibility to students in support of program completion, accessibility and inclusivity, and applied, active engaged outcome-based learning through much broader sampling of populations and culturally diverse In the Field Learning opportunities they will be exposed to and choose to complete.

These proposed program, regulation, and course changes will have impacts to administration that are in line with the challenges the Faculty of KSR is experiencing in the current Practicum delivery model. Academic Instructors, who currently are assigned to the Practicum Seminar, will be assigned to individual courses in the new model and will need to be more fully engaged in the oversight and quality assurance of the In the Field Learning experiences unique to each course offering. As well, relationship building with both current and new placement partners, to coordinate high quality micro and macro work integrated experiences for KSR students will continue to be a large focus of the KSR Practicum Advisor position and administrative support will need to be added there. Administration process will also need to be established to ensure current students already enrolled in programming are provided the opportunity and option to transition to the new delivery model if appropriate. As well, a phased approach to course deletions (indicated in the proposal package), during the teach out phase, will be taken to ensure that students who either can not or do not want to transition to the new delivery model can continue and complete their current degree programs. KSR Academic Advisors and Student Services Office staff, as well key Leadership positions in the Faculty, have been consulted and included in the development of these proposed changes and will continue to be included in addressing these proposed changes and administrative, transactional impacts associated with the proposed changes, for implementation of the new structure in Fall 2024.

Calendar Copy

URL in current Calendar (or leave blank if it is a new page):
https://calendar.ualberta.ca/content.php?catoid=36&navoid=11268

Current	Proposed
Faculty of Kinesiology, Sport, and Recreation General Information Return to: Faculty of Kinesiology, Sport, and Recreation The Faculty of Kinesiology, Sport, and Recreation Members of the Faculty Undergraduate Programs Graduate Programs Facilities **The Faculty of Kinesiology, Sport, and Recreation** The Faculty of Kinesiology, Sport, and Recreation (KSR) at the University of Alberta has been dedicated to improving the quality of life and the health of our communities through physical activity, sport and recreation for more than 55 years. Ranked top 10 in the world in sports related studies, the Faculty offers high-caliber undergraduate and graduate academic programs that inspire, challenge, push the boundaries and help students find out what they are capable of. Faculty of Kinesiology, Sport, and Recreation Vision: Outstanding achievements in learning, discovery and citizenship that contribute to the quality of life and health of	**Faculty of Kinesiology, Sport, and Recreation General Information** Return to: Faculty of Kinesiology, Sport, and Recreation The Faculty of Kinesiology, Sport, and Recreation Members of the Faculty Undergraduate Programs Graduate Programs Facilities **The Faculty of Kinesiology, Sport, and Recreation** The Faculty of Kinesiology, Sport, and Recreation (KSR) at the University of Alberta has been dedicated to improving the quality of life and the health of our communities through physical activity, sport and recreation for more than 55 years. Ranked top 10 in the world in sports related studies, the Faculty offers high-caliber undergraduate and graduate academic programs that inspire, challenge, push the boundaries and help students find out what they are capable of. Faculty of Kinesiology, Sport, and Recreation Vision: Outstanding achievements in learning, discovery and

our communities through physical activity, sport and recreation.

To support this vision, we work with our students and staff to put our mission of creating and sharing the best understandings and applications of physical activity, sport, and recreation for the public good to work throughout our entire academic and service endeavors. As the Faculty commits its resources to this mission, we affirm the following values:

Excellence – in teaching, research, and creative activity that enriches learning experiences and advances knowledge

Discovery and Innovation – creativity and innovation from the genesis of ideas to the dissemination of knowledge

Citizenship – empower and enable each member to positively contribute to the greater good

Diversity and Inclusion – across and among staff, students, campuses and disciplines

Life-long Learning – valuing learners at all stages of life and striving to provide an intellectually rewarding educational truth

Collaboration and Collegiality – united in a common purpose and respecting each other's abilities

History and Tradition – celebrating the Faculty and University's history with pride—our people, achievements and contributions to society

Graduates of the Faculty gain the requisite preparation to be:
● Professionals in fields related to physical education, kinesiology, recreation, tourism, sport management and sport science.
● Scholars can advance the frontiers of knowledge pertaining to physical activity, leisure, active living, and their relationships to personal and societal health and well-being, and to environmental conservation and preservation.

Undergraduate degree programs include:
● Bachelor of Arts in Recreation, Sport and Tourism (BARST)
● Bachelor of Kinesiology (BKin)
● Bachelor of Kinesiology/Bachelor of Education combined degrees (BKin/BEd) in both Elementary and Secondary Education (five-year program)
● Bachelor of Science in Kinesiology(BScKin)

citizenship that contribute to the quality of life and health of our communities through physical activity, sport and recreation.

To support this vision, we work with our students and staff to put our mission of creating and sharing the best understandings and applications of physical activity, sport, and recreation for the public good to work throughout our entire academic and service endeavors. As the Faculty commits its resources to this mission, we affirm the following values:

Excellence – in teaching, research, and creative activity that enriches learning experiences and advances knowledge

Discovery and Innovation – creativity and innovation from the genesis of ideas to the dissemination of knowledge

Citizenship – empower and enable each member to positively contribute to the greater good

Diversity and Inclusion – across and among staff, students, campuses and disciplines

Life-long Learning – valuing learners at all stages of life and striving to provide an intellectually rewarding educational truth

Collaboration and Collegiality – united in a common purpose and respecting each other's abilities

History and Tradition – celebrating the Faculty and University's history with pride—our people, achievements and contributions to society

Graduates of the Faculty gain the requisite preparation to be:
● Professionals in fields related to physical education, kinesiology, recreation, tourism, sport management and
sport science.
● Scholars can advance the frontiers of knowledge pertaining to physical activity, leisure, active living, and their relationships to personal and societal health and well-being, and to environmental conservation and preservation.

Undergraduate degree programs include:
● Bachelor of Arts in Recreation, Sport and Tourism (BARST)
● Bachelor of Kinesiology (BKin)

Our degree programs attract students from across Alberta, throughout Canada and all over the world. We offer opportunities for international study and continue to develop a wide range of exchange programs across Canada and internationally through our study abroad partnerships. Whether it's in the classroom, in the lab or in the field we offer an extraordinary learning environment, producing some of the most employable graduates in the world.

An important element of KSR undergraduate programs is the required ~~practicum experience~~ (with the exception of the BKin/BEd combined degree program) ~~in the final year of a student's program. This is a non-paid practicum work experience in which students are placed with an approved agency. The practicum placement provides students with a work experience~~ that complements program knowledge, previous work and volunteer history, as well as learning objectives.

[…]

~~Removed language~~

● Bachelor of Kinesiology/Bachelor of Education combined degrees (BKin/BEd) in both Elementary and Secondary Education (five-year program)
● Bachelor of Science in Kinesiology(BScKin)

Our degree programs attract students from across Alberta, throughout Canada and all over the world. We offer opportunities for international study and continue to develop a wide range of exchange programs across Canada and internationally through our study abroad partnerships. Whether it's in the classroom, in the lab or in the field we offer an extraordinary learning environment, producing some of the most employable graduates in the world.

Practicum Requirements - Effective September 2024

An important element of KSR undergraduate programs is the required completion of In Field Learning. This element of KSR undergraduate programming provides students with real world connection of theory into practice, career exploration, understanding of professional certifying standards, and access to a multitude of diverse work-integrated learning experiences with a large sampling of populations and cultures. The In Field Learning component presents experiences that complement program knowledge, previous work and volunteer history, as well as learning objectives.

[…]

New language

Reviewed/Approved by:

KSR Undergraduate Programs Committee: April 6th, 2022 consultation; June 1st, 2022 consultation; September 7, 2022 consultation; November 16th, 2022 approval
KSR Faculty Executive: Sept 21st 2022 consultation; November 22nd, 2022 approval
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Undergraduate Program Support Team (Undergraduate & Non-Credit): June 2, 2022; August 25, 2022 consultation
Dr. Karsten Mundel, Provost Fellow, Experiential and Work-Integrated Learning & Associate Professor: June 13, 2022
Norma Rodenburg, Deputy Registrar, Office of the Registrar: June 13, 2022
Dr. Beverley Temple, Professor, Associate Dean, Undergrad Studies, Faculty of Nursing: June 20, 2022
Dr. Florence Glanfield, Vice-Provost Indigenous Programming & Research: July 14, 2022

Item No. 7

Rebecca Liaw, University Calendar Editor: October 25, 2022

Attachment 3
KSR.Calendar Change Request Form for Program Changes.BARST.Practicum Changes.Fall 2024 Implementation

Calendar Change Request Form for Program and Regulation Changes

See the Calendar Guide for tips on how to complete this form.

Faculty (& Department or Academic Unit):	Kinesiology, Sport, & Recreation (KSR)
Contact Person:	Angela Bayduza, PhD - Associate Dean, Undergraduate Programs
Level of change (choose one only) [?]	• Undergraduate
Type of change request (check all that apply) [?]	• Program • Practicum Requirements
For which term is this intended to take effect?	Fall 2024
Does this proposal have corresponding course changes? (Should be submitted at the same time)	Yes

Rationale

The following proposed changes to the KSR Practicum are in response to the needs of current and future students in implementing solutions to prioritize diversity and provide more flexible pathways to students within more meaningful, rich, rigorous, purposeful, career focused, and culturally sensitive work integrated learning experiences. Currently, there are critical ethical, equity, accessibility, and inclusivity considerations for students with the current KSR "Practicum" model of delivery as well as a lack of culturally diverse and multi population based experiences offered and available to each individual student.

As the Faculty of KSR continues its strong response to the TRC calls to action in decolonizing and Indigenizing programming, the proposed changes to Practicum will have a dedicated focus on Indigenous Knowledges, ethical engagement and collaboration with Indigenous communities, and strong grounding in kinesiology related issues (sport, exercise, recreation, physical activity, health and wellness, etc.) experienced by Indigenous Peoples of Canada. The proposed new In the Field Learning experiences, at both a micro and macro level, will challenge students to respond to the needs they see and purposefully find solutions in application of their knowledge and training in meeting these challenges. Providing applied, active learning experiences focused on cultural sensitivity in a breadth of diverse populations and lived experiences, will be a driving factor within the proposed changes.

In addressing the lack of culturally diverse and multi population based experiences offered to each individual student within their current work integrated opportunities, the proposed changes provide an enhanced opportunity to continue to build already existing partnerships with community associations and organizations as well as build others. Through KSRs ongoing partnerships with such community organizations and professional certifying/registration bodies (i.e., Indigenous Sport Council of Alberta-ISCA; Alberta Kinesiology Association-AKA; Alberta Recreation and Parks-ARPA, to name just a few), at the level of each proposed IFL course, richer, deeper learning experiences for KSR students can be developed with not only

these associations but also the populations they serve and eventually KSR students will be working with professionally.

Key equity, accessibility, and inclusivity considerations within the proposed changes to "practicum" in the Faculty of KSR are the completion requirements of the current delivery models. The current student completing the Faculty of KSR practicum program structure comes from a privileged background, likely still living at home, or has other significant support such as family to pay for their accommodations and costs of daily living during the practicum semester. In the current practicum structure, where students who are matched with practicum placement partners, students are tasked with completing 30-35 hours per week of unpaid work across the practicum semester, for completion of up to 15 credit units. Students, as a result of this degree program requirement, have little time or flexibility to attend to other financial responsibilities by working in a paid position outside of their practicum commitment. In addition to this, the nature of work in some placements requires students to be available to be scheduled days, evenings, and weekends to meet the required hours of their placement while receiving meaningful mentorship. This further reduces the student's ability to work in a paid role as it makes scheduling paid shifts difficult.

Another driver of the update to the KSR practicum structure is that the career paths available to graduates of the Faculty's degree programs, where the practicum is required, are very diverse. The current delivery structure places completion of the practicum at the end of the degree program (90 credit units completed) when students have not yet had an opportunity to complete a thorough exploration of the different career paths available to them. This places a lot of pressure on the student to choose the "right" or most "advantageous" practicum at the very end of their program, instead of emphasizing the connection of theory into practice, very early in and across the degree program.

The proposed new delivery structure incorporates, much earlier in the degree program, student engagement in career exploration, understanding of professional requirements and potential certifying bodies more consistently and fully, attainment of multiple and more diverse work-integrated learning experiences, and improvement of students' personal awareness as to what is required of them in their next steps after completion of their undergraduate program, what their professional identity is, and how that identity is present within one's career path.

Finally, within the significant ask of students completing practicum in the current practicum structure where placements are unpaid with an average work week of 30-35 hours, it has become apparent that this time completion expectation of students is often not being filled with meaningful skills, professional development, and/or intensive applied learning for the student. Often within these large, macro experiences, significant amounts of this time is being filled with entry-level labour that should otherwise be completed by a paid employee of the placement organization. In other words, practicum organizations are asking skilled student labour to fill their placement hours and practicum requirements with tasks not connected strongly to learning outcomes or experiential, applied program learning. As a result, these students are left without a rigorous, purposeful, career focused work integrated learning experience.

The proposed new structure will respond to the needs of current and future students, implement solutions to prioritize diversity, and provide more flexible pathways for students to receive meaningful, rich, rigorous, purposeful, career focused, work integrated, and culturally responsive learning experiences. The new In the Field Learning delivery model will focus on the provision of high density, rich, and applied outcomes based learning and learning opportunities much more closely aligned with the Work Integrated Learning (WIL) principles of Field Placements. In this new delivery model, students will be provided a mix and variety of short term, micro, as well as macro intensive hands-on practical experiences, in a multiple of settings with a variety of populations relevant to their subjects of study and career pathways (reference: CEWIL Canada - What is Work Integrated Learning (WIL)).

This proposed top-down WIL approach integrates a greater connection of WIL (Experiential Learning-EL/Community Service Learning-CSL) in academic focused courses, from the point of completion of 45 credits (1.5 yr of program) all the way through to degree completion. In this way, students will be better able to understand how each of the individual courses offered throughout their program and in connection to WIL/EL/CSL electives, develop skills that are transferable across their degree and beyond into their careers. This proposed model of In the Field Learning provides greater flexibility to students in support of program completion, accessibility and inclusivity, and applied, active engaged outcome based learning through much broader sampling of populations and culturally diverse In the Field Learning opportunities they will be exposed to and choose to complete.

These proposed program, regulation, and course changes will have impacts to administration that are in line with the challenges the Faculty of KSR is experiencing in the current Practicum delivery model. Academic Instructors, who currently are assigned to the Practicum Seminar, will be assigned to individual courses in the new model and will need to be more fully engaged in the oversight and quality assurance of the In the Field Learning experiences unique to each course offering. As well, relationship building with both current and new placement partners, to coordinate high quality micro and macro work integrated experiences for KSR students will continue to be a large focus of the KSR Practicum Advisor position and administrative support will need to be added there. Administration process will also need to be established to ensure current students already enrolled in programming are provided the opportunity and option to transition to the new delivery model if appropriate. As well, a phased approach to course deletions (indicated in the proposal package), during the teach out phase, will be taken to ensure that students who either can not or do not want to transition to the new delivery model can continue and complete their current degree programs. KSR Academic Advisors and Student Services Office staff, as well key Leadership positions in the Faculty, have been consulted and included in the development of these proposed changes and will continue to be included in addressing these proposed changes and administrative, transactional impacts associated with the proposed changes, for implementation of the new structure in Fall 2024.

Calendar Copy

URL in current Calendar (or leave blank if it is a new page):
https://calendar.ualberta.ca/preview_program.php?catoid=36&poid=43025&returnto=11341

~~Current~~	Proposed
BA in Recreation, Sport and Tourism Degree Program Return to: Faculty of Kinesiology, Sport, and Recreation - Programs	**BA in Recreation, Sport and Tourism Degree Program** Return to: Faculty of Kinesiology, Sport, and Recreation - Programs
The Bachelor of Arts (Recreation, Sport and Tourism) (BARST) degree prepares graduates with a solid foundation of knowledge and skills underlying the delivery of recreation, sport and tourism. Students can create a diversified degree program that aligns with their individual interests through selection of one of four options: completion of the general BARST program or completion of the BARST program with a Minor.	The Bachelor of Arts (Recreation, Sport and Tourism) (BARST) degree prepares graduates with a solid foundation of knowledge and skills underlying the delivery of recreation, sport and tourism. Students can create a diversified degree program that aligns with their individual interests through selection of one of four options: completion of the general BARST program or completion of the BARST program with a Minor (Minor in Community Development, Minor in Sport and Recreation Management, or Minor in Tourism and Natural Environments).

General BARST Program Structure

1. ~~Faculty~~ Core: ★69

Required courses offered by the Faculty of Kinesiology, Sport, and Recreation~~, inclusive of a full term practicum or an Advanced Project option.~~

2. Liberal Arts Foundation: ★18
★6 of 100-level ENGL or ★3 ENGL and ★3 WRS
★12 with a minimum of ★3 in each of: ~~Humanities, Social Sciences, or Fine Arts/Languages (see below)~~
Humanities
Any course chosen from the following areas: CATS, CHRTC, CLASS, C LIT, EASIA, ENGL, HIST, LA ST, MLCS, MST, PHIL, RELIG, SPRIT, WRITE.
Fine Arts or Language Other than English
Any course chosen from the following areas: ART, DANCE, DES, DRAMA, FS, HADVC, Language(s) other than English, MUSIC.
Social Sciences
Any course chosen from the following areas: ANTHR, EAS, ECON, LING, NS, POL S, ~~PSYCO~~, SOC, SUST, WGS.
Note: Some courses [e.g., courses in Interdisciplinary (INT D) or Science, Technology, and Society (STS)] may satisfy one or more of the above subject areas. In this instance, students should consult a Program Advisor.

3. Senior Faculty Options: ★12
~~S~~enior courses offered by the Faculty of Kinesiology, Sport, and Recreation, chosen from a list of available options (students should consult the Student Services Office or the Faculty website).

4. Senior Out-of-Faculty Options: ★12
~~S~~enior courses offered outside of the Faculty of Kinesiology, Sport, and Recreation.
Note: Senior Courses are those courses numbered 200-499.
5. Open Options: ★9
~~Chosen from a~~ny credit course offered by the University of Alberta.

General BARST Program Structure
Effective September 2024

Students in the BARST Degree take a program of 120 units over a four-year period, consisting of:

1. Degree Core:
A group of required courses in Kinesiology, Sport, and/or Recreation totalling 54 units.

2. Liberal Arts Foundation:
A group of required out of Faculty courses totalling 18 units that consist of:
6 units of 100-level ENGL or 3 units ENGL and 3 units WRS
12 units with a minimum of 3 units in each of:
Humanities
Any course chosen from the following areas: CATS, CHRTC, CLASS, C LIT, EASIA, ENGL, HIST, LA ST, MLCS, MST, PHIL, RELIG, SPRIT, WRITE.
Fine Arts or Language Other than English
Any course chosen from the following areas: ART, DANCE, DES, DRAMA, FS, HADVC, Language(s) other than English, MUSIC.
Social Sciences
Any course chosen from the following areas: ANTHR, EAS, ECON, LING, NS, POL S, PSYCH, SOC, SUST, WGS.
Note: Some courses [e.g., courses in Interdisciplinary (INT D) or Science, Technology, and Society (STS)] may satisfy one or more of the above subject areas. In this instance, students should consult a Program Advisor.

3. In Field Learning Component:
A group of courses totalling completion of a minimum of 9 units to a maximum of 12 units.

4. Senior Faculty Options:
Senior Faculty Options must be 200-level or higher and chosen from the following subjects: HE ED, DANCE, KIN, KRLS, RLS, or INT D 280/403 and 408/439, totalling 15 units.

5. Senior Out-of-Faculty Options:
A group of senior courses offered outside of the Faculty of Kinesiology, Sport, and Recreation, totalling 12 units.

6. **Advanced Project Option:** This option is designed to provide the opportunity for advanced scholarly development by substituting an additional ★9 of course work in or out of the Faculty and ★6 of research based directed study in place of the ★15 normally dedicated to the practicum. Admission into the advanced project option is based on a demonstrated high standard of academic performance (minimum GPA of 3.0 on most recent minimum ★30), the preparation and acceptance of a program proposal detailing objectives, course work and research based directed studies, the availability of an academic supervisor and the approval of the Associate Dean (Undergraduate).

Students interested in doing the Advanced Project Option should contact the Student Services Office for more information.

Note:
Senior Courses are those courses numbered 200-499.

6. **Open Options:**
A group of courses totalling a minimum of 9 to a maximum of 12 units which may be taken from within or outside of the Faculty of Kinesiology, Sport, and Recreation (see Note).
Note:
Students who elect to complete the minimum 9 units of the In Field Learning Component will complete 12 units of Open Options. Students who elect to complete the maximum 12 units of the In Field Learning Component will complete 9 units of Open Options.

7. **Advanced Project Option:**
This option is designed to provide the opportunity for advanced scholarly development by substituting an additional 3/6 units of course work in or out of the Faculty and 6/6 units of research based directed study in place of the 9/12 units normally dedicated to the In Field Learning Component. Admission into the advanced project option is based on a demonstrated high standard of academic performance (minimum GPA of 3.0 on most recent minimum 30 units), the preparation and acceptance of a program proposal detailing objectives, course work and research based directed studies, the availability of an academic supervisor, and the approval of the Associate Dean (Undergraduate).
Students interested in completing the Advanced Project Option should contact the Student Services Office for more information.

Course Sequence for General BARST program

Students are advised to follow the prescribed order as closely as possible.

Year 1 (30 units)
HE ED 110 - Introduction to Personal Health and Well-Being
KRLS 104 - Introduction to Sociology of Sport and Leisure in Canadian Society
KRLS 105 - Introduction to the Management of Sport, Physical Activity and Recreation Programs
RLS 100 - Life, Leisure, and the Pursuit of Happiness

Course Sequence for General BARST program

Students are advised to follow the prescribed order as closely as possible.

Year 1 (30 units)
HE ED 110 - Introduction to Personal Health and Well-Being
KRLS 104 - Introduction to Sociology of Sport and Leisure in Canadian Society
KRLS 105 - Introduction to the Management of Sport, Physical Activity and Recreation Programs

RLS 122 - Leadership in Recreation and Leisure Organizations
RLS 130 - Collaborative Skills and Processes for Community Recreation and Leisure
6 units in 100-level ENGL OR 3 units in ENGL and 3 units in WRS
6 units in Humanities, Social Sciences, or Fine Arts/Languages [see Liberal Arts Foundation]

Year 2 (30 units)
KRLS 204 - Canadian History of Leisure, Sport, and Health
KRLS 207 - Adapted Physical Activity and Leisure for Diverse Populations
RLS 210 - Recreation and Leisure Scholarship
RLS 225 - Program Planning for Leisure
RLS 223 - Leisure and Human Behavior
RLS 232 - Marketing for Recreation, Sport and Tourism
RLS 263 - Principles of Tourism
6 units in Humanities, Social Sciences, or Fine Arts/Languages (see below)
3 units in Open Options.
Note:
Select courses based on balance of requirements relative to Year 1 selections.

Year 3 (30 units)
KRLS 305 - Financial Management in Recreation, Sport and Tourism
KRLS 304 - Advanced Sociology of Sport and Leisure
RLS 325 - Public Policy in Recreation, Sport and Tourism
RLS 335 - Human Resources Management in Recreation, Sport and Tourism
18 units selected from Senior Faculty Options, Senior Out-of-Faculty Options, or Open Options

Year 4 (30 units)
RLS 400 - Philosophies of Leisure
RLS 447 Professional Practicum
12 units chosen from Senior Faculty Options, Senior Out-of-Faculty Options, or Open Options

Notes

RLS 100 - Life, Leisure, and the Pursuit of Happiness
RLS 122 - Leadership in Recreation and Leisure Organizations
RLS 130 - Collaborative Skills and Processes for Community Recreation and Leisure
6 units in 100-level ENGL OR 3 units in ENGL and 3 units in WRS
6 units in Humanities, Social Sciences, or Fine Arts/Languages [see Liberal Arts Foundation]

Year 2 (30 units)
KRLS 204 - Canadian History of Leisure, Sport, and Health
KRLS 207 - Adapted Physical Activity and Leisure for Diverse Populations
RLS 210 - Recreation and Leisure Scholarship
RLS 225 - Program Planning for Leisure
RLS 223 - Leisure and Human Behavior
RLS 232 - Marketing for Recreation, Sport and Tourism
RLS 263 - Principles of Tourism
6 units in Humanities, Social Sciences, or Fine Arts/Languages (see below)
3 units in Open Options.
Note:
Select courses based on balance of requirements relative to Year 1 selections.

Year 3 (30 units)
KRLS 305 - Financial Management in Recreation, Sport and Tourism
KRLS 304 - Advanced Sociology of Sport and Leisure
RLS 325 - Public Policy in Recreation, Sport and Tourism
RLS 335 - Human Resources Management in Recreation, Sport and Tourism
6 units In Field Learning
6 units Senior Faculty Options
3 units Senior Out-of-Faculty Option
3 units Open Option

Year 4 (30 units)
RLS 400 - Philosophies of Leisure
3/6 units In Field Learning (see Note 1)
9 units Senior Faculty Options
9 units Senior Out-of-Faculty Options
6/3 units in Open Option (see Note 1)

Notes

1. ~~No more than 6 units of Options are to be completed through PAC/DAC courses.~~
2. Students approved to take the Advanced Project in lieu of ~~the Professional Practicum~~ would normally take the approved course work and research-based Directed Study in Year 4.
3. A maximum of 1~~8~~ units in ~~Practicum~~ course offerings may be credited toward the BARST degree program.
4. ~~RLS 447~~ is restricted to students who have completed a minimum of ~~90~~ units toward the BARST degree program.

1. The total course units taken in Open Options and In Field Learning courses in year 4 must equal 6 units.
2. Students are encouraged to contact the KSR Student Services Office and consult with an Academic Advisor for assistance in program building and course selection of Faculty Options in the completion of program requirements as well in selecting appropriate Open Options to support, prepare for, and meet In Field Learning course prerequisites and placement requirements.
3. Students approved to take the Advanced Project in lieu of In Field Learning would normally take the approved coursework and research-based Directed Study in Year 4.
4. A maximum of 1~~5~~ units in In Field Learning course offerings may be credited toward the BARST degree program.
5. In Field Learning courses are restricted to students who have completed a minimum of 45 units toward the BARST degree program.

Minors

A minor consists of at least 2~~7~~ units with at least ~~21~~ units at the 300-level or higher (see Note ~~1~~). Students may choose to complete one of the following minors:

Minor in Community Development

The minor must include the following:

KRLS 352 - Leisure Facilities: Planning and Management
RLS 331 - Leisure Education
~~RLS 447~~ in the community recreation sector.
At least 6 units from an approved list of options for the minor, available from the Student Services Office.

Minors

A minor consists of at least 21 units with at least 15 units at the 300-level or higher (see Notes). Students may choose to complete one of the following minors:

Minor in Community Development

The minor must include the following:

KRLS 352 - Leisure Facilities: Planning and Management
RLS 331 - Leisure Education
In Field Learning course work focused on experiential learning in the community recreation sector.
At least 6 units from an approved list of options for the minor, available from the Student Services Office.

Minor in Sport and Recreation Management
The minor must include the following:

KRLS 350 - Advanced Analysis of Sport and Leisure Organizations

Minor in Sport and Recreation Management
The minor must include the following:

KRLS 350 - Advanced Analysis of Sport and Leisure Organizations

KRLS 352 - Leisure Facilities: Planning and Management At least 6 units from an approved list of options for the minor, available from the Student Services Office.	KRLS 352 - Leisure Facilities: Planning and Management In Field Learning course work focused on experiential learning in the sport and recreation management sector. At least 6 units from an approved list of options for the minor, available from the Student Services Office.
Minor in Tourism and Natural Environments The minor must include the following: RLS 463 - Issues in Tourism Development RLS 465 - Natural Area Tourism ~~RLS 447~~ in the tourism and natural ~~areas~~ sector At least 6 units from an approved list of options for the minor, available from the Student Services Office.	**Minor in Tourism and Natural Environments** The minor must include the following: RLS 463 - Issues in Tourism Development RLS 465 - Natural Area Tourism In Field Learning course work focused on experiential learning in the tourism and natural environments sector. At least 6 units from an approved list of options for the minor, available from the Student Services Office.
Notes Students who complete a minor will complete 21 units open options with at least 12 units at the 200-level or higher. ~~A maximum of 6 units are to be completed through PAC/DAC courses.~~ […] ~~Removed language~~	**Notes:** 1. Students who complete a minor will complete 21 units open options with at least 12 units at the 200-level or higher. 2. Students who complete a minor will complete 4 senior open options and 4 minor courses, instead of the regular program requirement of 4 senior faculty options and 4 senior out-of-faculty options for those students who do not choose to declare a minor. […] New language

Reviewed/Approved by:

KSR Undergraduate Programs Committee: April 6th, 2022 consultation; June 1st, 2022 consultation; September 7, 2022 consultation; November 16th, 2022 approval
KSR Faculty Executive: Sept 21st 2022 consultation; November 22nd, 2022 approval
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Item No. 7

Dr. Karsten Mundel, Provost Fellow, Experiential and Work-Integrated Learning & Associate Professor: June 13, 2022

Norma Rodenburg, Deputy Registrar, Office of the Registrar: June 13, 2022

Dr. Beverley Temple, Professor, Associate Dean, Undergrad Studies, Faculty of Nursing: June 20, 2022

Dr. Florence Glanfield, Vice-Provost Indigenous Programming & Research: July 14, 2022

Rebecca Liaw, University Calendar Editor: October 25, 2022

Attachment 4
KSR.Calendar Change Request Form for Program Changes.BKin.Practicum Changes.Fall 2024
Implementation

Calendar Change Request Form for Program and Regulation Changes

See the [Calendar Guide](#) for tips on how to complete this form.

Faculty (& Department or Academic Unit):	Kinesiology, Sport, & Recreation (KSR)
Contact Person:	Angela Bayduza, PhD - Associate Dean, Undergraduate Programs
Level of change (choose one only) [?]	• Undergraduate
Type of change request (check all that apply) [?]	• Program • Practicum Requirements
For which term is this intended to take effect?	Fall 2024
Does this proposal have corresponding course changes? (Should be submitted at the same time)	Yes

Rationale

The following proposed changes to the KSR Practicum are in response to the needs of current and future students in implementing solutions to prioritize diversity and provide more flexible pathways to students within more meaningful, rich, rigorous, purposeful, career focused, and culturally sensitive work integrated learning experiences. Currently, there are critical ethical, equity, accessibility, and inclusivity considerations for students with the current KSR "Practicum" model of delivery as well as a lack of culturally diverse and multi population-based experiences offered and available to each individual student.

As the Faculty of KSR continues its strong response to the TRC calls to action in decolonizing and Indigenizing programming, the proposed changes to Practicum will have a dedicated focus on Indigenous Knowledges, ethical engagement and collaboration with Indigenous communities, and strong grounding in kinesiology related issues (sport, exercise, recreation, physical activity, health and wellness, etc.) experienced by Indigenous Peoples of Canada. The proposed new In the Field Learning experiences, at both a micro and macro level, will challenge students to respond to the needs they see and purposefully find solutions in application of their knowledge and training in meeting these challenges. Providing applied, active learning experiences focused on cultural sensitivity in a breadth of diverse populations and lived experiences, will be a driving factor within the proposed changes.

In addressing the lack of culturally diverse and multi population-based experiences offered to each individual student within their current work integrated opportunities, the proposed changes provide an enhanced opportunity to continue to build already existing partnerships with community associations and organizations as well as build others. Through KSRs ongoing partnerships with such community organizations and professional certifying/registration bodies (i.e., Indigenous Sport Council of Alberta-ISCA; Alberta Kinesiology Association-AKA; Alberta Recreation and Parks-ARPA, to name just a few), at the level of each proposed IFL course, richer, deeper learning experiences for KSR students can be developed with not only these associations but also the populations they serve and eventually KSR students will be working with professionally.

Key equity, accessibility, and inclusivity considerations within the proposed changes to "practicum" in the Faculty of KSR are the completion requirements of the current delivery models. The current student completing the Faculty of KSR practicum program structure comes from a privileged background, likely still living at home, or has other significant support such as family to pay for their accommodations and costs of daily living during the practicum semester. In the current practicum structure, where students who are matched with practicum placement partners, students are tasked with completing 30-35 hours per week of unpaid work across the practicum semester, for completion of up to 15 credit units. Students, as a result of this degree program requirement, have little time or flexibility to attend to other financial responsibilities by working in a paid position outside of their practicum commitment. In addition to this, the nature of work in some placements requires students to be available to be scheduled days, evenings, and weekends to meet the required hours of their placement while receiving meaningful mentorship. This further reduces the student's ability to work in a paid role as it makes scheduling paid shifts difficult.

Another driver of the update to the KSR practicum structure is that the career paths available to graduates of the Faculty's degree programs, where the practicum is required, are very diverse. The current delivery structure places completion of the practicum at the end of the degree program (90 credit units completed) when students have not yet had an opportunity to complete a thorough exploration of the different career paths available to them. This places a lot of pressure on the student to choose the "right" or most "advantageous" practicum at the very end of their program, instead of emphasizing the connection of theory into practice, very early in and across the degree program.

The proposed new delivery structure incorporates, much earlier in the degree program, student engagement in career exploration, understanding of professional requirements and potential certifying bodies more consistently and fully, attainment of multiple and more diverse work-integrated learning experiences, and improvement of students' personal awareness as to what is required of them in their next steps after completion of their undergraduate program, what their professional identity is, and how that identity is present within one's career path.

Finally, within the significant ask of students completing practicum in the current practicum structure where placements are unpaid with an average work week of 30-35 hours, it has become apparent that this time completion expectation of students is often not being filled with meaningful skills, professional development, and/or intensive applied learning for the student. Often within these large, macro experiences, significant amounts of this time is being filled with entry-level labour that should otherwise be completed by a paid employee of the placement organization. In other words, practicum organizations are asking skilled student labour to fill their placement hours and practicum requirements with tasks not connected strongly to learning outcomes or experiential, applied program learning. As a result, these students are left without a rigorous, purposeful, career focused work integrated learning experience.

The proposed new structure will respond to the needs of current and future students, implement solutions to prioritize diversity, and provide more flexible pathways for students to receive meaningful, rich, rigorous, purposeful, career focused, work integrated, and culturally responsive learning experiences. The new In the Field Learning delivery model will focus on the provision of high density, rich, and applied outcomes-based learning and learning opportunities much more closely aligned with the Work Integrated Learning (WIL) principles of Field Placements. In this new delivery model, students will be provided a mix and variety of short term, micro, as well as macro intensive hands-on practical experiences, in a multiple of settings with a variety of populations relevant to their subjects of study and career pathways (reference: CEWIL Canada - What is Work Integrated Learning (WIL)).

This proposed top-down WIL approach integrates a greater connection of WIL (Experiential Learning-EL/Community Service Learning-CSL) in academic focused courses, from the point of completion of 45 credits (1.5 yr of program) all the way through to degree completion. In this way, students will be better able to understand how each of the individual courses offered throughout their program and in connection to

WIL/EL/CSL electives, develop skills that are transferable across their degree and beyond into their careers. This proposed model of In the Field Learning provides greater flexibility to students in support of program completion, accessibility and inclusivity, and applied, active engaged outcome-based learning through much broader sampling of populations and culturally diverse In the Field Learning opportunities they will be exposed to and choose to complete.

These proposed program, regulation, and course changes will have impacts to administration that are in line with the challenges the Faculty of KSR is experiencing in the current Practicum delivery model. Academic Instructors, who currently are assigned to the Practicum Seminar, will be assigned to individual courses in the new model and will need to be more fully engaged in the oversight and quality assurance of the In the Field Learning experiences unique to each course offering. As well, relationship building with both current and new placement partners, to coordinate high quality micro and macro work integrated experiences for KSR students will continue to be a large focus of the KSR Practicum Advisor position and administrative support will need to be added there. Administration process will also need to be established to ensure current students already enrolled in programming are provided the opportunity and option to transition to the new delivery model if appropriate. As well, a phased approach to course deletions (indicated in the proposal package), during the teach out phase, will be taken to ensure that students who either can not or do not want to transition to the new delivery model can continue and complete their current degree programs. KSR Academic Advisors and Student Services Office staff, as well key Leadership positions in the Faculty, have been consulted and included in the development of these proposed changes and will continue to be included in addressing these proposed changes and administrative, transactional impacts associated with the proposed changes, for implementation of the new structure in Fall 2024.

Calendar Copy

URL in current Calendar (or leave blank if it is a new page):
https://calendar.ualberta.ca/preview_program.php?catoid=36&poid=42200&returnto=11341

~~Current~~	Proposed
	Effective September 2024

The Bachelor of Kinesiology (BKin) degree program consists of 120 units and has both a professional and discipline focus. The program consists of the following components:
 1. **Degree Core:** 66 units. These courses provide the foundation of knowledge in professional and discipline areas of the field.
 2. **Activity Core:** 12 units. These courses provide foundational knowledge and theory specific to movement education. See [Activity Core Electives](#) for a list of faculty approved activity core courses.
 Notes
   1. Any units of course weight completed above the required 12 units are included in the Open Option Component of the degree.
	The Bachelor of Kinesiology (BKin) degree program consists of 120 units and has both a professional and discipline focus. The program consists of the following components:
	 1. **Degree Core:** 66 units. These courses provide the foundation of knowledge in professional and discipline areas of the field.
	 2. **Activity Core:** 12 units. These courses provide foundational knowledge and theory specific to movement education. See [Activity Core Electives](#) for a list of faculty approved activity core courses.
	 Notes
	   1. Any units of course weight completed above the required 12 units are included in the Open Option Component of the degree.
	   2. A single course cannot be used to satisfy more than one degree program requirement
	 3. **In Field Learning Component:** A [group of](#)

2. A single course cannot be used to satisfy more than one degree program requirement

3. **Major:** ~~30 units.~~ Four majors provide specializations in professional areas of kinesiology, sport, health, and well-being. ~~Each major must include a practicum of at least 9 units.~~ Students normally select their major during the second year of their program.
   Note: Effective July 1, 2021, there will be no further admissions into the Sport Coaching major. Students who entered the Bachelor of Kinesiology program Sport Coaching major, prior to July 1 2021, will have until June 30, 2026 to complete all program requirements. Refer to the Calendar in effect at the time you were admitted or readmitted for the regulations governing the degree program requirements. The last degree with the Sport Coaching specific major will be granted at Convocation 2026.

Option Component: A group of courses totaling 12 units of which at least 3 units must be an open option taken from outside the Faculty.

Course Sequence

Students are advised to follow the prescribed order as closely as possible.

Year 1 (30 units)
- 3 units in WRS or 3 units in ENGL
- HE ED 120 - Introduction to the Biological Aspects of Fitness to Health
- KIN 100 - Human Anatomy
- KIN 101 - Introduction to Human Physiology
- KIN 102 - Foundations of Human Movement
- KIN 103 - Integrative Human Physiology
- KRLS 104 - Introduction to Sociology of Sport and Leisure in Canadian Society

courses totalling completion of a minimum of 9 units to a maximum of 12 units.

4. **Major:** A group of courses totalling completion of a minimum of 18 units to a maximum of 21 units (see Note i). Four majors provide specializations in professional areas of kinesiology, sport, health, and well-being. Students normally select their major during the second year of their program.
   Notes:
   i. Students who elect to complete the minimum 9 units of the In Field Learning Component will complete 21 units of major course options. Students who elect to complete the maximum 12 units of the In Field Learning Component will complete 18 units of a combination of major required and optional course options.
   ii. Effective July 1, 2021, there will be no further admissions into the Sport Coaching major. Students who entered the Bachelor of Kinesiology program Sport Coaching major, prior to July 1 2021, will have until June 30, 2026 to complete all program requirements. Refer to the Calendar in effect at the time you were admitted or readmitted for the regulations governing the degree program requirements. The last degree with the Sport Coaching specific major will be granted at Convocation 2026.

5. **Option Component:** A group of courses totaling 12 units of which at least 3 units must be an open option taken from outside the Faculty.

Course Sequence

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Year 1 (30 units)
- 3 units in WRS or 3 units in ENGL
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- KIN 101 - Introduction to Human Physiology
- KIN 102 - Foundations of Human Movement
- KIN 103 - Integrative Human Physiology
- KRLS 104 - Introduction to Sociology of Sport and Leisure in Canadian Society

- KRLS 105 - Introduction to the Management of Sport, Physical Activity and Recreation Programs
- 3 units from Activity Core

One of:
- KIN 109 - Statistics, Measurement, and Evaluation
- STAT 151 - Introduction to Applied Statistics I

Year 2 (30 units)
- DANCE 200 - The Spectrum of Dance in Society
- KIN 200 - Physiology of Exercise
- KIN 203 - Skill Acquisition and Performance
- KIN 206 - Biomechanics
- KIN 207 - Physical Growth and Psychomotor Development
- KIN 209 - Research Methods in Kinesiology
- KIN 240 - Introduction to Sports Injury Management
- KRLS 204 - Canadian History of Leisure, Sport, and Health
- KRLS 207 - Adapted Physical Activity and Leisure for Diverse Populations
- 3 units from Activity Core

Year 3 (30 units)
- KIN 311 - Assessment of Fitness and Health
- KRLS 304 - Advanced Sociology of Sport and Leisure
- ~~9~~ units from major
- 3 units from Activity Core
- ~~9~~ units in Open Options

One of:
- HE ED 321 - Psychological Dimensions of Health Promotion
- KIN 303 - Psychology of Sport and Physical Activity

Year 4 (30 units)
- KIN 401 - Applied Ethics in Sport, Physical Activity and Exercise
- ~~6~~ units from major (see Notes 1 and 3)
- 3 units from Activity Core
- ~~3~~ units in Open Option
- ~~15 units in Full-time practicum **OR** 9 units in part-time Practicum and 6 units Faculty Options (see Note 1)~~
  ~~The total course weights taken above must equal 15 units.~~

- KRLS 105 - Introduction to the Management of Sport, Physical Activity and Recreation Programs
- 3 units from Activity Core

One of:
- KIN 109 - Statistics, Measurement, and Evaluation
- STAT 151 - Introduction to Applied Statistics I

Year 2 (30 units)
- DANCE 200 - The Spectrum of Dance in Society
- KIN 200 - Physiology of Exercise
- KIN 203 - Skill Acquisition and Performance
- KIN 206 - Biomechanics
- KIN 207 - Physical Growth and Psychomotor Development
- KIN 209 - Research Methods in Kinesiology
- KIN 240 - Introduction to Sports Injury Management
- KRLS 204 - Canadian History of Leisure, Sport, and Health
- KRLS 207 - Adapted Physical Activity and Leisure for Diverse Populations
- 3 units from Activity Core

Year 3 (30 units)
- KIN 311 - Assessment of Fitness and Health
- KRLS 304 - Advanced Sociology of Sport and Leisure
- 6 units In Field Learning
- 6 units from Major
- 3 units from Activity Core
- 6 units in Open Options

One of:
- HE ED 321 - Psychological Dimensions of Health Promotion
- KIN 303 - Psychology of Sport and Physical Activity

Year 4 (30 units)
- KIN 401 - Applied Ethics in Sport, Physical Activity and Exercise
- 3/6 units In Field Learning (see Note 1)
- 15/12 units from major (see Note 1 and 2)
- 3 units from Activity Core
- 6 units in Open Option

Notes
1. Students who elect to complete the minimum 9 units of the In Field Learning Component will complete 21 units of Major courses. Students who elect to complete

Notes
1. ~~Students must choose one of following practicum options:~~
   ~~9 units: Part-time practicum (must register in KIN 492 only),~~ **~~OR~~**
   ~~15 units: Full-time practicum (must register in KIN 493 only)~~
2. ~~Practicum opportunities may be limited for those students wishing to do a part-time practicum.~~
3. A maximum of 1~~8~~ units ~~in Practicum~~ course offerings may be credited toward the BKin degree program.
4. ~~KIN 492 & KIN 493~~ are restricted to students who have completed a minimum of ~~90~~ units toward the BKin degree program.

the maximum 12 units of the In Field Learning Component will complete 18 units of Major courses.
2. A maximum of 1~~5~~ units of In Field Learning course offerings may be credited toward the BKin degree program.
3. In Field Learning courses are restricted to students who have completed a minimum of ~~45~~ units toward the BKin degree program.

Majors
Students should contact the Student Services Office of the Faculty of Kinesiology, Sport, and Recreation for information about specific course requirements for their major.

Adapted Physical Activity (30 units):
This major provides students with theoretical knowledge and practical skills to facilitate physically active lifestyles for people with impairments. Emphasis is placed on gaining instructional and leadership skills in physical activity, fitness and sport programs for individuals along the continuum of impairments and across all age groups and environments.

Required Courses for Major (12 units)
- KIN 372 - Neuroscience Considerations for Adapted Physical Activity
- KIN 385 - Physical Activity and the Aging Adult
- KIN 471 - Physical Activity for Individuals with Developmental Impairments **OR**
- KIN 472 - Physical Activity for Individuals with Physical Impairments
- KRLS 370 - Assessment and Service Delivery for Adapted Physical Activity and Therapeutic Recreation

Choose one of:
- 9 units ~~in Professional Practicum (KIN 492)~~ and 9 units from the list of approved Option Courses for Major

Majors
Students should contact the Student Services Office of the Faculty of Kinesiology, Sport, and Recreation for information about specific course requirements for their major.

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Required Courses for Major (12 units)
- KIN 372 - Neuroscience Considerations for Adapted Physical Activity
- KIN 385 - Physical Activity and the Aging Adult
- KIN 471 - Physical Activity for Individuals with Developmental Impairments **OR**
- KIN 472 - Physical Activity for Individuals with Physical Impairments
- KRLS 370 - Assessment and Service Delivery for Adapted Physical Activity and Therapeutic Recreation

Choose one of:
- 9 units of In Field Learning coursework focused on experiential learning in the Adapted Physical Activity sector and 9 units from the list of approved Option Courses for Major
  or
- 1~~2~~ units of In Field Learning coursework focused on experiential learning in the Adapted

- 1~~5~~ units in ==Professional Practicum (KIN 493)== and ~~3~~ units from the list of approved Option Courses for Major

Additional Information
Students should contact the Student Services Office of the Faculty of Kinesiology, Sport, and Recreation for a current list of approved options for this major.

Physical Activity and Health (30 units):
This major provides students with understanding of and appreciation for the importance of physical activity as it relates to health, fitness, and well-being over the lifespan. Biopsychosocial factors influencing acquisition and maintenance of physical activity and health will be emphasized.

Required Courses for Major (12 units)
- HE ED 320 - Social Dimensions of Health and Health Promotion
- HE ED 321 - Psychological Dimensions of Health Promotion
- KIN 334 - Physical Activity, Nutrition and Energy Balance
- KIN 335 - Advanced Conditioning Methodology

Note:
If HE ED 321 has been chosen as part of the Degree Core, please add 3 units to your Option Courses for Major requirement.

Choose one of:
- 9 units ~~in Professional Practicum (KIN 492)~~ and 9 units from the list of approved Option Courses for Major
- 1~~5~~ units ~~in Professional Practicum (KIN 493)~~ and 3 units from the list of approved Option Courses for Major

Additional Information
Students should contact the Student Services Office of the Faculty of Kinesiology, Sport, and Recreation for a current list of approved options for this major.

Sport Performance (30 units):
This major advances students' understanding of the theoretical underpinnings of the multifaceted aspects of sport performance. In addition, students will gain practical experience in sport performance

==Physical Activity sector== and ==6== units from the list of approved Option Courses for Major

Additional Information
Students should contact the Student Services Office of the Faculty of Kinesiology, Sport, and Recreation for a current list of approved options for this major.

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This major provides students with understanding of and appreciation for the importance of physical activity as it relates to health, fitness, and well-being over the lifespan. Biopsychosocial factors influencing acquisition and maintenance of physical activity and health will be emphasized.

Required Courses for Major (12 units)
- HE ED 320 - Social Dimensions of Health and Health Promotion
- HE ED 321 - Psychological Dimensions of Health Promotion
- KIN 334 - Physical Activity, Nutrition and Energy Balance
- KIN 335 - Advanced Conditioning Methodology

Note:
If HE ED 321 has been chosen as part of the Degree Core, please add 3 units to your Option Courses for Major requirement.

Choose one of:
- 9 units ==of In Field Learning coursework focused on experiential learning in the Physical Activity and Health sector== and 9 units from the list of approved Option Courses for Major ==or==
- 12 units ==of In Field Learning coursework focused on experiential learning in the Physical Activity and Health sector== and ==6== units from the list of approved Option Courses for Major

Additional Information
Students should contact the Student Services Office of the Faculty of Kinesiology, Sport, and Recreation for a current list of approved options for this major.

Sport Performance (30 units):
This major advances students' understanding of the theoretical underpinnings of the multifaceted aspects

through an interdisciplinary delivery of courses and ~~practicum~~ requirements.

Required Courses for Major (9 units)
- KIN 335 - Advanced Conditioning Methodology
- KIN 435 - Applied Resistance Training
- KIN 436 - Applied Endurance Training

Choose one of:
- 9 units ~~in Professional Practicum (KIN 492)~~ and 12 units from the list of approved Option Courses for Major
- 1~~5~~ units ~~in Professional Practicum (KIN 493)~~ and 6 units from the list of approved Option Courses for Major

Additional Information
Students should contact the Student Services Office of the Faculty of Kinesiology, Sport, and Recreation for a current list of approved options for this major.

Individualized Major (30 units):
This major affords students the opportunity to design a combination or collection of courses that meets their individual interests and needs, provided that an opportunity to pursue their area of interest is not available through the other three majors. It may also enable students who choose to spend one term or year abroad an opportunity to design a major area of study around their international courses. This must be done in consultation with the student's assigned KSR Academic Advisor and requires approval of the Associate Dean (Undergraduate Programs).

General Requirements
Students wishing to enter into this major must submit a written proposal to the Associate Dean (Undergraduate Programs) that contains the following information:
i. A clear description of the focus and the objectives of the major.
ii. A detailed list of courses to be taken and indication of how they relate to the stated objectives.

Specific Requirements

of sport performance. In addition, students will gain practical experience in sport performance through an interdisciplinary delivery of courses and in field learning requirements.

Required Courses for Major (9 units)
- KIN 335 - Advanced Conditioning Methodology
- KIN 435 - Applied Resistance Training
- KIN 436 - Applied Endurance Training

Choose one of:
- 9 units of In Field Learning coursework focused on experiential learning in the Sport Performance sector and 12 units from the list of approved Option Courses for Major
  or
- 12 units of In Field Learning coursework focused on experiential learning in the Sport Performance sector and 9 units from the list of approved Option Courses for Major

Additional Information
Students should contact the Student Services Office of the Faculty of Kinesiology, Sport, and Recreation for a current list of approved options for this major.

Individualized Major (30 units):
This major affords students the opportunity to design a combination or collection of courses that meets their individual interests and needs, provided that an opportunity to pursue their area of interest is not available through the other three majors. It may also enable students who choose to spend one term or year abroad an opportunity to design a major area of study around their international courses. This must be done in consultation with the student's assigned KSR Academic Advisor and requires approval of the Associate Dean (Undergraduate Programs).

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- A clear description of the focus and the objectives of the major.
- A detailed list of courses to be taken and indication of how they relate to the stated objectives.

Specific Requirements

Choose one of:
- 9 units ~~in Professional Practicum (KIN 492)~~ and 21 units in additional course work related to the major
- 1~~5~~ units ~~in Professional Practicum (KIN 493)~~ and ~~additional~~ 15 units of course work related to the major

Additional Information
The additional coursework related to the major normally consists of:
i.1~~5~~ units taken at the 300- or 400-level
ii.Minimum 9 units taken from DANCE, HE ED, KRLS, KIN, and/or RLS courses.

[…]

~~Removed language~~

Choose one of:
- 9 units of In Field Learning coursework focused on experiential learning and 21 units in additional coursework, both related to the major
  or
- 1~~2~~ units of In Field Learning coursework focused on experiential learning and 1~~8~~ units in additional coursework, both related to the major

Additional Information
The additional coursework related to the major normally consists of:
- 1~~8~~ units taken at the 300- or 400-level
- Minimum 9 units taken from DANCE, HE ED, KRLS, KIN, and/or RLS courses.

[…]

New language

Reviewed/Approved by:

KSR Undergraduate Programs Committee: April 6th, 2022 consultation; June 1st, 2022 consultation; September 7, 2022 consultation; November 16th, 2022 approval
KSR Faculty Executive: Sept 21st 2022 consultation; November 22nd, 2022 approval
KSR Faculty Council: Sept 28th 2022 consultation; November 30th, 2022 approval

Other Consultations:
KSR Leadership Team: April 4th, 2022; August 8, 2022; October 18th, 2022
KSR Academic Council: April, 26th, 2022
KSR UG Students (upon completion of practicum): June 10, 2022
KSRSS Council: October 16th, 2022
KSRSS GFC Student Representative: October 24, 2022
Undergraduate Program Support Team (Undergraduate & Non-Credit): June 2, 2022; August 25, 2022 consultation
Dr. Karsten Mundel, Provost Fellow, Experiential and Work-Integrated Learning & Associate Professor: June 13, 2022
Norma Rodenburg, Deputy Registrar, Office of the Registrar: June 13, 2022
Dr. Beverley Temple, Professor, Associate Dean, Undergrad Studies, Faculty of Nursing: June 20, 2022
Dr. Florence Glanfield, Vice-Provost Indigenous Programming & Research: July 14, 2022
Rebecca Liaw, University Calendar Editor: October 25, 2022

UNIVERSITY OF ALBERTA

Item No. 7

Attachment 5
KSR.Calendar Change Request Form for Program Changes.BScKin. Practicum Changes.Fall 2024 Implementation

Calendar Change Request Form for Program and Regulation Changes

See the Calendar Guide for tips on how to complete this form.

Faculty (& Department or Academic Unit):	Kinesiology, Sport, & Recreation (KSR)
Contact Person:	Angela Bayduza, PhD - Associate Dean, Undergraduate Programs
Level of change (choose one only) [?]	• Undergraduate
Type of change request (check all that apply) [?]	• Program • BScKin "Practicum" Requirements
For which term is this intended to take effect?	Fall 2024
Does this proposal have corresponding course changes? (Should be submitted at the same time)	Yes

Rationale

The following proposed changes to the KSR Practicum are in response to the needs of current and future students in implementing solutions to prioritize diversity and provide more flexible pathways to students within more meaningful, rich, rigorous, purposeful, career focused, and culturally sensitive work integrated learning experiences. Currently, there are critical ethical, equity, accessibility, and inclusivity considerations for students with the current KSR "Practicum" model of delivery as well as a lack of culturally diverse and multi population based experiences offered and available to each individual student.

As the Faculty of KSR continues its strong response to the TRC calls to action in decolonizing and Indigenizing programming, the proposed changes to Practicum will have a dedicated focus on Indigenous Knowledges, ethical engagement and collaboration with Indigenous communities, and strong grounding in kinesiology related issues (sport, exercise, recreation, physical activity, health and wellness, etc.) experienced by Indigenous Peoples of Canada. The proposed new In the Field Learning experiences, at both a micro and macro level, will challenge students to respond to the needs they see and purposefully find solutions in application of their knowledge and training in meeting these challenges. Providing applied, active learning experiences focused on cultural sensitivity in a breadth of diverse populations and lived experiences, will be a driving factor within the proposed changes.

In addressing the lack of culturally diverse and multi population based experiences offered to each individual student within their current work integrated opportunities, the proposed changes provide an enhanced opportunity to continue to build already existing partnerships with community associations and organizations as well as build others. Through KSRs ongoing partnerships with such community organizations and professional certifying/registration bodies (i.e., Indigenous Sport Council of Alberta-ISCA; Alberta Kinesiology Association-AKA; Alberta Recreation and Parks-ARPA, to name just a few), at the level of each proposed IFL course, richer, deeper learning experiences for KSR students can be developed with not only these associations but also the populations they serve and eventually KSR students will be working with professionally.

Key equity, accessibility, and inclusivity considerations within the proposed changes to "practicum" in the Faculty of KSR are the completion requirements of the current delivery models. The current student completing the Faculty of KSR practicum program structure comes from a privileged background, likely still living at home, or has other significant support such as family to pay for their accommodations and costs of daily living during the practicum semester. In the current practicum structure, where students who are matched with practicum placement partners, students are tasked with completing 30-35 hours per week of unpaid work across the practicum semester, for completion of up to 15 credit units. Students, as a result of this degree program requirement, have little time or flexibility to attend to other financial responsibilities by working in a paid position outside of their practicum commitment. In addition to this, the nature of work in some placements requires students to be available to be scheduled days, evenings, and weekends to meet the required hours of their placement while receiving meaningful mentorship. This further reduces the student's ability to work in a paid role as it makes scheduling paid shifts difficult.

Another driver of the update to the KSR practicum structure is that the career paths available to graduates of the Faculty's degree programs, where the practicum is required, are very diverse. The current delivery structure places completion of the practicum at the end of the degree program (90 credit units completed) when students have not yet had an opportunity to complete a thorough exploration of the different career paths available to them. This places a lot of pressure on the student to choose the "right" or most "advantageous" practicum at the very end of their program, instead of emphasizing the connection of theory into practice, very early in and across the degree program.

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Finally, within the significant ask of students completing practicum in the current practicum structure where placements are unpaid with an average work week of 30-35 hours, it has become apparent that this time completion expectation of students is often not being filled with meaningful skills, professional development, and/or intensive applied learning for the student. Often within these large, macro experiences, significant amounts of this time is being filled with entry-level labour that should otherwise be completed by a paid employee of the placement organization. In other words, practicum organizations are asking skilled student labour to fill their placement hours and practicum requirements with tasks not connected strongly to learning outcomes or experiential, applied program learning. As a result, these students are left without a rigorous, purposeful, career focused work integrated learning experience.

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Calendar Copy

URL in current Calendar (or leave blank if it is a new page):
https://calendar.ualberta.ca/preview_program.php?catoid=36&poid=43024&returnto=11341

Current	Proposed
Bachelor of Science in Kinesiology Return to: Faculty of Kinesiology, Sport, and Recreation - Programs	**Bachelor of Science in Kinesiology** Return to: Faculty of Kinesiology, Sport, and Recreation - Programs **Effective September 2024**
Program Requirements Students in the BSc (Kin) Degree take a program of 120 units over a four year period, consisting of: 1. Degree core: A group of required courses in Kinesiology totalling 93 units 2. Practicum Component: (9 units) Part-time or (15 units) Full-time practicum 3. Option component: a. Open Options: A group of courses totalling 12 units which may be taken from within or outside the Faculty of Kinesiology, Sport, and Recreation. b. Faculty Options: 0 units/6 units chosen from courses within the Faculty of Kinesiology, Sport, and Recreation.	**Program Requirements** Students in the BSc (Kin) Degree take a program of 120 units over a four-year period, consisting of: 1. Degree core: A group of required courses in Kinesiology totalling 78 units. 2. In Field Learning Component: A group of courses totalling a minimum of 9 units to a maximum of 12 units. 3. Option component: a. Open Options: A group of courses totalling a minimum of 12 to a maximum of 15 units which may be taken from within or outside the Faculty of Kinesiology, Sport, and Recreation (see Note). b. General Faculty Options: 6 units chosen from courses within the Faculty of Kinesiology, Sport, and Recreation.

Note: Students who choose ~~a~~ 9-unit ~~part-time practicum~~ will ~~do 6~~ units in Faculty Options; students who choose ~~a~~ 1~~5~~-unit ~~full-time practicum~~ will ~~not~~ require ~~any additional Faculty Options~~.

Course Sequence for BSc in Kinesiology
Students are advised to follow the prescribed order as closely as possible.

Year 1 (30 units)
● 6 units in 100-level ENGL OR 3 units in ENGL and 3 units in WRS
● CHEM 101 - Introductory University Chemistry I
● HE ED 120 - Introduction to the Biological Aspects of Fitness to Health
● KIN 100 - Human Anatomy
● KIN 101 - Introduction to Human Physiology
● KIN 103 - Integrative Human Physiology
● KRLS 104 - Introduction to Sociology of Sport and Leisure in Canadian Society
● KRLS 105 - Introduction to the Management of Sport, Physical Activity and Recreation Programs
● One of:
KIN 109 - Statistics, Measurement, and Evaluation
STAT 151 - Introduction to Applied Statistics I

Year 2 (30 units)
● CHEM 261 - Organic Chemistry I
● HE ED 221 - Population Health
● KIN 200 - Physiology of Exercise
● KIN 203 - Skill Acquisition and Performance
● KIN 209 - Research Methods in Kinesiology
● KIN 240 - Introduction to Sports Injury Management
● KRLS 207 - Adapted Physical Activity and Leisure for Diverse Populations
● MATH 125 - Linear Algebra I ~~OR~~
● MATH 134 - Calculus for the Life Sciences I
● PHYS 124 - Particles and Waves
● 3 units in Open options

Year 3 (30 units)
● BIOCH 200 - Introductory Biochemistry

c. Faculty Options: A group of courses totalling 12 units chosen from List A or B courses.
Note:
Students who elect to complete the minimum 9-units of the In Field Learning Component will complete 15 units/credits of Open Options. Students who elect to complete the maximum 12 units of the In Field Learning Component will complete 12 units of Open Options.

Course Sequence for BSc in Kinesiology
Students are advised to follow the prescribed order as closely as possible.

Year 1 (30 units)
● 6 units in 100-level ENGL OR 3 units in ENGL and 3 units in WRS
● CHEM 101 - Introductory University Chemistry I
● HE ED 120 - Introduction to the Biological Aspects of Fitness to Health
● KIN 100 - Human Anatomy
● KIN 101 - Introduction to Human Physiology
● KIN 103 - Integrative Human Physiology
● KRLS 104 - Introduction to Sociology of Sport and Leisure in Canadian Society
● KRLS 105 - Introduction to the Management of Sport, Physical Activity and Recreation Programs
● One of:
KIN 109 - Statistics, Measurement, and Evaluation or
STAT 151 - Introduction to Applied Statistics I

Year 2 (30 units)
● CHEM 261 - Organic Chemistry I
● HE ED 221 - Population Health
● KIN 200 - Physiology of Exercise
● KIN 203 - Skill Acquisition and Performance
● KIN 209 - Research Methods in Kinesiology
● KIN 240 - Introduction to Sports Injury Management
● KRLS 207 - Adapted Physical Activity and Leisure for Diverse Populations
● One of:
MATH 125 - Linear Algebra I
or
MATH 134 - Calculus for the Life Sciences I
● PHYS 124 - Particles and Waves
● 3 units in Open options

Year 3 (30 units)
● BIOCH 200 - Introductory Biochemistry
● One of:
KIN 303 - Psychology of Sport and Physical Activity or
HE ED 321 - Psychological Dimensions of Health Promotion

● KIN 303 - Psychology of Sport and Physical Activity ~~OR~~
● HE ED 321 - Psychological Dimensions of Health Promotion
● KIN 306 - Quantitative Biomechanics of Human Movement
● KIN 311 - Assessment of Fitness and Health
● KIN 334 - Physical Activity, Nutrition and Energy Balance
● KIN 335 - Advanced Conditioning Methodology
● ~~6~~ units in Open Option

3-unit ~~List A~~ Faculty Option
~~Students should contact the Student Services Office for detailed information about List A Faculty Options.~~
3~~-unit~~ ~~List B~~ Faculty Option
Students should contact the Student Services Office for detailed information about List B Faculty Options.
~~a. 6 units in Open Option~~

Year 4 (30 units)
~~1. KIN 401~~
~~2. 6 units chosen from List B Faculty Options Students should contact the Student Services Office for detailed information about List B Faculty Options.~~
~~3. 3 units chosen from List A or B Faculty Options Students should contact the Student Services Office for detailed information about List A and B Faculty Options.~~
~~4. 3 units in Open Option~~
~~5. 9 unit/15 unit Professional Practicum (see Notes 4 and 5)~~
~~6. 6 units in Faculty Options (see Notes 4 and 5)~~
The total course weights taken in 5 and 6 above must equal 15 units.
Notes
~~1. No more than 9 units of options are to be completed through PAC/DAC courses.~~
~~2. Practicum opportunities may be limited for those students wishing to do a part-time practicum.~~
3. It is strongly recommended to select appropriate Open Options in order to meet ~~agency~~ prerequisites for ~~a practicum placement~~. See a ~~Program~~ Advisor for suggested courses.

● KIN 306 - Quantitative Biomechanics of Human Movement
● KIN 311 - Assessment of Fitness and Health
● KIN 334 - Physical Activity, Nutrition and Energy Balance
● KIN 335 - Advanced Conditioning Methodology
● 6 units In Field Learning
● 3 units in Open Option
● 3 units Faculty Option (from List A or List B)
Note
Students are encouraged to contact the KSR Student Services Office and consult with an academic advisor for assistance in program building and course selection from List A and B Faculty Options in the completion of program requirements.

Year 4 (30 units)
● KIN 401
● 6 units Faculty Options (one from List A, one from List B)
● 3 units Faculty Options (from List A or List B)
● 6 units General Faculty Option
● 3/6 units In Field Learning (see Note 1)
● 9/6 units in Open Option (see Note 1)
Notes
1. The total course units taken in Open Options and In Field Learning courses in year 4 must equal 12 units.
2. Students are encouraged to contact the KSR Student Services Office and consult with an Academic Advisor for assistance in program building and course selection from List A and B Faculty Options in the completion of program requirements as well in selecting appropriate Open Options to support, prepare for, and meet In Field Learning course prerequisites and placement requirements.
3. In Field Learning courses are restricted to students who have completed a minimum of 45 units toward the BSc in Kinesiology degree program.
4. A maximum of 15 units in In Field Learning course offerings may be credited toward the BSc in Kinesiology degree program.

4. ~~Students must choose one of following practicum placement options:~~ ~~15-unit full-time practicum (must register in KIN~~ ~~493 only), or 9-unit part-time practicum (must~~ ~~register in KIN 492 only) and an additional 6~~ ~~units in Faculty Options.~~ 5. A maximum of ~~18~~ units in ~~Practicum~~ course offerings may be credited toward the BSc in Kinesiology degree program. 6. ~~KIN 492 & KIN 493~~ are restricted to students who have completed a minimum of ~~90~~ units toward the BSc in Kinesiology degree program. ~~Removed language~~	New language

Reviewed/Approved by:

KSR Undergraduate Programs Committee: April 6th, 2022 consultation; June 1st, 2022 consultation; September 7, 2022 consultation; November 16th, 2022 approval
KSR Faculty Executive: Sept 21st 2022 consultation; November 22nd, 2022 approval
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Other Consultations:
KSR Leadership Team: April 4th, 2022; August 8, 2022; October 18th, 2022
KSR Academic Council: April, 26th, 2022
KSR UG Students (upon completion of practicum): June 10, 2022
KSRSS Council: October 16th, 2022
KSRSS GFC Student Representative: October 24, 2022
Undergraduate Program Support Team (Undergraduate & Non-Credit): June 2, 2022; August 25, 2022 consultation
Dr. Karsten Mundel, Provost Fellow, Experiential and Work-Integrated Learning & Associate Professor: June 13, 2022
Norma Rodenburg, Deputy Registrar, Office of the Registrar: June 13, 2022
Dr. Beverley Temple, Professor, Associate Dean, Undergrad Studies, Faculty of Nursing: June 20, 2022
Dr. Florence Glanfield, Vice-Provost Indigenous Programming & Research: July 14, 2022
Rebecca Liaw, University Calendar Editor: October 25, 2022

UNIVERSITY OF ALBERTA

Item No. 7

Attachment 6
KSR.Calendar Change Request Form for Course Changes.IFL (new courses) and Practicum (course deletions).Fall 2024 Implementation

Calendar Change Request Form for Course Changes

See the Calendar Guide for tips on how to complete this form.

Faculty (& Department or Academic Unit):	FoKSR
Contact Person:	Angela L. Bayduza Associate Dean, Undergraduate Programs ksradu@ualberta.ca
Level of change (choose one only) [?]	Undergraduate
For which term will this change take effect?	Fall 2024

Rationale

URL KIN Courses:
https://calendar.ualberta.ca/content.php?filter%5B27%5D=KIN&filter%5B29%5D=&filter%5Bcourse_type%5D=-1&filter%5Bkeyword%5D=&filter%5B32%5D=1&filter%5Bcpage%5D=1&cur_cat_oid=36&expand=&navoid=11383&search_database=Filter&filter%5Bexact_match%5D=1#acalog_template_course_filter

URL RLS Courses:
https://calendar.ualberta.ca/content.php?filter%5B27%5D=RLS&filter%5B29%5D=&filter%5Bcourse_type%5D=-1&filter%5Bkeyword%5D=&filter%5B32%5D=1&filter%5Bcpage%5D=1&cur_cat_oid=36&expand=&navoid=11383&search_database=Filter&filter%5Bexact_match%5D=1#acalog_template_course_filter

The following proposed changes to the KSR Practicum are in response to the needs of current and future students in implementing solutions to prioritize diversity and provide more flexible pathways to students within more meaningful, rich, rigorous, purposeful, career focused, and culturally sensitive work integrated learning experiences. Currently, there are critical ethical, equity, accessibility, and inclusivity considerations for students with the current KSR "Practicum" model of delivery as well as a lack of culturally diverse and multi population-based experiences offered and available to each individual student.

As the Faculty of KSR continues its strong response to the TRC calls to action in decolonizing and Indigenizing programming, the proposed changes to Practicum will have a dedicated focus on Indigenous Knowledges, ethical engagement and collaboration with Indigenous communities, and strong grounding in kinesiology related issues (sport, exercise, recreation, physical activity, health and wellness, etc.) experienced by Indigenous Peoples of Canada. The proposed new In the Field Learning experiences, at both a micro and macro level, will challenge students to respond to the needs they see and purposefully find solutions in application of their knowledge and training in meeting these challenges. Providing applied, active learning experiences focused on cultural sensitivity in a breadth of diverse populations and lived experiences, will be a driving factor within the proposed changes.

In addressing the lack of culturally diverse and multi population-based experiences offered to each individual student within their current work integrated opportunities, the proposed changes provide an enhanced opportunity to continue to build already existing partnerships with community associations and organizations

as well as build others. Through KSRs ongoing partnerships with such community organizations and professional certifying/registration bodies (i.e., Indigenous Sport Council of Alberta-ISCA; Alberta Kinesiology Association-AKA; Alberta Recreation and Parks-ARPA, to name just a few), at the level of each proposed IFL course, richer, deeper learning experiences for KSR students can be developed with not only these associations but also the populations they serve and eventually KSR students will be working with professionally.

Key equity, accessibility, and inclusivity considerations within the proposed changes to "practicum" in the Faculty of KSR are the completion requirements of the current delivery models. The current student completing the Faculty of KSR practicum program structure comes from a privileged background, likely still living at home, or has other significant support such as family to pay for their accommodations and costs of daily living during the practicum semester. In the current practicum structure, where students who are matched with practicum placement partners, students are tasked with completing 30-35 hours per week of unpaid work across the practicum semester, for completion of up to 15 credit units. Students, as a result of this degree program requirement, have little time or flexibility to attend to other financial responsibilities by working in a paid position outside of their practicum commitment. In addition to this, the nature of work in some placements requires students to be available to be scheduled days, evenings, and weekends to meet the required hours of their placement while receiving meaningful mentorship. This further reduces the student's ability to work in a paid role as it makes scheduling paid shifts difficult.

Another driver of the update to the KSR practicum structure is that the career paths available to graduates of the Faculty's degree programs, where the practicum is required, are very diverse. The current delivery structure places completion of the practicum at the end of the degree program (90 credit units completed) when students have not yet had an opportunity to complete a thorough exploration of the different career paths available to them. This places a lot of pressure on the student to choose the "right" or most "advantageous" practicum at the very end of their program, instead of emphasizing the connection of theory into practice, very early in and across the degree program.

The proposed new delivery structure incorporates, much earlier in the degree program, student engagement in career exploration, understanding of professional requirements and potential certifying bodies more consistently and fully, attainment of multiple and more diverse work-integrated learning experiences, and improvement of students' personal awareness as to what is required of them in their next steps after completion of their undergraduate program, what their professional identity is, and how that identity is present within one's career path.

Finally, within the significant ask of students completing practicum in the current practicum structure where placements are unpaid with an average work week of 30-35 hours, it has become apparent that this time completion expectation of students is often not being filled with meaningful skills, professional development, and/or intensive applied learning for the student. Often within these large, macro experiences, significant amounts of this time is being filled with entry-level labour that should otherwise be completed by a paid employee of the placement organization. In other words, practicum organizations are asking skilled student labour to fill their placement hours and practicum requirements with tasks not connected strongly to learning outcomes or experiential, applied program learning. As a result, these students are left without a rigorous, purposeful, career focused work integrated learning experience.

The proposed new structure will respond to the needs of current and future students, implement solutions to prioritize diversity, and provide more flexible pathways for students to receive meaningful, rich, rigorous, purposeful, career focused, work integrated, and culturally responsive learning experiences. The new In the Field Learning delivery model will focus on the provision of high density, rich, and applied outcomes-based learning and learning opportunities much more closely aligned with the Work Integrated Learning (WIL) principles of Field Placements. In this new delivery model, students will be provided a mix and variety of short term, micro, as well as macro intensive hands-on practical experiences, in a multiple of settings with a

variety of populations relevant to their subjects of study and career pathways (reference: [CEWIL Canada - What is Work Integrated Learning (WIL)](#)).

This proposed top-down WIL approach integrates a greater connection of WIL (Experiential Learning-EL/Community Service Learning-CSL) in academic focused courses, from the point of completion of 45 credits (1.5 yr of program) all the way through to degree completion. In this way, students will be better able to understand how each of the individual courses offered throughout their program and in connection to WIL/EL/CSL electives, develop skills that are transferable across their degree and beyond into their careers. This proposed model of In the Field Learning provides greater flexibility to students in support of program completion, accessibility and inclusivity, and applied, active engaged outcome-based learning through much broader sampling of populations and culturally diverse In the Field Learning opportunities they will be exposed to and choose to complete.

These proposed program, regulation, and course changes will have impacts to administration that are in line with the challenges the Faculty of KSR is experiencing in the current Practicum delivery model. Academic Instructors, who currently are assigned to the Practicum Seminar, will be assigned to individual courses in the new model and will need to be more fully engaged in the oversight and quality assurance of the In the Field Learning experiences unique to each course offering. As well, relationship building with both current and new placement partners, to coordinate high quality micro and macro work integrated experiences for KSR students will continue to be a large focus of the KSR Practicum Advisor position and administrative support will need to be added there. Administration process will also need to be established to ensure current students already enrolled in programming are provided the opportunity and option to transition to the new delivery model if appropriate. As well, a phased approach to course deletions indicated below during the teach out phase will be taken to ensure that students who either can not or do not want to transition to the new delivery model can continue and complete their current degree programs. KSR Academic Advisors and Student Services Office staff, as well key Leadership positions in the Faculty, have been consulted and included in the development of these proposed changes and will continue to be included in addressing these proposed changes and administrative, transactional impacts associated with the proposed changes, for implementation of the new structure in Fall 2024.

Course Template

Current	Proposed
KIN 490 - Professional Practicum ★ 6 (*fi 12*) (variable, variable) A half-time unpaid Professional Practicum of 20 hours per week for 14 weeks, or the equivalent time. Students must arrange placements through the Practicum Supervisor/Instructor. A limited number of placements are available. Note: Students will not be allowed to register in more than *9 concurrently with KIN 490 unless approved by the Practicum Supervisor/Instructor. Note: Credit will be granted for only one of KIN 490 or PEDS 490.	… [delete] …
KIN 491 - Professional Practicum ★ 12 (*fi 24*) (variable, variable) A full-time unpaid Professional Practicum of 35-40 hours per week for 14 weeks, or the equivalent time. Students must arrange placements through the Practicum Supervisor/Instructor. Note: Students will not be allowed to register in any other course concurrently with KIN 491 unless approved by the	… [delete] …

Practicum Supervisor/Instructor. Note: Credit will be granted for only one of KIN 491 or PEDS 491.

KIN 492 - Professional Practicum
★ 9 (*fi 18*) (variable, variable) A half-time unpaid Professional Practicum of 20 hours per week for 14 weeks, or the equivalent time. Students must arrange placements through the Practicum Supervisor/Instructor. A limited number of placements are available. Note: Students will not be allowed to register in more than *9 concurrently with KIN 492 unless approved by the Practicum Supervisor/Instructor. Note: Credit will be granted for only one of KIN 492 or PEDS 492.

… [delete] …

KIN 493 - Professional Practicum
★ 15 (*fi 30*) (variable, variable) A full-time unpaid Professional Practicum of 35-40 hours per week for 14 weeks, or the equivalent time. Students must arrange placements through the Practicum Supervisor/Instructor. Note: Students will not be allowed to register in any other course concurrently with KIN 493 unless approved by the Practicum Supervisor/Instructor. Note: Credit will be granted for only one of KIN 493 or PEDS 493.

… [delete] …

RLS 441 - Practicum Seminar
★ 3 (*fi 6*) (either term, 0-3s-0) A seminar, taken concurrently with RLS 449, which seeks to relate the professional work experience to the academic and professional preparation elements within the BA program. Students will not be allowed to register in any other course concurrently with RLS 441/449 unless approved by the Practicum Supervisor/Instructor.

… [delete] …

RLS 447 - Professional Practicum
★ 15 (*fi 30*) (variable, variable) A full-time unpaid Professional Practicum of 35-40 hours per week for 14 weeks, or the equivalent time. Students must arrange placements through the Practicum Supervisor/Instructor. Note: Students will not be allowed to register in any other course concurrently with RLS 447 unless approved by the Practicum Supervisor/ Instructor. Credit will be granted for only one of RLS 441/449 or RLS 447.

… [delete] …

RLS 449 - Professional Practicum
★ 12 (*fi 24*) (either term, 14 weeks) Fourteen weeks of professional experience in full-time, unpaid placement (35 to 40 hours per week). Students must arrange placements through the Practicum Supervisor/Instructor. Must be taken concurrently with RLS 441. Students will not be allowed to register in any other course in conjunction with RLS 441/449 unless approved by the Practicum Supervisor/Instructor.

… [delete] …

… [new] …

… [new] …

Effective September 2024

KRLS 290 – An Introduction to In Field Learning: Career Explorations
Course Career Undergraduate
Units 3
Approved Hours Variable
Fee index 6
Faculty Kinesiology, Sport, & Rec
Department Kinesiology, Sport, & Rec
Typically Offered Variable

Description
In this course, students will explore the breadth of career paths and scope of practice that can be pursued with their degrees. Strategies for conducting job searches, application and resume writing skills, interviewing and networking skills, and engaging stakeholders will also be addressed. Throughout the course, students will be tasked with creating a professional portfolio to be built upon and utilized as they progress through their remaining program, in field learning courses, and as they enter into their careers. Through multiple micro career explorations and informational interviewing with established practicing professionals students will be connected with throughout the course (e.g., alumni, practitioners in professions of interest), students will discover and uncover how professionals use degree knowledge to build careers. Through these micro career experiences (variable; ~1-4 hrs/ week or ~15-60 hrs/term), students will be guided in learning how to identify and articulate transferable skills from all of their own experiences, including from their academic program, that can then be utilized in their future career journey. Notes: Classroom/tutorial sessions are variable per week in addition to the micro career explorations and in field learning experiences with working professionals students will engage with throughout the course. Prerequisite: Successful completion of 45 course units.

… [new] …

KRLS 291 – In Field, Practice-Based, Learning – Professional Practice & Interpersonal Skill Building
Course Career Undergraduate
Units 3
Approved Hours Variable
Fee index 6
Faculty Kinesiology, Sport, & Rec
Department Kinesiology, Sport, & Rec
Typically Offered Variable

Description
This course provides students the opportunity to develop knowledge and competencies in interpersonal theory specific to Kinesiology, Sport, and/or Recreation settings.

| … [new] … | Content covered in this course include such topics as effective verbal, non-verbal, and written communication strategies, active listening with patients/clients, reflective practice, managing conflict and difficult conversations, negotiations in the workplace, decision making, leadership, respect for diversity, intercultural competence, self-awareness, collaboration, teamwork and interdisciplinary practice, and generating and synthesizing evidence, and applying ethical principles. This course draws upon previous coursework and integrates theory and practice across course learning activities to apply the course content to the breadth of populations, settings, and career pathways within the field of Kinesiology, Sport, and Recreation. As a part of the course, students will participate in multiple micro field placements (variable; ~1-4 hrs/ week or ~15-60 hrs/term) with assigned mentors, observing and engaging in interpersonal relations and participating in the planning and implementation of programs as is appropriate. Notes: Classroom/tutorial sessions are variable per week in addition to the micro in field learning experiences. Prerequisite: Successful completion of KRLS 290.

KRLS 392 – In Field, Practice-Based, Learning – Interdisciplinary Problem Solving
Course Career Undergraduate
Units 3
Approved Hours Variable
Fee index 6
Faculty Kinesiology, Sport, & Rec
Department Kinesiology, Sport, & Rec
Typically Offered Variable

Description
In this project, micro field placement (variable; ~1-4 hrs/ week or ~15-60 hrs/term) based course, students will work in small interdisciplinary teams to analyze a complex problem and propose a solution (strategies and interventions) to address a real-world issue and context. Students will apply theoretical knowledge to attempt to solve practical challenges they identify, demonstrate their understanding of the challenge and potential solutions through presentation of their ideas, and design an implementation and evaluation strategy. Students will be asked to draw connections between their theoretical course learnings and the practical application of skills through discussion of proposed solutions with team members and other course participants. With the support of the Course Instructor, Practicum Advisor, and Industry Partners, students will visualize, identify, and articulate how the practical application of their knowledge altered their self-efficacy in the competency areas required of the experience. Notes: Classroom/tutorial sessions are variable per week in addition to micro in field learning experiences scheduled for each iteration of the course. Prerequisite: Successful completion of KRLS 291. |

[new] …	**KRLS 493 – In Field, Practice-Based, Learning – Comprehensive Placement** **Course Career** Undergraduate **Units** 6 **Approved Hours** Variable **Fee index** 12 **Faculty** Kinesiology, Sport, & Rec **Department** Kinesiology, Sport, & Rec **Typically Offered** Variable **Description** Students will participate in a singular, comprehensive, high-density, macro learning (variable; ~8-12 hrs/week or ~120-180 hrs/term), In Field Learning placement with an assigned mentor. During this intensive in the field learning experience, students will become fully integrated into the work at their assigned Field Placement that will provide students with an intensive short term hands-on practical experience in a setting relevant to their subject of study and lead to relatively independent work by the completion of the placement. Students will work towards contributing to their assigned field placement's capacity, critically assessing issues, designing, implementing, and evaluating strategic initiatives, and/or engaging actively in research while at the same time gaining confidence and skills as a practicing professional under the direction of the course instructor and the placement mentor. Students will report back to the course instructor regularly i). proposed ideas and plans for work appropriate to the working environment that aligns with the settings mission, values, and workflow; ii). information collected and resources utilized that were needed to assess and complete work functions; iii) evaluation of what skill sets are required to complete work functions, and iv). judgements on whether their current skill set meets the identified work functions. Notes: Classroom/tutorial sessions are variable per week in addition to the macro in field learning experience. Prerequisite: Successful completion of KRLS 290 or KRLS 291.
[new] …	**KRLS 499 – In Field, Practice-Based, Learning – Directed Project** **Course Career** Undergraduate **Units** 3 **Approved Hours** Variable **Fee index** 6 **Faculty** Kinesiology, Sport, & Rec **Department** Kinesiology, Sport, & Rec **Typically Offered** Variable **Description** A course designed to meet the needs of individual students in completion of the In Field Learning requirements of their degree program. A singular, comprehensive, high-density, micro experience (variable;

Removed language	New language
	~1-4 hrs/ week or ~15-60 hrs/term), in combination with academically focused work, completed under the supervision, mentorship, and direction of an academic member in the Faculty of Kinesiology, Sport, and Recreation or approved affiliate. Normally for students in their fourth year of study. Notes: Classroom/tutorial sessions are variable per week in addition to the micro in field learning experience. Prerequisite: KRLS 290 or KRLS 291 and consent of the Associate Dean (Undergraduate Programs). Students must arrange a project with an academic staff member or approved affiliate.

Reviewed/Approved by:

KSR Undergraduate Programs Committee: April 6th, 2022 consultation; June 1st, 2022 consultation; September 7, 2022 consultation; November 16th, 2022 approval
KSR Faculty Executive: Sept 21st 2022 consultation; November 22nd, 2022 approval
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Dr. Karsten Mundel, Provost Fellow, Experiential and Work-Integrated Learning & Associate Professor: June 13, 2022
Norma Rodenburg, Deputy Registrar, Office of the Registrar: June 13, 2022
Dr. Beverley Temple, Professor, Associate Dean, Undergrad Studies, Faculty of Nursing: June 20, 2022
Dr. Florence Glanfield, Vice-Provost Indigenous Programming & Research: July 14, 2022
Rebecca Liaw, University Calendar Editor: October 25, 2022

Attachment 7
KSR.Calendar Change Request Form for Program Changes.UG Research Certificate Changes.Fall 2024 Implementation

Calendar Change Request Form for Program and Regulation Changes

See the Calendar Guide for tips on how to complete this form.

Faculty (& Department or Academic Unit):	Kinesiology, Sport, & Recreation (KSR)
Contact Person:	Angela Bayduza, PhD - Associate Dean, Undergraduate Programs
Level of change (choose one only) [?]	• Undergraduate
Type of change request (check all that apply) [?]	• Program • BScKin "Practicum" Requirements
For which term is this intended to take effect?	Fall 2024
Does this proposal have corresponding course changes? (Should be submitted at the same time)	Yes

Rationale

The proposed changes to the Faculty of KSR Research Certificate in Kinesiology are in response to alignment with the proposed changes to the Faculty of KSR Practicum Component.

The proposed changes in the Faculty of KSR Practicum Component are intended to meet the needs of current and future students and implement solutions to prioritize diversity and provide more flexible pathways to students within more meaningful, rich, rigorous, purposeful, career focused, and culturally sensitive work integrated learning experiences. Currently, there are critical ethical, equity, accessibility, and inclusivity considerations for students with the current KSR "Practicum" model of delivery as well as a lack of culturally diverse and multi population-based experiences offered and available to each individual student.

As the Faculty of KSR continues its strong response to the TRC calls to action in decolonizing and Indigenizing programming, the proposed changes to Practicum will have a dedicated focus on Indigenous Knowledges, ethical engagement and collaboration with Indigenous communities, and strong grounding in kinesiology related issues (sport, exercise, recreation, physical activity, health and wellness, etc.) experienced by Indigenous Peoples of Canada. The proposed new In the Field Learning experiences, at both a micro and macro level, will challenge students to respond to the needs they see and purposefully find solutions in application of their knowledge and training in meeting these challenges. Providing applied, active learning experiences focused on cultural sensitivity in a breadth of diverse populations and lived experiences, will be a driving factor within the proposed changes.

In addressing the lack of culturally diverse and multi population-based experiences offered to each individual student within their current work integrated opportunities, the proposed changes provide an enhanced opportunity to continue to build already existing partnerships with community associations and organizations as well as build others. Through KSRs ongoing partnerships with such community organizations and professional certifying/registration bodies (i.e., Indigenous Sport Council of Alberta-ISCA; Alberta Kinesiology Association-AKA; Alberta Recreation and Parks-ARPA, to name just a few), at the level of each proposed IFL course, richer, deeper learning experiences for KSR students can be developed with not only

these associations but also the populations they serve and eventually KSR students will be working with professionally.

Key equity, accessibility, and inclusivity considerations within the proposed changes to "practicum" in the Faculty of KSR are the completion requirements of the current delivery models. The current student completing the Faculty of KSR practicum program structure comes from a privileged background, likely still living at home, or has other significant support such as family to pay for their accommodations and costs of daily living during the practicum semester. In the current practicum structure, where students who are matched with practicum placement partners, students are tasked with completing 30-35 hours per week of unpaid work across the practicum semester, for completion of up to 15 credit units. Students, as a result of this degree program requirement, have little time or flexibility to attend to other financial responsibilities by working in a paid position outside of their practicum commitment. In addition to this, the nature of work in some placements requires students to be available to be scheduled days, evenings, and weekends to meet the required hours of their placement while receiving meaningful mentorship. This further reduces the student's ability to work in a paid role as it makes scheduling paid shifts difficult.

Another driver of the update to the KSR practicum structure is that the career paths available to graduates of the Faculty's degree programs, where the practicum is required, are very diverse. The current delivery structure places completion of the practicum at the end of the degree program (90 credit units completed) when students have not yet had an opportunity to complete a thorough exploration of the different career paths available to them. This places a lot of pressure on the student to choose the "right" or most "advantageous" practicum at the very end of their program, instead of emphasizing the connection of theory into practice, very early in and across the degree program.

The proposed new delivery structure incorporates, much earlier in the degree program, student engagement in career exploration, understanding of professional requirements and potential certifying bodies more consistently and fully, attainment of multiple and more diverse work-integrated learning experiences, and improvement of students' personal awareness as to what is required of them in their next steps after completion of their undergraduate program, what their professional identity is, and how that identity is present within one's career path.

Finally, within the significant ask of students completing practicum in the current practicum structure where placements are unpaid with an average work week of 30-35 hours, it has become apparent that this time completion expectation of students is often not being filled with meaningful skills, professional development, and/or intensive applied learning for the student. Often within these large, macro experiences, significant amounts of this time is being filled with entry-level labour that should otherwise be completed by a paid employee of the placement organization. In other words, practicum organizations are asking skilled student labour to fill their placement hours and practicum requirements with tasks not connected strongly to learning outcomes or experiential, applied program learning. As a result, these students are left without a rigorous, purposeful, career focused work integrated learning experience.

The proposed new structure will respond to the needs of current and future students, implement solutions to prioritize diversity, and provide more flexible pathways for students to receive meaningful, rich, rigorous, purposeful, career focused, work integrated, and culturally responsive learning experiences. The new In the Field Learning delivery model will focus on the provision of high density, rich, and applied outcomes-based learning and learning opportunities much more closely aligned with the Work Integrated Learning (WIL) principles of Field Placements. In this new delivery model, students will be provided a mix and variety of short term, micro, as well as macro intensive hands-on practical experiences, in a multiple of settings with a variety of populations relevant to their subjects of study and career pathways (reference: CEWIL Canada - What is Work Integrated Learning (WIL)).

This proposed top-down WIL approach integrates a greater connection of WIL (Experiential Learning-EL/Community Service Learning-CSL) in academic focused courses, from the point of completion of 45

credits (1.5 yr of program) all the way through to degree completion. In this way, students will be better able to understand how each of the individual courses offered throughout their program and in connection to WIL/EL/CSL electives, develop skills that are transferable across their degree and beyond into their careers. This proposed model of In the Field Learning provides greater flexibility to students in support of program completion, accessibility and inclusivity, and applied, active engaged outcome-based learning through much broader sampling of populations and culturally diverse In the Field Learning opportunities they will be exposed to and choose to complete.

These proposed program, regulation, and course changes will have impacts to administration that are in line with the challenges the Faculty of KSR is experiencing in the current Practicum delivery model. Academic Instructors, who currently are assigned to the Practicum Seminar, will be assigned to individual courses in the new model and will need to be more fully engaged in the oversight and quality assurance of the In the Field Learning experiences unique to each course offering. As well, relationship building with both current and new placement partners, to coordinate high quality micro and macro work integrated experiences for KSR students will continue to be a large focus of the KSR Practicum Advisor position and administrative support will need to be added there. Administration process will also need to be established to ensure current students already enrolled in programming are provided the opportunity and option to transition to the new delivery model if appropriate. As well, a phased approach to course deletions (indicated in the proposal package), during the teach out phase, will be taken to ensure that students who either can not or do not want to transition to the new delivery model can continue and complete their current degree programs. KSR Academic Advisors and Student Services Office staff, as well key Leadership positions in the Faculty, have been consulted and included in the development of these proposed changes and will continue to be included in addressing these proposed changes and administrative, transactional impacts associated with the proposed changes, for implementation of the new structure in Fall 2024.

Calendar Copy

URL in current Calendar (or leave blank if it is a new page):
https://calendar.ualberta.ca/preview_program.php?catoid=36&poid=43054&returnto=11341

Current	**Proposed**
Research Certificate in Kinesiology	**Research Certificate in Kinesiology**
	Effective September 2024
Return to: Faculty of Kinesiology, Sport, and Recreation - Programs	Return to: Faculty of Kinesiology, Sport, and Recreation - Programs
The Research Certificate in Kinesiology is open to undergraduate students in the Faculty of Kinesiology, Sport, and Recreation's BSc Kin or BKin degree programs. Consent of the Faculty is required. Normally, a student will be able to fulfill the requirements for this certificate as part of a BSc Kin or BKin program although some students may need to complete more than the minimum number of credits required in order to qualify for both the degree and the certificate.	The Research Certificate in Kinesiology is open to undergraduate students in the Faculty of Kinesiology, Sport, and Recreation's BSc Kin or BKin degree programs. Consent of the Faculty is required. Normally, a student will be able to fulfill the requirements for this certificate as part of a BSc Kin or BKin program although some students may need to complete more than the minimum number of credits required in order to qualify for both the degree and the certificate.
Students may pursue the Research Certificate in Kinesiology by fulfilling the existing requirements for their program and by completing 24 units as follows:	Students may pursue the Research Certificate in Kinesiology by fulfilling the existing

1. 9 units from a list of 300- and 400-level approved option courses that include instruction and experience in research methods, data collection, data handling and analysis, interpretation, and/or practical skills. A maximum of 6 units may be selected from KIN 398, KIN 399, KIN 498, or KRLS 495. 2. ~~KIN 493 (15 units) Professional Practicum~~ focused on research completed under the supervision of a University of Alberta academic faculty member or an approved research affiliate**,** 3. Presentation at a conference either on or off campus. Students wishing to receive the Research Certificate in Kinesiology must apply through Undergraduate Student Services in the Faculty of Kinesiology, Sport, and Recreation by the application deadline for convocation (see [Academic Schedule](#)). ~~Removed language~~	requirements for their program and by completing a **minimum of 21 to a maximum of** 24 units as follows: 1. 9 **to a maximum of 12** units from a list of 300- and 400-level approved option courses that include instruction and experience in research methods, data collection, data handling and analysis, interpretation, and/or practical skills. A maximum of 6 units may be selected from KIN 398, KIN 399, KIN 498, or KRLS 495. 2. **Minimum of 9 to a maximum of 12 units of** [In Field Learning](#) **that is** focused on research completed under the supervision of a University of Alberta academic faculty member or an approved research affiliate**.** 3. Presentation at a conference either on or off campus. Students wishing to receive the Research Certificate in Kinesiology must apply through Undergraduate Student Services in the Faculty of Kinesiology, Sport, and Recreation by the application deadline for convocation (see [Academic Schedule](#)). New language

Reviewed/Approved by:

KSR Undergraduate Programs Committee: April 6th, 2022 consultation; June 1st, 2022 consultation; September 7, 2022 consultation; November 16th, 2022 approval
KSR Faculty Executive: Sept 21st 2022 consultation; November 22nd, 2022 approval
KSR Faculty Council: Sept 28th 2022 consultation; November 30th, 2022 approval

Other Consultations:
KSR Leadership Team: April 4th, 2022; August 8, 2022; October 18th, 2022
KSR Academic Council: April, 26th, 2022
KSR UG Students (upon completion of practicum): June 10, 2022
KSRSS Council: October 16th, 2022
KSRSS GFC Student Representative: October 24, 2022
Undergraduate Program Support Team (Undergraduate & Non-Credit): June 2, 2022; August 25, 2022 consultation
Dr. Karsten Mundel, Provost Fellow, Experiential and Work-Integrated Learning & Associate Professor: June 13, 2022
Norma Rodenburg, Deputy Registrar, Office of the Registrar: June 13, 2022
Dr. Beverley Temple, Professor, Associate Dean, Undergrad Studies, Faculty of Nursing: June 20, 2022
Dr. Florence Glanfield, Vice-Provost Indigenous Programming & Research: July 14, 2022
Rebecca Liaw, University Calendar Editor: October 25, 2022

PROPOSED CHANGES TO
Faculty of Kinesiology, Sport, and Recreation (KSR)
Practicum Requirement Restructure
Executive Summary
Prepared by:
Angela Bayduza, Associate Teaching Professor and Associate Dean (Undergraduate Programs), Faculty of KSR (ksradu@ualberta.ca)

Preamble
In January of 2021, the Faculty of KSR began the Practicum Requirement Restructure project with the primary goals of conducting a thorough review of the current Practicum Requirement structure across three Undergraduate Degree Programs (BARST, BKin, BScKin) and making necessary changes for maximum improvement. The Faculty's Practicum framework and delivery structure has existed in its current form for at least two decades or more and had not been reviewed or updated to this degree for a significant period of time.

The purpose of this executive summary is to provide University Governance committees with further background information for discussion and decision making regarding the proposed changes to the Practicum Requirement for KSR undergraduate students in three of KSR undergraduate degree programs (BARST, BKin, BScKin). Students enrolled in the fourth KSR undergraduate degree program, the BKinBEd Combined Degrees program, complete their professional practice experience in the Faculty of Education during their 4th and 5th years of their degree program.

Existing KSR Practicum Structure
In the current practicum structure, students are provided with one singular or macro level experience matched with a practicum placement partner, and are tasked with completing 30-35 hours per week of unpaid work across the practicum semester with this one singular experience, for completion of up to 15 credit units. The nature of work in placements often requires students to make themselves available to be scheduled days, evenings, and/or weekends in order to meet the required hours of their placement while receiving meaningful mentorship. Within the current practicum structure, students complete practicum placements just prior to or nearing the end of the degree program with a completion of 90 credit units requirement.

Results of Review of Current KSR Practicum Structure
As a result of an extensive review of the current KSR Practicum requirement structure, critical ethical, equity, accessibility, and inclusivity concerns and considerations for students with this current model of delivery have become clear. As well, a lack of culturally diverse and multi population based experiences offered and made available to each individual student through the current Practicum structure of delivery are problematic and also need to be addressed.

The review of the current KSR Practicum requirement structure has highlighted a need to move forward with a new, updated delivery structure that is solidly based upon the following seven principles:

- Emphasis and alignment given to a strong Indigenous Initiatives, Equity, Diversity, and Inclusion lens and focus, to address equity & accessibility barriers, in current KSR "practicum" structure
- High density, rich, deep, meaningful, learning outcomes based opportunities and alignment with the [Work Integrated Learning (WIL) principles](#) of Field Placements
- Increase variety and breadth of experiences for students in both contexts & populations that is inclusive of choices between both micro (part-time/short term) intensive hands-on experiences and continued macro (longer term) intensive practical, "In the Field Learning" (IFL) experiences, relevant to student subjects of study.
- Exposure to professional practice opportunities earlier in and across more of the degree program
- Professional practice experiences more deeply connected to theory, curriculum, degree core coursework, and credit completion through a laddered or scaffolded course based approach
- Greater choice, flexibility, and accessibility for the student in the completion of the degree requirement.
- Provision of a delivery structure, model, and/or foundation for future innovation and evolution for completion of this program requirement, that is more nimble and responsive to change.

New Proposed KSR In Field Learning Structure
The proposed new In the Field Learning experiences, will include both micro (variable; ~1-4 hrs/ week or ~15-60 hrs/term) and macro level (variable; ~8-12 hrs/week or ~120-180 hrs/term) experiences. These experiences will be developed with the objective of challenging students to respond to the needs they see and purposefully find solutions in application of their knowledge and training in meeting these challenges within placements. Providing applied, active learning experiences focused on cultural sensitivity in a breadth of diverse populations and lived experiences, will be a driving factor within the proposed changes. An increased number of richer, deeper learning experiences for KSR students will be developed across an increased number of populations eventually KSR students will be working with professionally.

The proposed new delivery structure incorporates, much earlier in the degree program (courses are restricted to students who have completed a minimum of 45 units), student engagement in career exploration, understanding of professional requirements and potential certifying bodies more consistently and fully, attainment of multiple and more diverse work-integrated learning experiences, and improvement of students' personal awareness as to what is required of them in their next steps after completion of their undergraduate program, what their professional identity is, and how that identity is present within one's career path.

The new In the Field Learning delivery model will also focus on the provision of high density, rich, and applied outcomes based learning and learning opportunities much more closely aligned with the Work Integrated Learning (WIL) principles of Field Placements, providing a mix and variety of short term micro, as well as macro, intensive hands-on practical experiences, in a multiple of settings with a variety of populations relevant to their subjects of study and career pathways. This proposed top-down WIL approach integrates a greater connection of WIL (Experiential Learning-EL/Community Service Learning-CSL) in academic focused courses, from the point of completion of 45 credits (1.5 yr of program) all the way through to degree completion. In this way, students will be better able to understand how each of the individual courses offered throughout their program and in connection to WIL/EL/CSL electives, develop skills that are transferable across their degree and beyond into their careers.

This proposed model of In the Field Learning attempts to provide greater width and number of in the field learning experiences while at the same time offer increased flexibility to students in support of program completion, accessibility and inclusivity, and applied, active engaged outcome based learning through much broader sampling of populations and culturally diverse In the Field Learning opportunities they will be exposed to and may choose to complete.

BARST
- In Field Learning Component: A group of courses totalling completion of a minimum of 9 units to a maximum of 12 units.
- The total course units taken in Open Options and In Field Learning courses in year 4 must equal 6 units.
- Students are encouraged to contact the KSR Student Services Office and consult with an Academic Advisor for assistance in program building and course selection of Faculty Options in the completion of program requirements as well in selecting appropriate Open Options to support, prepare for, and meet In Field Learning course prerequisites and placement requirements.
- Students approved to take the Advanced Project in lieu of In Field Learning would normally take the approved coursework and research-based Directed Study in Year 4.
- A maximum of 15 units in In Field Learning course offerings may be credited toward the BARST degree program.
- In Field Learning courses are restricted to students who have completed a minimum of 45 units toward the BARST degree program.

BKin
- In Field Learning Component: A group of courses totalling completion of a minimum of 9 units to a maximum of 12 units.
- Students who elect to complete the minimum 9 units of the In Field Learning Component will complete 21 units of major course options. Students who elect to complete the maximum 12 units of the In Field Learning Component will complete 18 units of a combination of major required and optional course options.
- A maximum of 15 units of In Field Learning course offerings may be credited toward the BKin degree program.

- In Field Learning courses are restricted to students who have completed a minimum of 45 units toward the BKin degree program.

BScKin
- In Field Learning Component: A group of courses totalling a minimum of 9 units to a maximum of 12 units.
- Students who elect to complete the minimum 9-units of the In Field Learning Component will complete 15 units/credits of Open Options. Students who elect to complete the maximum 12 units of the In Field Learning Component will complete 12 units of Open Options.
- The total course units taken in Open Options and In Field Learning courses in year 4 must equal 12 units.
- A maximum of 15 units in In Field Learning course offerings may be credited toward the BSc in Kinesiology degree program.
- In Field Learning courses are restricted to students who have completed a minimum of 45 units toward the BSc in Kinesiology degree program.

Implementation Plan

Faculty and administrative staff will continue to work together closely to implement the proposed changes, ensuring forms, policies, processes are correctly and appropriately updated, procedural changes are made, student service office staff continue to be kept informed and engaged in the process, students receive frequent communication and updates, and placement partners are given ample direction and information in collaborating with the Faculty to achieve the objectives of the new proposed In Field Learning program requirement structure.

Administration processes within the KSR Student Services Office will need to be established to ensure current students already enrolled in programming are provided the opportunity and option to transition to the new delivery model if appropriate. As well, a phased approach to course deletions (indicated in the proposal package), during the teach out phase, will be taken to ensure that students who either can not or do not want to transition to the new delivery model can continue and complete their current degree programs.

These proposed program, regulation, and course changes to the Practicum requirement structure will have impact upon administration resource needs that are in line with the challenges the Faculty of KSR is experiencing with the current Practicum delivery model. Academic Instructors, who currently are assigned to the Practicum Seminar, will need to be assigned to individual courses in the new In Field Learning delivery model and will need to be more fully engaged in the oversight and quality assurance of the In the Field Learning experiences unique to each course offering through teaching service directly related to the course they are assigned to. As well, relationship building with both current and new placement partners, to coordinate high quality micro and macro work integrated experiences for KSR students will be centrally positioned as a large focus and responsibility of a newly envisioned KSR Practicum Advisor position, along with realigned administrative support needs to be addressed there. The number of micro and macro placements developed for offering to KSR

students will also need to be closely managed and directly connected in this management to undergraduate enrollment demands across all three programs. As well, undergraduate enrollment management in the Faculty will need to be directly connected to available capacity in the number of micro and macro placements developed for offering in partnership with the Faculty of KSR and its students. With the proposed changes also comes the necessity to implement program-level controls on admission.

The new proposed practicum framework will require minor changes in the way KSR programs are presented in the Academic Calendar. However, these changes will require close collaboration with the Calendar Editor, Governance, and the Registrar as the proposed changes begin to move towards implementation.

The Faculty communication plan will include the use and enhancement of undergraduate pages on the Faculty of KSR webpage. Utilizing the KSR biweekly undergraduate newsletter, constant and inclusive engagement with the KSR Student Society group, and multiple In Field Learning and academic advisement information sessions, the Faculty will employ a multipronged approach in sharing important information regarding the proposed changes. Developing and maintaining strong recruitment and advisement strategies will be essential to this communication plan. Dissemination of information will also occur through various faculty governance and non governance committees and course instructors.

Teach Out Plan
The expected date of implementation of the new proposed In Field Learning Requirement is Fall 2024. Inclusion of this notation in the Academic Calendar in Fall 2023 will be of critical importance for recruitment purposes, in the Faculty communication efforts, and for increased readiness for implementation in Fall 2024.

There may need to be some calendar changes within this suite of proposals that can be implemented as soon as the changes are approved. However, others may need to be in the calendar a full year before they can be implemented. For example, students are eligible to follow the program requirements published in the calendar year they were admitted to the Faculty of KSR. To ensure both continuing and new students are accommodated in terms of the year of program they are eligible to follow, KSR will begin by submitting the new In Field Learning courses for implementation into the calendar immediately and begin use of the new course codes for those students eligible for completion once Fall 2024 begins. At the same time, the faculty will also delay submission of the deletion of the old Practicum courses and course codes as the teach out phase continues and as long as needed to assist students in completion of their programs if they remain on the old Practicum structure program. Although some students may find the new proposed In Field Learning structure appealing and transitioning to advantageous for them, many students will not and continue to choose to follow the old Practicum structure requirements. To accommodate both new and continuing students, the Faculty of KSR will ensure all necessary courses are offered for students in continuation and completion of their programs or acceptable accommodations will be made.

As is the case in all program changes made within the Faculty of KSR, Academic Advisors will also be continuously consulted and familiar with all calendar year versions of KSR Undergraduate programs and submission of program change submissions throughout the teach out phase.

Required Calendar Changes
The following table lists the associated proposed calendar changes in an attempt to provide an organized reference of the multiple resultant calendar program changes that will be required in order to implement the new In Field Learning delivery model and requirements within the three Faculty of KSR undergraduate programs.

Below you will find links to Google documents for the the six associated calendar changes required for implementation of the proposed new In Field Learning requirement structure:

[KSR.Calendar Change Request Form for Program Changes-Regulations.General Information Practicum.Fall 2024 Implementation](#)	Indicates the general statement in calendar of the change in wordage from "Practicum" to use of "In Field Learning" and proposed objectives for KSR students.
[KSR.Calendar Change Request Form for Program Changes.BARST.Practicum Changes.Fall 2024 Implementation](#)	Indicates proposed changes to the BARST undergraduate degree program to reflect implementation of new In Field Learning delivery model and objectives.
[KSR.Calendar Change Request Form for Program Changes.BKin.Practicum Changes.Fall 2024 Implementation](#)	Indicates proposed changes to the BKin undergraduate degree program to reflect implementation of new In Field Learning delivery model and objectives.
[KSR.Calendar Change Request Form for Program Changes.BScKin.Practicum Changes.Fall 2024 Implementation](#)	Indicates proposed changes to the BScKin undergraduate degree program to reflect implementation of new In Field Learning delivery model and objectives.
[KSR.Calendar Change Request Form for Course Changes.IFL (new courses) and Practicum (course deletions).Fall 2024 Implementation](#)	Indicates the associated courses deletions from old "Practicum" structure and the course additions for new proposed "In Field Learning" structure.
[KSR.Calendar Change Request Form for Program Changes.UG Research Certificate Changes.Fall 2024 Implementation](#)	Indicates associated changes to the UG Research Certificate to align with the new proposed "In Field Learning" structure.

Calendar Change Request Form for Program and Regulation Changes

See the Calendar Guide for tips on how to complete this form.

Faculty (& Department or Academic Unit):	FoKSR
Contact Person:	Angela L. Bayduza, KSR Associate Dean, Undergraduate Programs ksradu@ualberta.ca
Level of change (choose one only) [?]	● Undergraduate ● Graduate
Type of change request (check all that apply) [?]	● Program ● Regulation
For which term is this intended to take effect?	Fall 2024
Does this proposal have corresponding course changes? (Should be submitted at the same time)	Yes

Rationale

The following proposed changes to the KSR Practicum are in response to the needs of current and future students in implementing solutions to prioritize diversity and provide more flexible pathways to students within more meaningful, rich, rigorous, purposeful, career focused, and culturally sensitive work integrated learning experiences. Currently, there are critical ethical, equity, accessibility, and inclusivity considerations for students with the current KSR "Practicum" model of delivery as well as a lack of culturally diverse and multi population based experiences offered and available to each individual student.

As the Faculty of KSR continues its strong response to the TRC calls to action in decolonizing and Indigenizing programming, the proposed changes to Practicum will have a dedicated focus on Indigenous Knowledges, ethical engagement and collaboration with Indigenous communities, and strong grounding in kinesiology related issues (sport, exercise, recreation, physical activity, health and wellness, etc.) experienced by Indigenous Peoples of Canada. The proposed new In the Field Learning experiences, at both a micro and macro level, will challenge students to respond to the needs they see and purposefully find solutions in application of their knowledge and training in meeting these challenges. Providing applied, active learning experiences focused on cultural sensitivity in a breadth of diverse populations and lived experiences, will be a driving factor within the proposed changes.

In addressing the lack of culturally diverse and multi population based experiences offered to each individual student within their current work integrated opportunities, the proposed changes provide an enhanced opportunity to continue to build already existing partnerships with community associations and organizations as well as build others. Through KSRs ongoing partnerships with such community organizations and professional certifying/registration bodies (i.e., Indigenous Sport Council of Alberta-ISCA; Alberta Kinesiology Association-AKA; Alberta Recreation and Parks-ARPA, to name just a few), at the level of each proposed IFL course, richer, deeper learning experiences for KSR students can be developed with not only these associations but also the populations they serve and eventually KSR students will be working with professionally.

Key equity, accessibility, and inclusivity considerations within the proposed changes to "practicum" in the Faculty of KSR are the completion requirements of the current delivery models. The current student completing the Faculty of KSR practicum program structure comes from a privileged background, likely still living at home, or has other significant support such as family to pay for their accommodations and costs of daily living during the practicum semester. In the current practicum structure, where students who are matched with practicum placement partners, students are tasked with completing 30-35 hours per week of unpaid work across the practicum semester, for completion of up to 15 credit units. Students, as a result of this degree program requirement, have little time or flexibility to attend to other financial responsibilities by working in a paid position outside of their practicum commitment. In addition to this, the nature of work in some placements requires students to be available to be scheduled days, evenings, and weekends to meet the required hours of their placement while receiving meaningful mentorship. This further reduces the student's ability to work in a paid role as it makes scheduling paid shifts difficult.

Another driver of the update to the KSR practicum structure is that the career paths available to graduates of the Faculty's degree programs, where the practicum is required, are very diverse. The current delivery structure places completion of the practicum at the end of the degree program (90 credit units completed) when students have not yet had an opportunity to complete a thorough exploration of the different career paths available to them. This places a lot of pressure on the student to choose the "right" or most "advantageous" practicum at the very end of their program, instead of emphasizing the connection of theory into practice, very early in and across the degree program.

The proposed new delivery structure incorporates, much earlier in the degree program, student engagement in career exploration, understanding of professional requirements and potential certifying bodies more consistently and fully, attainment of multiple and more diverse work-integrated learning experiences, and improvement of students' personal awareness as to what is required of them in their next steps after completion of their undergraduate program, what their professional identity is, and how that identity is present within one's career path.

Finally, within the significant ask of students completing practicum in the current practicum structure where placements are unpaid with an average work week of 30-35 hours, it has become apparent that this time completion expectation of students is often not being filled with meaningful skills, professional development, and/or intensive applied learning for the student. Often within these large, macro experiences, significant amounts of this time is being filled with entry-level labour that should otherwise be completed by a paid employee of the placement organization. In other words, practicum organizations are asking skilled student labour to fill their placement hours and practicum requirements with tasks not connected strongly to learning outcomes or experiential, applied program learning. As a result, these students are left without a rigorous, purposeful, career focused work integrated learning experience.

The proposed new structure will respond to the needs of current and future students, implement solutions to prioritize diversity, and provide more flexible pathways for students to receive meaningful, rich, rigorous, purposeful, career focused, work integrated, and culturally responsive learning experiences. The new In the Field Learning delivery model will focus on the provision of high density, rich, and applied outcomes based learning and learning opportunities much more closely aligned with the Work Integrated Learning (WIL) principles of Field Placements. In this new delivery model, students will be provided a mix and variety of short term, micro, as well as macro intensive hands-on practical experiences, in a multiple of settings with a variety

of populations relevant to their subjects of study and career pathways (reference: [CEWIL Canada - What is Work Integrated Learning (WIL)](#)).

This proposed top-down WIL approach integrates a greater connection of WIL (Experiential Learning-EL/Community Service Learning-CSL) in academic focused courses, from the point of completion of 45 credits (1.5 yr of program) all the way through to degree completion. In this way, students will be better able to understand how each of the individual courses offered throughout their program and in connection to WIL/EL/CSL electives, develop skills that are transferable across their degree and beyond into their careers. This proposed model of In the Field Learning provides greater flexibility to students in support of program completion, accessibility and inclusivity, and applied, active engaged outcome based learning through much broader sampling of populations and culturally diverse In the Field Learning opportunities they will be exposed to and choose to complete.

These proposed program, regulation, and course changes will have impacts to administration that are in line with the challenges the Faculty of KSR is experiencing in the current Practicum delivery model. Academic Instructors, who currently are assigned to the Practicum Seminar, will be assigned to individual courses in the new model and will need to be more fully engaged in the oversight and quality assurance of the In the Field Learning experiences unique to each course offering. As well, relationship building with both current and new placement partners, to coordinate high quality micro and macro work integrated experiences for KSR students will continue to be a large focus of the KSR Practicum Advisor position and administrative support will need to be added there. Administration process will also need to be established to ensure current students already enrolled in programming are provided the opportunity and option to transition to the new delivery model if appropriate. As well, a phased approach to course deletions (indicated in the proposal package), during the teach out phase, will be taken to ensure that students who either can not or do not want to transition to the new delivery model can continue and complete their current degree programs. KSR Academic Advisors and Student Services Office staff, as well key Leadership positions in the Faculty, have been consulted and included in the development of these proposed changes and will continue to be included in addressing these proposed changes and administrative, transactional impacts associated with the proposed changes, for implementation of the new structure in Fall 2024.

Calendar Copy

URL in current Calendar (or leave blank if it is a new page):
https://calendar.ualberta.ca/content.php?catoid=36&navoid=11268

Current	Proposed
Faculty of Kinesiology, Sport, and Recreation General Information Return to: Faculty of Kinesiology, Sport, and Recreation The Faculty of Kinesiology, Sport, and Recreation Members of the Faculty Undergraduate Programs Graduate Programs Facilities	**Faculty of Kinesiology, Sport, and Recreation General Information** Return to: Faculty of Kinesiology, Sport, and Recreation The Faculty of Kinesiology, Sport, and Recreation Members of the Faculty Undergraduate Programs Graduate Programs Facilities

The Faculty of Kinesiology, Sport, and Recreation
The Faculty of Kinesiology, Sport, and Recreation (KSR) at the University of Alberta has been dedicated to improving the quality of life and the health of our communities through physical activity, sport and recreation for more than 55 years. Ranked top 10 in the world in sports related studies, the Faculty offers high-caliber undergraduate and graduate academic programs that inspire, challenge, push the boundaries and help students find out what they are capable of.

Faculty of Kinesiology, Sport, and Recreation Vision: Outstanding achievements in learning, discovery and citizenship that contribute to the quality of life and health of our communities through physical activity, sport and recreation.

To support this vision, we work with our students and staff to put our mission of creating and sharing the best understandings and applications of physical activity, sport, and recreation for the public good to work throughout our entire academic and service endeavors. As the Faculty commits its resources to this mission, we affirm the following values:

Excellence – in teaching, research, and creative activity that enriches learning experiences and advances knowledge

Discovery and Innovation – creativity and innovation from the genesis of ideas to the dissemination of knowledge

Citizenship – empower and enable each member to positively contribute to the greater good

Diversity and Inclusion – across and among staff, students, campuses and disciplines

Life-long Learning – valuing learners at all stages of life and striving to provide an intellectually rewarding educational truth

Collaboration and Collegiality – united in a common purpose and respecting each other's abilities

History and Tradition – celebrating the Faculty and University's history with pride—our people, achievements and contributions to society

Graduates of the Faculty gain the requisite preparation to

be:
● Professionals in fields related to physical education, kinesiology, recreation, tourism, sport management and sport science.
● Scholars can advance the frontiers of knowledge pertaining to physical activity, leisure, active living, and their relationships to personal and societal health and well-being, and to environmental conservation and preservation.

Undergraduate degree programs include:
● Bachelor of Arts in Recreation, Sport and Tourism (BARST)
● Bachelor of Kinesiology (BKin)
● Bachelor of Kinesiology/Bachelor of Education combined degrees (BKin/BEd) in both Elementary and Secondary Education (five-year program)
● Bachelor of Science in Kinesiology(BScKin)

Our degree programs attract students from across Alberta, throughout Canada and all over the world. We offer opportunities for international study and continue to develop a wide range of exchange programs across Canada and internationally through our study abroad partnerships. Whether it's in the classroom, in the lab or in the field we offer an extraordinary learning environment, producing some of the most employable graduates in the world.

An important element of KSR undergraduate programs is the required ~~practicum experience~~ (with the exception of the BKin/BEd combined degree program) ~~in the final year of a student's program. This is a non-paid practicum work experience in which students are placed with an approved agency. The practicum placement provides students with a work experience~~ that complements program knowledge, previous work and volunteer history, as well as learning objectives.

[…]

~~Removed language~~

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be:
● Professionals in fields related to physical education, kinesiology, recreation, tourism, sport management and sport science.
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Practicum Requirements - Effective September 2024

An important element of KSR undergraduate programs is the required completion of In Field Learning. This element of KSR undergraduate programming provides students with real world connection of theory into practice, career exploration, understanding of professional certifying standards, and access to a multitude of diverse work-integrated learning experiences with a large sampling of populations and cultures. The In Field Learning component presents experiences that complement program knowledge, previous work and volunteer history, as well as learning objectives.

[…]

New language

Reviewed/Approved by:

KSR Undergraduate Programs Committee: April 6th, 2022 consultation; June 1st, 2022 consultation; September 7, 2022 consultation; November 16th, 2022 approval
KSR Faculty Executive: Sept 21st 2022 consultation; November 22nd, 2022 approval
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Dr. Karsten Mundel, Provost Fellow, Experiential and Work-Integrated Learning & Associate Professor: June 13, 2022
Norma Rodenburg, Deputy Registrar, Office of the Registrar: June 13, 2022
Dr. Beverley Temple, Professor, Associate Dean, Undergrad Studies, Faculty of Nursing: June 20, 2022
Dr. Florence Glanfield, Vice-Provost Indigenous Programming & Research: July 14, 2022
Rebecca Liaw, University Calendar Editor: October 25, 2022

UNIVERSITY OF ALBERTA

Calendar Change Request Form for Program and Regulation Changes

See the Calendar Guide for tips on how to complete this form.

Faculty (& Department or Academic Unit):	Kinesiology, Sport, & Recreation (KSR)
Contact Person:	Angela Bayduza, PhD - Associate Dean, Undergraduate Programs
Level of change (choose one only) [?]	● Undergraduate
Type of change request (check all that apply) [?]	● Program ● Practicum Requirements
For which term is this intended to take effect?	Fall 2024
Does this proposal have corresponding course changes? (Should be submitted at the same time)	Yes

Rationale

The following proposed changes to the KSR Practicum are in response to the needs of current and future students in implementing solutions to prioritize diversity and provide more flexible pathways to students within more meaningful, rich, rigorous, purposeful, career focused, and culturally sensitive work integrated learning experiences. Currently, there are critical ethical, equity, accessibility, and inclusivity considerations for students with the current KSR "Practicum" model of delivery as well as a lack of culturally diverse and multi population based experiences offered and available to each individual student.

As the Faculty of KSR continues its strong response to the TRC calls to action in decolonizing and Indigenizing programming, the proposed changes to Practicum will have a dedicated focus on Indigenous Knowledges, ethical engagement and collaboration with Indigenous communities, and strong grounding in kinesiology related issues (sport, exercise, recreation, physical activity, health and wellness, etc.) experienced by Indigenous Peoples of Canada. The proposed new In the Field Learning experiences, at both a micro and macro level, will challenge students to respond to the needs they see and purposefully find solutions in application of their knowledge and training in meeting these challenges. Providing applied, active learning experiences focused on cultural sensitivity in a breadth of diverse populations and lived experiences, will be a driving factor within the proposed changes.

In addressing the lack of culturally diverse and multi population based experiences offered to each individual student within their current work integrated opportunities, the proposed changes provide an enhanced opportunity to continue to build already existing partnerships with community associations and organizations as well as build others. Through KSRs ongoing partnerships with such community organizations and professional certifying/registration bodies (i.e., Indigenous Sport Council of Alberta-ISCA; Alberta Kinesiology Association-AKA; Alberta Recreation and Parks-ARPA, to name just a few), at the level of each proposed IFL course, richer, deeper learning experiences for KSR students can be developed with not only these associations but also the populations they serve and eventually KSR students will be working with professionally.

Key equity, accessibility, and inclusivity considerations within the proposed changes to "practicum" in the Faculty of KSR are the completion requirements of the current delivery models. The current student

completing the Faculty of KSR practicum program structure comes from a privileged background, likely still living at home, or has other significant support such as family to pay for their accommodations and costs of daily living during the practicum semester. In the current practicum structure, where students who are matched with practicum placement partners, students are tasked with completing 30-35 hours per week of unpaid work across the practicum semester, for completion of up to 15 credit units. Students, as a result of this degree program requirement, have little time or flexibility to attend to other financial responsibilities by working in a paid position outside of their practicum commitment. In addition to this, the nature of work in some placements requires students to be available to be scheduled days, evenings, and weekends to meet the required hours of their placement while receiving meaningful mentorship. This further reduces the student's ability to work in a paid role as it makes scheduling paid shifts difficult.

Another driver of the update to the KSR practicum structure is that the career paths available to graduates of the Faculty's degree programs, where the practicum is required, are very diverse. The current delivery structure places completion of the practicum at the end of the degree program (90 credit units completed) when students have not yet had an opportunity to complete a thorough exploration of the different career paths available to them. This places a lot of pressure on the student to choose the "right" or most "advantageous" practicum at the very end of their program, instead of emphasizing the connection of theory into practice, very early in and across the degree program.

The proposed new delivery structure incorporates, much earlier in the degree program, student engagement in career exploration, understanding of professional requirements and potential certifying bodies more consistently and fully, attainment of multiple and more diverse work-integrated learning experiences, and improvement of students' personal awareness as to what is required of them in their next steps after completion of their undergraduate program, what their professional identity is, and how that identity is present within one's career path.

Finally, within the significant ask of students completing practicum in the current practicum structure where placements are unpaid with an average work week of 30-35 hours, it has become apparent that this time completion expectation of students is often not being filled with meaningful skills, professional development, and/or intensive applied learning for the student. Often within these large, macro experiences, significant amounts of this time is being filled with entry-level labour that should otherwise be completed by a paid employee of the placement organization. In other words, practicum organizations are asking skilled student labour to fill their placement hours and practicum requirements with tasks not connected strongly to learning outcomes or experiential, applied program learning. As a result, these students are left without a rigorous, purposeful, career focused work integrated learning experience.

The proposed new structure will respond to the needs of current and future students, implement solutions to prioritize diversity, and provide more flexible pathways for students to receive meaningful, rich, rigorous, purposeful, career focused, work integrated, and culturally responsive learning experiences. The new In the Field Learning delivery model will focus on the provision of high density, rich, and applied outcomes based learning and learning opportunities much more closely aligned with the Work Integrated Learning (WIL) principles of Field Placements. In this new delivery model, students will be provided a mix and variety of short term, micro, as well as macro intensive hands-on practical experiences, in a multiple of settings with a variety of populations relevant to their subjects of study and career pathways (reference: CEWIL Canada - What is Work Integrated Learning (WIL)).

This proposed top-down WIL approach integrates a greater connection of WIL (Experiential Learning-EL/Community Service Learning-CSL) in academic focused courses, from the point of completion of 45 credits (1.5 yr of program) all the way through to degree completion. In this way, students will be better able to understand how each of the individual courses offered throughout their program and in connection to WIL/EL/CSL electives, develop skills that are transferable across their degree and beyond into their careers. This proposed model of In the Field Learning provides greater flexibility to students in support of program completion, accessibility and inclusivity, and applied, active engaged outcome based learning through much broader sampling of populations and culturally diverse In the Field Learning opportunities they will be exposed to and choose to complete.

These proposed program, regulation, and course changes will have impacts to administration that are in line with the challenges the Faculty of KSR is experiencing in the current Practicum delivery model. Academic Instructors, who currently are assigned to the Practicum Seminar, will be assigned to individual courses in the new model and will need to be more fully engaged in the oversight and quality assurance of the In the Field Learning experiences unique to each course offering. As well, relationship building with both current and new placement partners, to coordinate high quality micro and macro work integrated experiences for KSR students will continue to be a large focus of the KSR Practicum Advisor position and administrative support will need to be added there. Administration process will also need to be established to ensure current students already enrolled in programming are provided the opportunity and option to transition to the new delivery model if appropriate. As well, a phased approach to course deletions (indicated in the proposal package), during the teach out phase, will be taken to ensure that students who either can not or do not want to transition to the new delivery model can continue and complete their current degree programs. KSR Academic Advisors and Student Services Office staff, as well key Leadership positions in the Faculty, have been consulted and included in the development of these proposed changes and will continue to be included in addressing these proposed changes and administrative, transactional impacts associated with the proposed changes, for implementation of the new structure in Fall 2024.

Calendar Copy

URL in current Calendar (or leave blank if it is a new page):
https://calendar.ualberta.ca/preview_program.php?catoid=36&poid=43025&returnto=11341

~~Current~~	Proposed
BA in Recreation, Sport and Tourism Degree Program Return to: Faculty of Kinesiology, Sport, and Recreation - Programs The Bachelor of Arts (Recreation, Sport and Tourism) (BARST) degree prepares graduates with a solid foundation of knowledge and skills underlying the delivery of recreation, sport and tourism. Students can create a diversified degree program that aligns with their individual interests through selection of one	**BA in Recreation, Sport and Tourism Degree Program** Return to: Faculty of Kinesiology, Sport, and Recreation - Programs The Bachelor of Arts (Recreation, Sport and Tourism) (BARST) degree prepares graduates with a solid foundation of knowledge and skills underlying the delivery of recreation, sport and tourism. Students can create a diversified degree program that aligns with their individual interests through selection of one

Left Column

of four options: completion of the general BARST program or completion of the BARST program with a Minor.

General BARST Program Structure

1. ~~Faculty~~ Core: ~~★69~~
Required courses offered by the Faculty of Kinesiology, Sport, and Recreation~~, inclusive of a full term practicum or an Advanced Project option.~~

2. Liberal Arts Foundation: ~~★18~~
★6 of 100-level ENGL or ★3 ENGL and ★3 WRS
★12 with a minimum of ★3 in each of: ~~Humanities, Social Sciences, or Fine Arts/Languages (see below)~~
Humanities
Any course chosen from the following areas: CATS, CHRTC, CLASS, C LIT, EASIA, ENGL, HIST, LA ST, MLCS, MST, PHIL, RELIG, SPRIT, WRITE.
Fine Arts or Language Other than English
Any course chosen from the following areas: ART, DANCE, DES, DRAMA, FS, HADVC, Language(s) other than English, MUSIC.
Social Sciences
Any course chosen from the following areas: ANTHR, EAS, ECON, LING, NS, POL S, ~~PSYCO~~, SOC, SUST, WGS.
Note: Some courses [e.g., courses in Interdisciplinary (INT D) or Science, Technology, and Society (STS)] may satisfy one or more of the above subject areas. In this instance, students should consult a Program Advisor.

3. Senior Faculty Options: ~~★12~~

Right Column

of four options: completion of the general BARST program or completion of the BARST program with a Minor (Minor in Community Development, Minor in Sport and Recreation Management, or Minor in Tourism and Natural Environments).

General BARST Program Structure
Effective September 2024

Students in the BARST Degree take a program of 120 units over a four-year period, consisting of:

1. Degree Core:
A group of required courses in Kinesiology, Sport, and/or Recreation totalling 54 units.

2. Liberal Arts Foundation:
A group of required out of Faculty courses totalling 18 units that consist of:
6 units of 100-level ENGL or 3 units ENGL and 3 units WRS
12 units with a minimum of 3 units in each of:
Humanities
Any course chosen from the following areas: CATS, CHRTC, CLASS, C LIT, EASIA, ENGL, HIST, LA ST, MLCS, MST, PHIL, RELIG, SPRIT, WRITE.
Fine Arts or Language Other than English
Any course chosen from the following areas: ART, DANCE, DES, DRAMA, FS, HADVC, Language(s) other than English, MUSIC.
Social Sciences
Any course chosen from the following areas: ANTHR, EAS, ECON, LING, NS, POL S, PSYCH, SOC, SUST, WGS.
Note: Some courses [e.g., courses in Interdisciplinary (INT D) or Science, Technology, and Society (STS)] may satisfy one or more of the above subject areas. In this instance, students should consult a Program Advisor.

3. In Field Learning Component:
A group of courses totalling completion of a minimum of 9 units to a maximum of 12 units.

4. Senior Faculty Options:

Left column:

Senior courses offered by the Faculty of Kinesiology, Sport, and Recreation, chosen from a list of available options (students should consult the Student Services Office or the Faculty website).

4. Senior Out-of-Faculty Options: ★12
Senior courses offered outside of the Faculty of Kinesiology, Sport, and Recreation.
Note: Senior Courses are those courses numbered 200-499.

5. Open Options: ★9
Chosen from any credit course offered by the University of Alberta.

6. Advanced Project Option: This option is designed to provide the opportunity for advanced scholarly development by substituting an additional ★9 of course work in or out of the Faculty and ★6 of research based directed study in place of the ★15 normally dedicated to the practicum. Admission into the advanced project option is based on a demonstrated high standard of academic performance (minimum GPA of 3.0 on most recent minimum ★30), the preparation and acceptance of a program proposal detailing objectives, course work and research based directed studies, the availability of an academic supervisor and the approval of the Associate Dean (Undergraduate).
Students interested in doing the Advanced Project Option should contact the Student Services Office for more information.

Course Sequence for General BARST program

Right column:

Senior Faculty Options must be 200-level or higher and chosen from the following subjects: HE ED, DANCE, KIN, KRLS, RLS, or INT D 280/403 and 408/439, totalling 15 units.

5. Senior Out-of-Faculty Options:
A group of senior courses offered outside of the Faculty of Kinesiology, Sport, and Recreation, totalling 12 units.
Note:
Senior Courses are those courses numbered 200-499.

6. Open Options:
A group of courses totalling a minimum of 9 to a maximum of 12 units which may be taken from within or outside of the Faculty of Kinesiology, Sport, and Recreation (see Note).
Note:
Students who elect to complete the minimum 9 units of the In Field Learning Component will complete 12 units of Open Options. Students who elect to complete the maximum 12 units of the In Field Learning Component will complete 9 units of Open Options.

7. Advanced Project Option:
This option is designed to provide the opportunity for advanced scholarly development by substituting an additional 3/6 units of course work in or out of the Faculty and 6/6 units of research based directed study in place of the 9/12 units normally dedicated to the In Field Learning Component. Admission into the advanced project option is based on a demonstrated high standard of academic performance (minimum GPA of 3.0 on most recent minimum 30 units), the preparation and acceptance of a program proposal detailing objectives, course work and research based directed studies, the availability of an academic supervisor, and the approval of the Associate Dean (Undergraduate).
Students interested in completing the Advanced Project Option should contact the Student Services Office for more information.

Course Sequence for General BARST program

Students are advised to follow the prescribed order as closely as possible.

Year 1 (30 units)
HE ED 110 - Introduction to Personal Health and Well-Being
KRLS 104 - Introduction to Sociology of Sport and Leisure in Canadian Society
KRLS 105 - Introduction to the Management of Sport, Physical Activity and Recreation Programs
RLS 100 - Life, Leisure, and the Pursuit of Happiness
RLS 122 - Leadership in Recreation and Leisure Organizations
RLS 130 - Collaborative Skills and Processes for Community Recreation and Leisure
6 units in 100-level ENGL OR 3 units in ENGL and 3 units in WRS
6 units in Humanities, Social Sciences, or Fine Arts/Languages [see Liberal Arts Foundation]

Year 2 (30 units)
KRLS 204 - Canadian History of Leisure, Sport, and Health
KRLS 207 - Adapted Physical Activity and Leisure for Diverse Populations
RLS 210 - Recreation and Leisure Scholarship
RLS 225 - Program Planning for Leisure
RLS 223 - Leisure and Human Behavior
RLS 232 - Marketing for Recreation, Sport and Tourism
RLS 263 - Principles of Tourism
6 units in Humanities, Social Sciences, or Fine Arts/Languages (see below)
3 units in Open Options.
Note:
Select courses based on balance of requirements relative to Year 1 selections.

Year 3 (30 units)
KRLS 305 - Financial Management in Recreation, Sport and Tourism
KRLS 304 - Advanced Sociology of Sport and Leisure
RLS 325 - Public Policy in Recreation, Sport and Tourism

Left Column

RLS 335 - Human Resources Management in Recreation, Sport and Tourism
18 units selected from Senior Faculty Options, Senior Out-of-Faculty Options, or Open Options

Year 4 (30 units)
RLS 400 - Philosophies of Leisure
RLS 447 Professional Practicum
12 units chosen from Senior Faculty Options, Senior Out-of-Faculty Options, or Open Options

Notes
1. No more than 6 units of Options are to be completed through PAC/DAC courses.
2. Students approved to take the Advanced Project in lieu of the Professional Practicum would normally take the approved course work and research-based Directed Study in Year 4.
3. A maximum of 18 units in Practicum course offerings may be credited toward the BARST degree program.
4. RLS 447 is restricted to students who have completed a minimum of 90 units toward the BARST degree program.

Minors
A minor consists of at least 27 units with at least 21 units at the 300-level or higher (see Note 4). Students may choose to complete one of the following minors:

Minor in Community Development

The minor must include the following:

Right Column

RLS 335 - Human Resources Management in Recreation, Sport and Tourism
6 units In Field Learning
6 units Senior Faculty Options
3 units Senior Out-of-Faculty Option
3 units Open Option

Year 4 (30 units)
RLS 400 - Philosophies of Leisure
3/6 units In Field Learning (see Note 1)
9 units Senior Faculty Options
9 units Senior Out-of-Faculty Options
6/3 units in Open Option (see Note 1)

Notes
1. The total course units taken in Open Options and In Field Learning courses in year 4 must equal 6 units.
2. Students are encouraged to contact the KSR Student Services Office and consult with an Academic Advisor for assistance in program building and course selection of Faculty Options in the completion of program requirements as well in selecting appropriate Open Options to support, prepare for, and meet In Field Learning course prerequisites and placement requirements.
3. Students approved to take the Advanced Project in lieu of In Field Learning would normally take the approved coursework and research-based Directed Study in Year 4.
4. A maximum of 15 units in In Field Learning course offerings may be credited toward the BARST degree program.
5. In Field Learning courses are restricted to students who have completed a minimum of 45 units toward the BARST degree program.

Minors
A minor consists of at least 21 units with at least 15 units at the 300-level or higher (see Notes). Students may choose to complete one of the following minors:

Minor in Community Development

The minor must include the following:

KRLS 352 - Leisure Facilities: Planning and Management
RLS 331 - Leisure Education
RLS 447 in the community recreation sector.
At least 6 units from an approved list of options for the minor, available from the Student Services Office.

Minor in Sport and Recreation Management
The minor must include the following:

KRLS 350 - Advanced Analysis of Sport and Leisure Organizations
KRLS 352 - Leisure Facilities: Planning and Management
At least 6 units from an approved list of options for the minor, available from the Student Services Office.

Minor in Tourism and Natural Environments

The minor must include the following:

RLS 463 - Issues in Tourism Development
RLS 465 - Natural Area Tourism
RLS 447 in the tourism and natural areas sector
At least 6 units from an approved list of options for the minor, available from the Student Services Office.

Notes
Students who complete a minor will complete 21 units open options with at least 12 units at the 200-level or higher. A maximum of 6 units are to be completed through PAC/DAC courses.

[…]

Removed language

KRLS 352 - Leisure Facilities: Planning and Management
RLS 331 - Leisure Education
In Field Learning course work focused on experiential learning in the community recreation sector.
At least 6 units from an approved list of options for the minor, available from the Student Services Office.

Minor in Sport and Recreation Management
The minor must include the following:

KRLS 350 - Advanced Analysis of Sport and Leisure Organizations
KRLS 352 - Leisure Facilities: Planning and Management
In Field Learning course work focused on experiential learning in the sport and recreation management sector.
At least 6 units from an approved list of options for the minor, available from the Student Services Office.

Minor in Tourism and Natural Environments

The minor must include the following:

RLS 463 - Issues in Tourism Development
RLS 465 - Natural Area Tourism
In Field Learning course work focused on experiential learning in the tourism and natural environments sector.
At least 6 units from an approved list of options for the minor, available from the Student Services Office.

Notes:
1. Students who complete a minor will complete 21 units open options with at least 12 units at the 200-level or higher.
2. Students who complete a minor will complete 4 senior open options and 4 minor courses, instead of the regular program requirement of 4 senior faculty options and 4 senior out-of-faculty options for those students who do not choose to declare a minor.

[…]

New language

Reviewed/Approved by:

KSR Undergraduate Programs Committee: April 6th, 2022 consultation; June 1st, 2022 consultation; September 7, 2022 consultation; November 16th, 2022 approval
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Contact Person:	Angela Bayduza, PhD - Associate Dean, Undergraduate Programs
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Type of change request (check all that apply) [?]	● Program ● Practicum Requirements
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Rationale

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The proposed new structure will respond to the needs of current and future students, implement solutions to prioritize diversity, and provide more flexible pathways for students to receive meaningful, rich, rigorous, purposeful, career focused, work integrated, and culturally responsive learning experiences. The new In the Field Learning delivery model will focus on the provision of high density, rich, and applied outcomes based learning and learning opportunities much more closely aligned with the Work Integrated Learning (WIL) principles of Field Placements. In this new delivery model, students will be provided a mix and variety of short term, micro, as well as macro intensive hands-on practical experiences, in a multiple of settings with a variety of populations relevant to their subjects of study and career pathways (reference: CEWIL Canada - What is Work Integrated Learning (WIL)).

This proposed top-down WIL approach integrates a greater connection of WIL (Experiential Learning-EL/Community Service Learning-CSL) in academic focused courses, from the point of completion of 45 credits (1.5 yr of program) all the way through to degree completion. In this way, students will be better able to understand how each of the individual courses offered throughout their program and in connection to WIL/EL/CSL electives, develop skills that are transferable across their degree and beyond into their careers. This proposed model of In the Field Learning provides greater flexibility to students in support of program completion, accessibility and inclusivity, and applied, active engaged outcome based learning through much broader sampling of populations and culturally diverse In the Field Learning opportunities they will be exposed to and choose to complete.

These proposed program, regulation, and course changes will have impacts to administration that are in line with the challenges the Faculty of KSR is experiencing in the current Practicum delivery model. Academic Instructors, who currently are assigned to the Practicum Seminar, will be assigned to individual courses in the new model and will need to be more fully engaged in the oversight and quality assurance of the In the Field Learning experiences unique to each course offering. As well, relationship building with both current and new placement partners, to coordinate high quality micro and macro work integrated experiences for KSR students will continue to be a large focus of the KSR Practicum Advisor position and administrative support will need to be added there. Administration process will also need to be established to ensure current students already enrolled in programming are provided the opportunity and option to transition to the new delivery model if appropriate. As well, a phased approach to course deletions (indicated in the proposal package), during the teach out phase, will be taken to ensure that students who either can not or do not want to transition to the new delivery model can continue and complete their current degree programs. KSR Academic Advisors and Student Services Office staff, as well key Leadership positions in the Faculty, have been consulted and included in the development of these proposed changes and will continue to be included in addressing these proposed changes and administrative, transactional impacts associated with the proposed changes, for implementation of the new structure in Fall 2024.

Calendar Copy

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https://calendar.ualberta.ca/preview_program.php?catoid=36&poid=42200&returnto=11341

~~Current~~	Proposed
	Effective September 2024
The Bachelor of Kinesiology (BKin) degree program consists of 120 units and has both a professional and discipline focus. The program consists of the following components: **Degree Core:** 66 units. These courses provide the foundation of knowledge in professional and discipline areas of the field. **Activity Core:** 12 units. These courses provide foundational knowledge and theory	The Bachelor of Kinesiology (BKin) degree program consists of 120 units and has both a professional and discipline focus. The program consists of the following components: **Degree Core:** 66 units. These courses provide the foundation of knowledge in professional and discipline areas of the field. **Activity Core:** 12 units. These courses provide foundational knowledge and theory specific to

specific to movement education. See [Activity Core Electives](#) for a list of faculty approved activity core courses.

Notes
1. Any units of course weight completed above the required 12 units are included in the Open Option Component of the degree.
2. A single course cannot be used to satisfy more than one degree program requirement

3. **Major:** ~~30 units.~~ Four majors provide specializations in professional areas of kinesiology, sport, health, and well-being. ~~Each major must include a practicum of at least 9 units.~~ Students normally select their major during the second year of their program.
   Note: Effective July 1, 2021, there will be no further admissions into the Sport Coaching major. Students who entered the Bachelor of Kinesiology program Sport Coaching major, prior to July 1 2021, will have until June 30, 2026 to complete all program requirements. Refer to the Calendar in effect at the time you were admitted or readmitted for the regulations governing the degree program requirements. The last degree with the Sport Coaching specific major will be granted at Convocation 2026.

4. **Option Component:** A group of courses totaling 12 units of which at least 3 units must be an open option taken from outside the Faculty.

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movement education.
See [Activity Core Electives](#) for a list of faculty approved activity core courses.

Notes
1. Any units of course weight completed above the required 12 units are included in the Open Option Component of the degree.
2. A single course cannot be used to satisfy more than one degree program requirement

3. **In Field Learning Component:** A [group of courses](#) totalling completion of a minimum of 9 units to a maximum of 12 units.

4. **Major:** A group of courses totalling completion of a minimum of 18 units to a maximum of 21 units (see Note i). Four majors provide specializations in professional areas of kinesiology, sport, health, and well-being. Students normally select their major during the second year of their program.

Notes:
i. Students who elect to complete the minimum 9 units of the In Field Learning Component will complete 21 units of major course options. Students who elect to complete the maximum 12 units of the In Field Learning Component will complete 18 units of a combination of major required and optional course options.
ii. Effective July 1, 2021, there will be no further admissions into the Sport Coaching major. Students who entered the Bachelor of Kinesiology program Sport Coaching major, prior to July 1 2021, will have until June 30, 2026 to complete all program requirements. Refer to the Calendar in effect at the time you were admitted or readmitted for the regulations governing the degree program requirements. The last degree with the Sport Coaching specific major will be granted at Convocation 2026.

5. **Option Component:** A group of courses totaling 12 units of which at least 3 units must be an open option taken from outside the

Course Sequence

Students are advised to follow the prescribed order as closely as possible.

Year 1 (30 units)

- 3 units in WRS or 3 units in ENGL
- HE ED 120 - Introduction to the Biological Aspects of Fitness to Health
- KIN 100 - Human Anatomy
- KIN 101 - Introduction to Human Physiology
- KIN 102 - Foundations of Human Movement
- KIN 103 - Integrative Human Physiology
- KRLS 104 - Introduction to Sociology of Sport and Leisure in Canadian Society
- KRLS 105 - Introduction to the Management of Sport, Physical Activity and Recreation Programs
- 3 units from Activity Core

One of:
- KIN 109 - Statistics, Measurement, and Evaluation
- STAT 151 - Introduction to Applied Statistics I

Year 2 (30 units)
- DANCE 200 - The Spectrum of Dance in Society
- KIN 200 - Physiology of Exercise
- KIN 203 - Skill Acquisition and Performance
- KIN 206 - Biomechanics
- KIN 207 - Physical Growth and Psychomotor Development
- KIN 209 - Research Methods in Kinesiology
- KIN 240 - Introduction to Sports Injury Management
- KRLS 204 - Canadian History of Leisure, Sport, and Health
- KRLS 207 - Adapted Physical Activity and Leisure for Diverse Populations
- 3 units from Activity Core

Year 3 (30 units)

Left Column

- KIN 311 - Assessment of Fitness and Health
- KRLS 304 - Advanced Sociology of Sport and Leisure
- ~~9~~ units from major
- 3 units from Activity Core
- ~~9~~ units in Open Options

One of:
- HE ED 321 - Psychological Dimensions of Health Promotion
- KIN 303 - Psychology of Sport and Physical Activity

Year 4 (30 units)
- KIN 401 - Applied Ethics in Sport, Physical Activity and Exercise
- ~~6~~ units from major (see Notes 1 and 3)
- 3 units from Activity Core
- ~~3~~ units in Open Option
- ~~15 units in Full-time practicum **OR** 9 units in part-time Practicum and 6 units Faculty Options (see Note 1)~~
  ~~The total course weights taken above must equal 15 units.~~

Notes
1. ~~Students must choose one of following practicum options:~~
   ~~9 units: Part-time practicum (must register in KIN 492 only), **OR**~~
   ~~15 units: Full-time practicum (must register in KIN 493 only)~~
2. ~~Practicum opportunities may be limited for those students wishing to do a part-time practicum.~~
3. A maximum of 1~~8~~ units ~~in Practicum~~ course offerings may be credited toward the BKin degree program.
4. ~~KIN 492 & KIN 493~~ are restricted to students who have completed a minimum of ~~90~~ units toward the BKin degree program.

Majors
Students should contact the Student Services Office of the Faculty of Kinesiology, Sport, and Recreation for information about specific course requirements for their major.

Right Column

- KIN 311 - Assessment of Fitness and Health
- KRLS 304 - Advanced Sociology of Sport and Leisure
- 6 units In Field Learning
- 6 units from Major
- 3 units from Activity Core
- 6 units in Open Options

One of:
- HE ED 321 - Psychological Dimensions of Health Promotion
- KIN 303 - Psychology of Sport and Physical Activity

Year 4 (30 units)
- KIN 401 - Applied Ethics in Sport, Physical Activity and Exercise
- 3/6 units In Field Learning (see Note 1)
- 15/12 units from major (see Note 1 and 2)
- 3 units from Activity Core
- 6 units in Open Option

Notes
1. Students who elect to complete the minimum 9 units of the In Field Learning Component will complete 21 units of Major courses. Students who elect to complete the maximum 12 units of the In Field Learning Component will complete 18 units of Major courses.
2. A maximum of 15 units of In Field Learning course offerings may be credited toward the BKin degree program.
3. In Field Learning courses are restricted to students who have completed a minimum of 45 units toward the BKin degree program.

Majors
Students should contact the Student Services Office of the Faculty of Kinesiology, Sport, and Recreation for information about specific course requirements for their major.

Adapted Physical Activity (30 units):
This major provides students with theoretical knowledge and practical skills to facilitate physically active lifestyles for people with impairments. Emphasis is placed on gaining instructional and leadership skills in physical activity, fitness and sport programs for individuals along the continuum of impairments and across all age groups and environments.

Required Courses for Major (12 units)
- KIN 372 - Neuroscience Considerations for Adapted Physical Activity
- KIN 385 - Physical Activity and the Aging Adult

- KIN 471 - Physical Activity for Individuals with Developmental Impairments **OR**
- KIN 472 - Physical Activity for Individuals with Physical Impairments

- KRLS 370 - Assessment and Service Delivery for Adapted Physical Activity and Therapeutic Recreation

Choose one of:
- 9 units in Professional Practicum (KIN 492) and 9 units from the list of approved Option Courses for Major
- 15 units in Professional Practicum (KIN 493) and 3 units from the list of approved Option Courses for Major

Additional Information
Students should contact the Student Services Office of the Faculty of Kinesiology, Sport, and Recreation for a current list of approved options for this major.

Physical Activity and Health (30 units):

This major provides students with understanding of and appreciation for the importance of physical activity as it relates to health, fitness, and well-being over the lifespan. Biopsychosocial factors influencing acquisition and maintenance of physical activity and health will be emphasized. **Required Courses for Major (12 units)** ● HE ED 320 - Social Dimensions of Health and Health Promotion ● HE ED 321 - Psychological Dimensions of Health Promotion ● KIN 334 - Physical Activity, Nutrition and Energy Balance ● KIN 335 - Advanced Conditioning Methodology **Note:** If HE ED 321 has been chosen as part of the Degree Core, please add 3 units to your Option Courses for Major requirement. **Choose one of:** ● 9 units ~~in Professional Practicum (KIN 492)~~ and 9 units from the list of approved Option Courses for Major ● 1~~5~~ units ~~in Professional Practicum (KIN 493)~~ and 3 units from the list of approved Option Courses for Major **Additional Information** Students should contact the Student Services Office of the Faculty of Kinesiology, Sport, and Recreation for a current list of approved options for this major. **Sport Performance (30 units):** This major advances students' understanding of the theoretical underpinnings of the multifaceted aspects of sport performance. In addition, students will gain practical experience in sport performance through an	This major provides students with understanding of and appreciation for the importance of physical activity as it relates to health, fitness, and well-being over the lifespan. Biopsychosocial factors influencing acquisition and maintenance of physical activity and health will be emphasized. **Required Courses for Major (12 units)** ● HE ED 320 - Social Dimensions of Health and Health Promotion ● HE ED 321 - Psychological Dimensions of Health Promotion ● KIN 334 - Physical Activity, Nutrition and Energy Balance ● KIN 335 - Advanced Conditioning Methodology **Note:** If HE ED 321 has been chosen as part of the Degree Core, please add 3 units to your Option Courses for Major requirement. **Choose one of:** ● 9 units of In Field Learning coursework focused on experiential learning in the Physical Activity and Health sector and 9 units from the list of approved Option Courses for Major or ● 12 units of In Field Learning coursework focused on experiential learning in the Physical Activity and Health sector and 6 units from the list of approved Option Courses for Major **Additional Information** Students should contact the Student Services Office of the Faculty of Kinesiology, Sport, and Recreation for a current list of approved options for this major. **Sport Performance (30 units):** This major advances students' understanding of the theoretical underpinnings of the multifaceted aspects of sport performance. In addition, students will gain practical experience in sport performance through an

interdisciplinary delivery of courses and ~~practicum~~ requirements.

Required Courses for Major (9 units)
- KIN 335 - Advanced Conditioning Methodology
- KIN 435 - Applied Resistance Training
- KIN 436 - Applied Endurance Training

Choose one of:
- 9 units ~~in Professional Practicum (KIN 492)~~ and 12 units from the list of approved Option Courses for Major
- 1~~5~~ units ~~in Professional Practicum (KIN 493)~~ and ~~6~~ units from the list of approved Option Courses for Major

Additional Information
Students should contact the Student Services Office of the Faculty of Kinesiology, Sport, and Recreation for a current list of approved options for this major.

Individualized Major (30 units):
This major affords students the opportunity to design a combination or collection of courses that meets their individual interests and needs, provided that an opportunity to pursue their area of interest is not available through the other three majors. It may also enable students who choose to spend one term or year abroad an opportunity to design a major area of study around their international courses. This must be done in consultation with the student's assigned KSR Academic Advisor and requires approval of the Associate Dean (Undergraduate Programs).

General Requirements
Students wishing to enter into this major must submit a written proposal to the Associate Dean (Undergraduate Programs) that contains the following information:
  i.   A clear description of the focus and the objectives of the major.

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interdisciplinary delivery of courses and in field learning requirements.

Required Courses for Major (9 units)
- KIN 335 - Advanced Conditioning Methodology
- KIN 435 - Applied Resistance Training
- KIN 436 - Applied Endurance Training

Choose one of:
- 9 units of In Field Learning coursework focused on experiential learning in the Sport Performance sector and 12 units from the list of approved Option Courses for Major
  or
- 12 units of In Field Learning coursework focused on experiential learning in the Sport Performance sector and 9 units from the list of approved Option Courses for Major

Additional Information
Students should contact the Student Services Office of the Faculty of Kinesiology, Sport, and Recreation for a current list of approved options for this major.

Individualized Major (30 units):
This major affords students the opportunity to design a combination or collection of courses that meets their individual interests and needs, provided that an opportunity to pursue their area of interest is not available through the other three majors. It may also enable students who choose to spend one term or year abroad an opportunity to design a major area of study around their international courses. This must be done in consultation with the student's assigned KSR Academic Advisor and requires approval of the Associate Dean (Undergraduate Programs).

General Requirements
Students wishing to enter into this major must submit a written proposal to the Associate Dean (Undergraduate Programs) that contains the following information:
- A clear description of the focus and the objectives of the major.

ii.   A detailed list of courses to be taken and indication of how they relate to the stated objectives.

Specific Requirements

Choose one of:
- 9 units ~~in Professional Practicum (KIN 492)~~ and 21 units in additional course work related to the major
- 1~~5~~ units ~~in Professional Practicum (KIN 493)~~ and ~~additional~~ 1~~5~~ units of course work related to the major

Additional Information
The additional coursework related to the major normally consists of:
i.   1~~5~~ units taken at the 300- or 400-level
ii. Minimum 9 units taken from DANCE, HE ED, KRLS, KIN, and/or RLS courses.

[…]

~~Removed language~~

- A detailed list of courses to be taken and indication of how they relate to the stated objectives.

Specific Requirements

Choose one of:
- 9 units of In Field Learning coursework focused on experiential learning and 21 units in additional coursework, both related to the major
  or
- 12 units of In Field Learning coursework focused on experiential learning and 18 units in additional coursework, both related to the major

Additional Information
The additional coursework related to the major normally consists of:
- 18 units taken at the 300- or 400-level
- Minimum 9 units taken from DANCE, HE ED, KRLS, KIN, and/or RLS courses.

[…]

New language

Reviewed/Approved by:

KSR Undergraduate Programs Committee: April 6th, 2022 consultation; June 1st, 2022 consultation; September 7, 2022 consultation; November 16th, 2022 approval
KSR Faculty Executive: Sept 21st 2022 consultation; November 22nd, 2022 approval
KSR Faculty Council: Sept 28th 2022 consultation; November 30th, 2022 approval

Other Consultations:
KSR Leadership Team: April 4th, 2022; August 8, 2022; October 18th, 2022
KSR Academic Council: April, 26th, 2022
KSR UG Students (upon completion of practicum): June 10, 2022
KSRSS Council: October 16th, 2022
KSRSS GFC Student Representative: October 24, 2022
Undergraduate Program Support Team (Undergraduate & Non-Credit): June 2, 2022; August 25, 2022 consultation

Dr. Karsten Mundel, Provost Fellow, Experiential and Work-Integrated Learning & Associate Professor: June 13, 2022
Norma Rodenburg, Deputy Registrar, Office of the Registrar: June 13, 2022
Dr. Beverley Temple, Professor, Associate Dean, Undergrad Studies, Faculty of Nursing: June 20, 2022
Dr. Florence Glanfield, Vice-Provost Indigenous Programming & Research: July 14, 2022
Rebecca Liaw, University Calendar Editor: October 25, 2022

Calendar Change Request Form for Program and Regulation Changes
See the [Calendar Guide](#) for tips on how to complete this form.

Faculty (& Department or Academic Unit):	Kinesiology, Sport, & Recreation (KSR)
Contact Person:	Angela Bayduza, PhD - Associate Dean, Undergraduate Programs
Level of change (choose one only) [?]	● Undergraduate
Type of change request (check all that apply) [?]	● Program ● BScKin "Practicum" Requirements
For which term is this intended to take effect?	Fall 2024
Does this proposal have corresponding course changes? (Should be submitted at the same time)	Yes

Rationale

The following proposed changes to the KSR Practicum are in response to the needs of current and future students in implementing solutions to prioritize diversity and provide more flexible pathways to students within more meaningful, rich, rigorous, purposeful, career focused, and culturally sensitive work integrated learning experiences. Currently, there are critical ethical, equity, accessibility, and inclusivity considerations for students with the current KSR "Practicum" model of delivery as well as a lack of culturally diverse and multi population based experiences offered and available to each individual student.

As the Faculty of KSR continues its strong response to the TRC calls to action in decolonizing and Indigenizing programming, the proposed changes to Practicum will have a dedicated focus on Indigenous Knowledges, ethical engagement and collaboration with Indigenous communities, and strong grounding in kinesiology related issues (sport, exercise, recreation, physical activity, health and wellness, etc.) experienced by Indigenous Peoples of Canada. The proposed new In the Field Learning experiences, at both a micro and macro level, will challenge students to respond to the needs they see and purposefully find solutions in application of their knowledge and training in meeting these challenges. Providing applied, active learning experiences focused on cultural sensitivity in a breadth of diverse populations and lived experiences, will be a driving factor within the proposed changes.

In addressing the lack of culturally diverse and multi population based experiences offered to each individual student within their current work integrated opportunities, the proposed changes provide an enhanced opportunity to continue to build already existing partnerships with community associations and organizations as well as build others. Through KSRs ongoing partnerships with such community organizations and professional certifying/registration bodies (i.e., Indigenous Sport Council of Alberta-ISCA; Alberta Kinesiology Association-AKA; Alberta Recreation and Parks-ARPA, to name just a few), at the level of each proposed IFL course, richer, deeper learning experiences for KSR students can be developed with not only these associations but also the populations they serve and eventually KSR students will be working with professionally.

Key equity, accessibility, and inclusivity considerations within the proposed changes to "practicum" in the Faculty of KSR are the completion requirements of the current delivery models. The current student

completing the Faculty of KSR practicum program structure comes from a privileged background, likely still living at home, or has other significant support such as family to pay for their accommodations and costs of daily living during the practicum semester. In the current practicum structure, where students who are matched with practicum placement partners, students are tasked with completing 30-35 hours per week of unpaid work across the practicum semester, for completion of up to 15 credit units. Students, as a result of this degree program requirement, have little time or flexibility to attend to other financial responsibilities by working in a paid position outside of their practicum commitment. In addition to this, the nature of work in some placements requires students to be available to be scheduled days, evenings, and weekends to meet the required hours of their placement while receiving meaningful mentorship. This further reduces the student's ability to work in a paid role as it makes scheduling paid shifts difficult.

Another driver of the update to the KSR practicum structure is that the career paths available to graduates of the Faculty's degree programs, where the practicum is required, are very diverse. The current delivery structure places completion of the practicum at the end of the degree program (90 credit units completed) when students have not yet had an opportunity to complete a thorough exploration of the different career paths available to them. This places a lot of pressure on the student to choose the "right" or most "advantageous" practicum at the very end of their program, instead of emphasizing the connection of theory into practice, very early in and across the degree program.

The proposed new delivery structure incorporates, much earlier in the degree program, student engagement in career exploration, understanding of professional requirements and potential certifying bodies more consistently and fully, attainment of multiple and more diverse work-integrated learning experiences, and improvement of students' personal awareness as to what is required of them in their next steps after completion of their undergraduate program, what their professional identity is, and how that identity is present within one's career path.

Finally, within the significant ask of students completing practicum in the current practicum structure where placements are unpaid with an average work week of 30-35 hours, it has become apparent that this time completion expectation of students is often not being filled with meaningful skills, professional development, and/or intensive applied learning for the student. Often within these large, macro experiences, significant amounts of this time is being filled with entry-level labour that should otherwise be completed by a paid employee of the placement organization. In other words, practicum organizations are asking skilled student labour to fill their placement hours and practicum requirements with tasks not connected strongly to learning outcomes or experiential, applied program learning. As a result, these students are left without a rigorous, purposeful, career focused work integrated learning experience.

The proposed new structure will respond to the needs of current and future students, implement solutions to prioritize diversity, and provide more flexible pathways for students to receive meaningful, rich, rigorous, purposeful, career focused, work integrated, and culturally responsive learning experiences. The new In the Field Learning delivery model will focus on the provision of high density, rich, and applied outcomes based learning and learning opportunities much more closely aligned with the Work Integrated Learning (WIL) principles of Field Placements. In this new delivery model, students will be provided a mix and variety of short term, micro, as well as macro intensive hands-on practical experiences, in a multiple of settings with a variety of populations relevant to their subjects of study and career pathways (reference: CEWIL Canada - What is Work Integrated Learning (WIL)).

This proposed top-down WIL approach integrates a greater connection of WIL (Experiential Learning-EL/Community Service Learning-CSL) in academic focused courses, from the point of completion of 45 credits (1.5 yr of program) all the way through to degree completion. In this way, students will be better able to understand how each of the individual courses offered throughout their program and in connection to WIL/EL/CSL electives, develop skills that are transferable across their degree and beyond into their careers. This proposed model of In the Field Learning provides greater flexibility to students in support of program completion, accessibility and inclusivity, and applied, active engaged outcome based learning through much broader sampling of populations and culturally diverse In the Field Learning opportunities they will be exposed to and choose to complete.

These proposed program, regulation, and course changes will have impacts to administration that are in line with the challenges the Faculty of KSR is experiencing in the current Practicum delivery model. Academic Instructors, who currently are assigned to the Practicum Seminar, will be assigned to individual courses in the new model and will need to be more fully engaged in the oversight and quality assurance of the In the Field Learning experiences unique to each course offering. As well, relationship building with both current and new placement partners, to coordinate high quality micro and macro work integrated experiences for KSR students will continue to be a large focus of the KSR Practicum Advisor position and administrative support will need to be added there. Administration process will also need to be established to ensure current students already enrolled in programming are provided the opportunity and option to transition to the new delivery model if appropriate. As well, a phased approach to course deletions (indicated in the proposal package), during the teach out phase, will be taken to ensure that students who either can not or do not want to transition to the new delivery model can continue and complete their current degree programs. KSR Academic Advisors and Student Services Office staff, as well key Leadership positions in the Faculty, have been consulted and included in the development of these proposed changes and will continue to be included in addressing these proposed changes and administrative, transactional impacts associated with the proposed changes, for implementation of the new structure in Fall 2024.

Calendar Copy

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https://calendar.ualberta.ca/preview_program.php?catoid=36&poid=43024&returnto=11341

Current	Proposed
Bachelor of Science in Kinesiology	**Bachelor of Science in Kinesiology**
Return to: Faculty of Kinesiology, Sport, and Recreation - Programs	Return to: Faculty of Kinesiology, Sport, and Recreation - Programs
	Effective September 2024
Program Requirements Students in the BSc (Kin) Degree take a program of 120 units over a four year period, consisting of: 1. Degree core: A group of required courses in	**Program Requirements** Students in the BSc (Kin) Degree take a program of 120 units over a four-year period, consisting of: 1. Degree core: A group of required courses in

Kinesiology totalling ~~93~~ units
2. ~~Practicum~~ Component: ~~(9 units) Part-time or (15 units) Full-time practicum~~
3. Option component:
   a. Open Options: A group of courses totalling 1~~2~~ units which may be taken from within or outside the Faculty of Kinesiology, Sport, and Recreation.
   b. Faculty Options: ~~0 units/~~6 units chosen from courses within the Faculty of Kinesiology, Sport, and Recreation.

Note: Students who choose ~~a~~ 9-unit ~~part-time practicum~~ will ~~do 6~~ units in Faculty Options; students who choose ~~a~~ 15-unit ~~full-time practicum~~ will ~~not~~ require ~~any additional Faculty Options~~.

Course Sequence for BSc in Kinesiology
Students are advised to follow the prescribed order as closely as possible.

Year 1 (30 units)
● 6 units in 100-level ENGL OR 3 units in ENGL and 3 units in WRS
● CHEM 101 - Introductory University Chemistry I
● HE ED 120 - Introduction to the Biological Aspects of Fitness to Health
● KIN 100 - Human Anatomy
● KIN 101 - Introduction to Human Physiology
● KIN 103 - Integrative Human Physiology
● KRLS 104 - Introduction to Sociology of Sport and Leisure in Canadian Society
● KRLS 105 - Introduction to the Management of Sport, Physical Activity and Recreation Programs
● One of:
KIN 109 - Statistics, Measurement, and Evaluation
STAT 151 - Introduction to Applied Statistics I

Year 2 (30 units)

Kinesiology totalling 78 units.
2. In Field Learning Component: A group of courses totalling a minimum of 9 units to a maximum of 12 units.
3. Option component:
   a. Open Options: A group of courses totalling a minimum of 12 to a maximum of 1~~5~~ units which may be taken from within or outside the Faculty of Kinesiology, Sport, and Recreation (see Note).
   b. General Faculty Options: 6 units chosen from courses within the Faculty of Kinesiology, Sport, and Recreation.
   c. Faculty Options: A group of courses totalling 12 units chosen from List A or B courses.

Note:
Students who elect to complete the minimum 9-units of the In Field Learning Component will complete 15 units/credits of Open Options. Students who elect to complete the maximum 12 units of the In Field Learning Component will complete 12 units of Open Options.

Course Sequence for BSc in Kinesiology
Students are advised to follow the prescribed order as closely as possible.

Year 1 (30 units)
● 6 units in 100-level ENGL OR 3 units in ENGL and 3 units in WRS
● CHEM 101 - Introductory University Chemistry I
● HE ED 120 - Introduction to the Biological Aspects of Fitness to Health
● KIN 100 - Human Anatomy
● KIN 101 - Introduction to Human Physiology
● KIN 103 - Integrative Human Physiology
● KRLS 104 - Introduction to Sociology of Sport and Leisure in Canadian Society
● KRLS 105 - Introduction to the Management of Sport, Physical Activity and Recreation Programs
● One of:
KIN 109 - Statistics, Measurement, and Evaluation
or
STAT 151 - Introduction to Applied Statistics I

Year 2 (30 units)

Left column:

- CHEM 261 - Organic Chemistry I
- HE ED 221 - Population Health
- KIN 200 - Physiology of Exercise
- KIN 203 - Skill Acquisition and Performance
- KIN 209 - Research Methods in Kinesiology
- KIN 240 - Introduction to Sports Injury Management
- KRLS 207 - Adapted Physical Activity and Leisure for Diverse Populations

- MATH 125 - Linear Algebra I ~~OR~~
- MATH 134 - Calculus for the Life Sciences I
- PHYS 124 - Particles and Waves
- 3 units in Open options

Year 3 (30 units)
- BIOCH 200 - Introductory Biochemistry

- KIN 303 - Psychology of Sport and Physical Activity ~~OR~~
- HE ED 321 - Psychological Dimensions of Health Promotion

- KIN 306 - Quantitative Biomechanics of Human Movement
- KIN 311 - Assessment of Fitness and Health
- KIN 334 - Physical Activity, Nutrition and Energy Balance
- KIN 335 - Advanced Conditioning Methodology
- ~~6~~ units in Open Option

3~~-unit List A~~ Faculty Option
~~Students should contact the Student Services Office for detailed information about List A Faculty Options.~~

3~~-unit List B~~ Faculty Option
Students should contact the Student Services Office for detailed information about List B Faculty Options.
~~a. 6 units in Open Option~~

Year 4 (30 units)
~~1.   KIN 401~~
~~2.   6 units chosen from List B Faculty Options~~
~~Students should contact the Student Services Office for detailed information about List B Faculty Options.~~

Right column:

- CHEM 261 - Organic Chemistry I
- HE ED 221 - Population Health
- KIN 200 - Physiology of Exercise
- KIN 203 - Skill Acquisition and Performance
- KIN 209 - Research Methods in Kinesiology
- KIN 240 - Introduction to Sports Injury Management
- KRLS 207 - Adapted Physical Activity and Leisure for Diverse Populations
- One of:
MATH 125 - Linear Algebra I
or
MATH 134 - Calculus for the Life Sciences I
- PHYS 124 - Particles and Waves
- 3 units in Open options

Year 3 (30 units)
- BIOCH 200 - Introductory Biochemistry
- One of:
KIN 303 - Psychology of Sport and Physical Activity
or
HE ED 321 - Psychological Dimensions of Health Promotion
- KIN 306 - Quantitative Biomechanics of Human Movement
- KIN 311 - Assessment of Fitness and Health
- KIN 334 - Physical Activity, Nutrition and Energy Balance
- KIN 335 - Advanced Conditioning Methodology
- 6 units In Field Learning
- 3 units in Open Option
- 3 units Faculty Option (from List A or List B)

Note
Students are encouraged to contact the KSR Student Services Office and consult with an academic advisor for assistance in program building and course selection from List A and B Faculty Options in the completion of program requirements.

Year 4 (30 units)
- KIN 401
- 6 units Faculty Options (one from List A, one from List B)
- 3 units Faculty Options (from List A or List B)

3. ~~3 units chosen from List A or B Faculty Options Students should contact the Student Services Office for detailed information about List A and B Faculty Options.~~
4. ~~3 units in Open Option~~
5. ~~9 unit/15 unit Professional Practicum (see Notes 4 and 5)~~
6. ~~6 units in Faculty Options (see Notes 4 and 5)~~

The total course weights taken in 5 and 6 above must equal 15 units.

Notes

1. ~~No more than 9 units of options are to be completed through PAC/DAC courses.~~
2. ~~Practicum opportunities may be limited for those students wishing to do a part-time practicum.~~
3. It is strongly recommended to select appropriate Open Options in order to meet ~~agency~~ prerequisites for ~~a practicum placement~~. See a ~~Program~~ Advisor for suggested courses.
4. ~~Students must choose one of following practicum placement options:~~
   - ~~15-unit full-time practicum (must register in KIN 493 only), or 9-unit part-time practicum (must register in KIN 492 only) and an additional 6 units in Faculty Options.~~
5. A maximum of ~~18~~ units in ~~Practicum~~ course offerings may be credited toward the BSc in Kinesiology degree program.
6. ~~KIN 492 & KIN 493~~ are restricted to students who have completed a minimum of ~~90~~ units toward the BSc in Kinesiology degree program.

~~Removed language~~

- 6 units General Faculty Option
- 3/6 units In Field Learning (see Note 1)
- 9/6 units in Open Option (see Note 1)

Notes

1. The total course units taken in Open Options and In Field Learning courses in year 4 must equal 12 units.
2. Students are encouraged to contact the KSR Student Services Office and consult with an Academic Advisor for assistance in program building and course selection from List A and B Faculty Options in the completion of program requirements as well in selecting appropriate Open Options to support, prepare for, and meet In Field Learning course prerequisites and placement requirements.
3. In Field Learning courses are restricted to students who have completed a minimum of 45 units toward the BSc in Kinesiology degree program.
4. A maximum of 15 units in In Field Learning course offerings may be credited toward the BSc in Kinesiology degree program.

New language

Reviewed/Approved by:

KSRSS Council: October 16th, 2022
KSRSS GFC Student Representative: October 24, 2022
Undergraduate Program Support Team (Undergraduate & Non-Credit): June 2, 2022; August 25, 2022 consultation
Dr. Karsten Mundel, Provost Fellow, Experiential and Work-Integrated Learning & Associate Professor: June 13, 2022
Norma Rodenburg, Deputy Registrar, Office of the Registrar: June 13, 2022
Dr. Beverley Temple, Professor, Associate Dean, Undergrad Studies, Faculty of Nursing: June 20, 2022
Dr. Florence Glanfield, Vice-Provost Indigenous Programming & Research: July 14, 2022
Rebecca Liaw, University Calendar Editor: October 25, 2022

Calendar Change Request Form for Course Changes

See the Calendar Guide for tips on how to complete this form.

Faculty (& Department or Academic Unit):	FoKSR
Contact Person:	Angela L. Bayduza Associate Dean, Undergraduate Programs ksradu@ualberta.ca
Level of change (choose one only) [?]	Undergraduate
For which term will this change take effect?	Fall 2024

Rationale

URL KIN Courses:
https://calendar.ualberta.ca/content.php?filter%5B27%5D=KIN&filter%5B29%5D=&filter%5Bcourse_type%5D=-1&filter%5Bkeyword%5D=&filter%5B32%5D=1&filter%5Bcpage%5D=1&cur_cat_oid=36&expand=&navoid=11383&search_database=Filter&filter%5Bexact_match%5D=1#acalog_template_course_filter

URL RLS Courses:
https://calendar.ualberta.ca/content.php?filter%5B27%5D=RLS&filter%5B29%5D=&filter%5Bcourse_type%5D=-1&filter%5Bkeyword%5D=&filter%5B32%5D=1&filter%5Bcpage%5D=1&cur_cat_oid=36&expand=&navoid=11383&search_database=Filter&filter%5Bexact_match%5D=1#acalog_template_course_filter

The following proposed changes to the KSR Practicum are in response to the needs of current and future students in implementing solutions to prioritize diversity and provide more flexible pathways to students within more meaningful, rich, rigorous, purposeful, career focused, and culturally sensitive work integrated learning experiences. Currently, there are critical ethical, equity, accessibility, and inclusivity considerations for students with the current KSR "Practicum" model of delivery as well as a lack of culturally diverse and multi population based experiences offered and available to each individual student.

As the Faculty of KSR continues its strong response to the TRC calls to action in decolonizing and Indigenizing programming, the proposed changes to Practicum will have a dedicated focus on Indigenous Knowledges, ethical engagement and collaboration with Indigenous communities, and strong grounding in kinesiology related issues (sport, exercise, recreation, physical activity, health and wellness, etc.) experienced by Indigenous Peoples of Canada. The proposed new In the Field Learning experiences, at both a micro and macro level, will challenge students to respond to the needs they see and purposefully find solutions in application of their knowledge and training in meeting these challenges. Providing applied, active learning experiences focused on cultural sensitivity in a breadth of diverse populations and lived experiences, will be a driving factor within the proposed changes.

In addressing the lack of culturally diverse and multi population based experiences offered to each individual student within their current work integrated opportunities, the proposed changes provide an enhanced opportunity to continue to build already existing partnerships with community associations and organizations as well as build others. Through KSRs ongoing partnerships with such community organizations and professional certifying/registration bodies (i.e., Indigenous Sport Council of Alberta-ISCA; Alberta Kinesiology Association-AKA; Alberta Recreation and Parks-ARPA, to name just a few), at the level of each proposed IFL course, richer, deeper learning experiences for KSR students can be developed with not only these

associations but also the populations they serve and eventually KSR students will be working with professionally.

Key equity, accessibility, and inclusivity considerations within the proposed changes to "practicum" in the Faculty of KSR are the completion requirements of the current delivery models. The current student completing the Faculty of KSR practicum program structure comes from a privileged background, likely still living at home, or has other significant support such as family to pay for their accommodations and costs of daily living during the practicum semester. In the current practicum structure, where students who are matched with practicum placement partners, students are tasked with completing 30-35 hours per week of unpaid work across the practicum semester, for completion of up to 15 credit units. Students, as a result of this degree program requirement, have little time or flexibility to attend to other financial responsibilities by working in a paid position outside of their practicum commitment. In addition to this, the nature of work in some placements requires students to be available to be scheduled days, evenings, and weekends to meet the required hours of their placement while receiving meaningful mentorship. This further reduces the student's ability to work in a paid role as it makes scheduling paid shifts difficult.

Another driver of the update to the KSR practicum structure is that the career paths available to graduates of the Faculty's degree programs, where the practicum is required, are very diverse. The current delivery structure places completion of the practicum at the end of the degree program (90 credit units completed) when students have not yet had an opportunity to complete a thorough exploration of the different career paths available to them. This places a lot of pressure on the student to choose the "right" or most "advantageous" practicum at the very end of their program, instead of emphasizing the connection of theory into practice, very early in and across the degree program.

The proposed new delivery structure incorporates, much earlier in the degree program, student engagement in career exploration, understanding of professional requirements and potential certifying bodies more consistently and fully, attainment of multiple and more diverse work-integrated learning experiences, and improvement of students' personal awareness as to what is required of them in their next steps after completion of their undergraduate program, what their professional identity is, and how that identity is present within one's career path.

Finally, within the significant ask of students completing practicum in the current practicum structure where placements are unpaid with an average work week of 30-35 hours, it has become apparent that this time completion expectation of students is often not being filled with meaningful skills, professional development, and/or intensive applied learning for the student. Often within these large, macro experiences, significant amounts of this time is being filled with entry-level labour that should otherwise be completed by a paid employee of the placement organization. In other words, practicum organizations are asking skilled student labour to fill their placement hours and practicum requirements with tasks not connected strongly to learning outcomes or experiential, applied program learning. As a result, these students are left without a rigorous, purposeful, career focused work integrated learning experience.

The proposed new structure will respond to the needs of current and future students, implement solutions to prioritize diversity, and provide more flexible pathways for students to receive meaningful, rich, rigorous, purposeful, career focused, work integrated, and culturally responsive learning experiences. The new In the Field Learning delivery model will focus on the provision of high density, rich, and applied outcomes based learning and learning opportunities much more closely aligned with the Work Integrated Learning (WIL)

principles of Field Placements. In this new delivery model, students will be provided a mix and variety of short term, micro, as well as macro intensive hands-on practical experiences, in a multiple of settings with a variety of populations relevant to their subjects of study and career pathways (reference: [CEWIL Canada - What is Work Integrated Learning (WIL)](#)).

This proposed top-down WIL approach integrates a greater connection of WIL (Experiential Learning-EL/Community Service Learning-CSL) in academic focused courses, from the point of completion of 45 credits (1.5 yr of program) all the way through to degree completion. In this way, students will be better able to understand how each of the individual courses offered throughout their program and in connection to WIL/EL/CSL electives, develop skills that are transferable across their degree and beyond into their careers. This proposed model of In the Field Learning provides greater flexibility to students in support of program completion, accessibility and inclusivity, and applied, active engaged outcome based learning through much broader sampling of populations and culturally diverse In the Field Learning opportunities they will be exposed to and choose to complete.

These proposed program, regulation, and course changes will have impacts to administration that are in line with the challenges the Faculty of KSR is experiencing in the current Practicum delivery model. Academic Instructors, who currently are assigned to the Practicum Seminar, will be assigned to individual courses in the new model and will need to be more fully engaged in the oversight and quality assurance of the In the Field Learning experiences unique to each course offering. As well, relationship building with both current and new placement partners, to coordinate high quality micro and macro work integrated experiences for KSR students will continue to be a large focus of the KSR Practicum Advisor position and administrative support will need to be added there. Administration process will also need to be established to ensure current students already enrolled in programming are provided the opportunity and option to transition to the new delivery model if appropriate. As well, a phased approach to course deletions indicated below during the teach out phase will be taken to ensure that students who either can not or do not want to transition to the new delivery model can continue and complete their current degree programs. KSR Academic Advisors and Student Services Office staff, as well key Leadership positions in the Faculty, have been consulted and included in the development of these proposed changes and will continue to be included in addressing these proposed changes and administrative, transactional impacts associated with the proposed changes, for implementation of the new structure in Fall 2024.

Course Template

Current	Proposed
KIN 490 - Professional Practicum ★ 6 (*fi 12*) (variable, variable) A half-time unpaid Professional Practicum of 20 hours per week for 14 weeks, or the equivalent time. Students must arrange placements through the Practicum Supervisor/Instructor. A limited number of placements are available. Note: Students will not be allowed to register in more than *9 concurrently with KIN 490 unless approved by the Practicum Supervisor/Instructor. Note: Credit will be granted for only one of KIN 490 or PEDS 490.	… [delete] …

KIN 491 - Professional Practicum ~~★ 12 (*fi 24*) (variable, variable) A full-time unpaid Professional Practicum of 35-40 hours per week for 14 weeks, or the equivalent time. Students must arrange placements through the Practicum Supervisor/Instructor. Note: Students will not be allowed to register in any other course concurrently with KIN 491 unless approved by the Practicum Supervisor/Instructor. Note: Credit will be granted for only one of KIN 491 or PEDS 491.~~	… [delete] …
KIN 492 - Professional Practicum ~~★ 9 (*fi 18*) (variable, variable) A half-time unpaid Professional Practicum of 20 hours per week for 14 weeks, or the equivalent time. Students must arrange placements through the Practicum Supervisor/Instructor. A limited number of placements are available. Note: Students will not be allowed to register in more than *9 concurrently with KIN 492 unless approved by the Practicum Supervisor/Instructor. Note: Credit will be granted for only one of KIN 492 or PEDS 492.~~	… [delete] …
KIN 493 - Professional Practicum ~~★ 15 (*fi 30*) (variable, variable) A full-time unpaid Professional Practicum of 35-40 hours per week for 14 weeks, or the equivalent time. Students must arrange placements through the Practicum Supervisor/Instructor. Note: Students will not be allowed to register in any other course concurrently with KIN 493 unless approved by the Practicum Supervisor/Instructor. Note: Credit will be granted for only one of KIN 493 or PEDS 493.~~	… [delete] …
RLS 441 - Practicum Seminar ~~★ 3 (*fi 6*) (either term, 0-3s-0) A seminar, taken concurrently with RLS 449, which seeks to relate the professional work experience to the academic and professional preparation elements within the BA program. Students will not be allowed to register in any other course concurrently with RLS 441/449 unless approved by the Practicum Supervisor/Instructor.~~	… [delete] …
RLS 447 - Professional Practicum ~~★ 15 (*fi 30*) (variable, variable) A full-time unpaid Professional Practicum of 35-40 hours per week for 14 weeks, or the equivalent time. Students must arrange placements through the Practicum Supervisor/Instructor. Note: Students will not be allowed to register in any other course concurrently with RLS 447 unless approved by the Practicum Supervisor/ Instructor. Credit will be granted for only one of RLS 441/449 or RLS 447.~~	… [delete] …

RLS 449 - Professional Practicum
~~★ 12 (*fi 24*) (either term, 14 weeks) Fourteen weeks of professional experience in full-time, unpaid placement (35 to 40 hours per week). Students must arrange placements through the Practicum Supervisor/Instructor. Must be taken concurrently with RLS 441. Students will not be allowed to register in any other course in conjunction with RLS 441/449 unless approved by the Practicum Supervisor/Instructor.~~

… [new] …

… [delete] …

Effective September 2024

KRLS 290 – An Introduction to In Field Learning: Career Explorations
Course Career Undergraduate
Units 3
Approved Hours Variable
Fee index 6
Faculty Kinesiology, Sport, & Rec
Department Kinesiology, Sport, & Rec
Typically Offered Variable

Description
In this course, students will explore the breadth of career paths and scope of practice that can be pursued with their degrees. Strategies for conducting job searches, application and resume writing skills, interviewing and networking skills, and engaging stakeholders will also be addressed. Throughout the course, students will be tasked with creating a professional portfolio to be built upon and utilized as they progress through their remaining program, in field learning courses, and as they enter into their careers. Through multiple micro career explorations and informational interviewing with established practicing professionals students will be connected with throughout the course (e.g., alumni, practitioners in professions of interest), students will discover and uncover how professionals use degree knowledge to build careers. Through these micro career experiences (variable; ~1-4 hrs/ week or ~15-60 hrs/term), students will be guided in learning how to identify and articulate transferable skills from all of their own experiences, including from their academic program, that can then be utilized in their future career journey. Notes: Classroom/tutorial sessions are variable per week in addition to the micro career explorations and in field learning experiences with working professionals students will engage with throughout the course. Prerequisite: Successful completion of 45 course units.

| … [new] … | **KRLS 291 – In Field, Practice-Based, Learning – Professional Practice & Interpersonal Skill Building**
Course Career Undergraduate
Units 3
Approved Hours Variable
Fee index 6
Faculty Kinesiology, Sport, & Rec
Department Kinesiology, Sport, & Rec
Typically Offered Variable

Description
This course provides students the opportunity to develop knowledge and competencies in interpersonal theory specific to Kinesiology, Sport, and/or Recreation settings. Content covered in this course include such topics as effective verbal, non-verbal, and written communication strategies, active listening with patients/clients, reflective practice, managing conflict and difficult conversations, negotiations in the workplace, decision making, leadership, respect for diversity, intercultural competence, self-awareness, collaboration, teamwork and interdisciplinary practice, and generating and synthesizing evidence, and applying ethical principles. This course draws upon previous coursework and integrates theory and practice across course learning activities to apply the course content to the breadth of populations, settings, and career pathways within the field of Kinesiology, Sport, and Recreation. As a part of the course, students will participate in multiple micro field placements (variable; ~1-4 hrs/ week or ~15-60 hrs/term) with assigned mentors, observing and engaging in interpersonal relations and participating in the planning and implementation of programs as is appropriate. Notes: Classroom/tutorial sessions are variable per week in addition to the micro in field learning experiences. Prerequisite: Successful completion of KRLS 290. |
| … [new] … | **KRLS 392 – In Field, Practice-Based, Learning – Interdisciplinary Problem Solving**
Course Career Undergraduate
Units 3
Approved Hours Variable
Fee index 6
Faculty Kinesiology, Sport, & Rec
Department Kinesiology, Sport, & Rec
Typically Offered Variable

Description
In this project, micro field placement (variable; ~1-4 hrs/ week or ~15-60 hrs/term) based course, students will work |

… [new] …	in small interdisciplinary teams to analyze a complex problem and propose a solution (strategies and interventions) to address a real-world issue and context. Students will apply theoretical knowledge to attempt to solve practical challenges they identify, demonstrate their understanding of the challenge and potential solutions through presentation of their ideas, and design an implementation and evaluation strategy. Students will be asked to draw connections between their theoretical course learnings and the practical application of skills through discussion of proposed solutions with team members and other course participants. With the support of the Course Instructor, Practicum Advisor, and Industry Partners, students will visualize, identify, and articulate how the practical application of their knowledge altered their self-efficacy in the competency areas required of the experience. Notes: Classroom/tutorial sessions are variable per week in addition to micro in field learning experiences scheduled for each iteration of the course. Prerequisite: Successful completion of KRLS 291. **KRLS 493 – In Field, Practice-Based, Learning – Comprehensive Placement** **Course Career** Undergraduate **Units** 6 **Approved Hours** Variable **Fee index** 12 **Faculty** Kinesiology, Sport, & Rec **Department** Kinesiology, Sport, & Rec **Typically Offered** Variable **Description** Students will participate in a singular, comprehensive, high-density, macro learning (variable; ~8-12 hrs/week or ~120-180 hrs/term), In Field Learning placement with an assigned mentor. During this intensive in the field learning experience, students will become fully integrated into the work at their assigned Field Placement that will provide students with an intensive short term hands-on practical experience in a setting relevant to their subject of study and lead to relatively independent work by the completion of the placement. Students will work towards contributing to their assigned field placement's capacity, critically assessing issues, designing, implementing and evaluating strategic initiatives, and/or engaging actively in research while at the same time gaining confidence and skills as a practicing professional under the direction of the course instructor and the placement mentor. Students will report back to the course instructor regularly i). proposed ideas and plans for work appropriate to the working environment

... [new] ...	that aligns with the settings mission, values, and workflow; ii). information collected and resources utilized that were needed to assess and complete work functions; iii) evaluation of what skill sets are required to complete work functions, and iv). judgements on whether their current skill set meets the identified work functions. Notes: Classroom/tutorial sessions are variable per week in addition to the macro in field learning experience. Prerequisite: Successful completion of KRLS 290 or KRLS 291.
	KRLS 499 – In Field, Practice-Based, Learning – Directed Project **Course Career** Undergraduate **Units** 3 **Approved Hours** Variable **Fee index** 6 **Faculty** Kinesiology, Sport, & Rec **Department** Kinesiology, Sport, & Rec **Typically Offered** Variable **Description** A course designed to meet the needs of individual students in completion of the In Field Learning requirements of their degree program. A singular, comprehensive, high-density, micro experience (variable; ~1-4 hrs/ week or ~15-60 hrs/term), in combination with academically focused work, completed under the supervision, mentorship, and direction of an academic member in the Faculty of Kinesiology, Sport, and Recreation or approved affiliate. Normally for students in their fourth year of study. Notes: Classroom/tutorial sessions are variable per week in addition to the micro in field learning experience. Prerequisite: KRLS 290 or KRLS 291 and consent of the Associate Dean (Undergraduate Programs). Students must arrange a project with an academic staff member or approved affiliate.
~~Removed language~~	New language

Reviewed/Approved by:

KSR Undergraduate Programs Committee: April 6th, 2022 consultation; June 1st, 2022 consultation; September 7, 2022 consultation; November 16th, 2022 approval
KSR Faculty Executive: Sept 21st 2022 consultation; November 22nd, 2022 approval
KSR Faculty Council: Sept 28th 2022 consultation; November 30th, 2022 approval

Other Consultations:
KSR Leadership Team: April 4th, 2022; August 8, 2022; October 18th, 2022

KSR Academic Council: April, 26th, 2022
KSR UG Students (upon completion of practicum): June 10, 2022
KSRSS Council: October 16th, 2022
KSRSS GFC Student Representative: October 24, 2022
Undergraduate Program Support Team (Undergraduate & Non-Credit): June 2, 2022; August 25, 2022
consultation
Dr. Karsten Mundel, Provost Fellow, Experiential and Work-Integrated Learning & Associate Professor: June 13, 2022
Norma Rodenburg, Deputy Registrar, Office of the Registrar: June 13, 2022
Dr. Beverley Temple, Professor, Associate Dean, Undergrad Studies, Faculty of Nursing: June 20, 2022
Dr. Florence Glanfield, Vice-Provost Indigenous Programming & Research: July 14, 2022
Rebecca Liaw, University Calendar Editor: October 25, 2022

Calendar Change Request Form for Program and Regulation Changes

See the Calendar Guide for tips on how to complete this form.

Faculty (& Department or Academic Unit):	Kinesiology, Sport, & Recreation (KSR)
Contact Person:	Angela Bayduza, PhD - Associate Dean, Undergraduate Programs
Level of change (choose one only) [?]	● Undergraduate
Type of change request (check all that apply) [?]	● Program ● BScKin "Practicum" Requirements
For which term is this intended to take effect?	Fall 2024
Does this proposal have corresponding course changes? (Should be submitted at the same time)	Yes

Rationale

The proposed changes to the Faculty of KSR Research Certificate in Kinesiology are in response to alignment with the proposed changes to the Faculty of KSR Practicum Component.

The proposed changes in the Faculty of KSR Practicum Component are intended to meet the needs of current and future students and implement solutions to prioritize diversity and provide more flexible pathways to students within more meaningful, rich, rigorous, purposeful, career focused, and culturally sensitive work integrated learning experiences. Currently, there are critical ethical, equity, accessibility, and inclusivity considerations for students with the current KSR "Practicum" model of delivery as well as a lack of culturally diverse and multi population based experiences offered and available to each individual student.

As the Faculty of KSR continues its strong response to the TRC calls to action in decolonizing and Indigenizing programming, the proposed changes to Practicum will have a dedicated focus on Indigenous Knowledges, ethical engagement and collaboration with Indigenous communities, and strong grounding in kinesiology related issues (sport, exercise, recreation, physical activity, health and wellness, etc.) experienced by Indigenous Peoples of Canada. The proposed new In the Field Learning experiences, at both a micro and macro level, will challenge students to respond to the needs they see and purposefully find solutions in application of their knowledge and training in meeting these challenges. Providing applied, active learning experiences focused on cultural sensitivity in a breadth of diverse populations and lived experiences, will be a driving factor within the proposed changes.

In addressing the lack of culturally diverse and multi population based experiences offered to each individual student within their current work integrated opportunities, the proposed changes provide an enhanced opportunity to continue to build already existing partnerships with community associations and organizations as well as build others. Through KSRs ongoing partnerships with such community organizations and professional certifying/registration bodies (i.e., Indigenous Sport Council of Alberta-ISCA; Alberta Kinesiology Association-AKA; Alberta Recreation and Parks-ARPA, to name just a few), at the level of each proposed IFL course, richer, deeper learning experiences for KSR students can be developed with not only these associations but also the populations they serve and eventually KSR students will be working with professionally.

Key equity, accessibility, and inclusivity considerations within the proposed changes to "practicum" in the Faculty of KSR are the completion requirements of the current delivery models. The current student completing the Faculty of KSR practicum program structure comes from a privileged background, likely still living at home, or has other significant support such as family to pay for their accommodations and costs of daily living during the practicum semester. In the current practicum structure, where students who are matched with practicum placement partners, students are tasked with completing 30-35 hours per week of unpaid work across the practicum semester, for completion of up to 15 credit units. Students, as a result of this degree program requirement, have little time or flexibility to attend to other financial responsibilities by working in a paid position outside of their practicum commitment. In addition to this, the nature of work in some placements requires students to be available to be scheduled days, evenings, and weekends to meet the required hours of their placement while receiving meaningful mentorship. This further reduces the student's ability to work in a paid role as it makes scheduling paid shifts difficult.

Another driver of the update to the KSR practicum structure is that the career paths available to graduates of the Faculty's degree programs, where the practicum is required, are very diverse. The current delivery structure places completion of the practicum at the end of the degree program (90 credit units completed) when students have not yet had an opportunity to complete a thorough exploration of the different career paths available to them. This places a lot of pressure on the student to choose the "right" or most "advantageous" practicum at the very end of their program, instead of emphasizing the connection of theory into practice, very early in and across the degree program.

The proposed new delivery structure incorporates, much earlier in the degree program, student engagement in career exploration, understanding of professional requirements and potential certifying bodies more consistently and fully, attainment of multiple and more diverse work-integrated learning experiences, and improvement of students' personal awareness as to what is required of them in their next steps after completion of their undergraduate program, what their professional identity is, and how that identity is present within one's career path.

Finally, within the significant ask of students completing practicum in the current practicum structure where placements are unpaid with an average work week of 30-35 hours, it has become apparent that this time completion expectation of students is often not being filled with meaningful skills, professional development, and/or intensive applied learning for the student. Often within these large, macro experiences, significant amounts of this time is being filled with entry-level labour that should otherwise be completed by a paid employee of the placement organization. In other words, practicum organizations are asking skilled student labour to fill their placement hours and practicum requirements with tasks not connected strongly to learning outcomes or experiential, applied program learning. As a result, these students are left without a rigorous, purposeful, career focused work integrated learning experience.

The proposed new structure will respond to the needs of current and future students, implement solutions to prioritize diversity, and provide more flexible pathways for students to receive meaningful, rich, rigorous, purposeful, career focused, work integrated, and culturally responsive learning experiences. The new In the Field Learning delivery model will focus on the provision of high density, rich, and applied outcomes based learning and learning opportunities much more closely aligned with the Work Integrated Learning (WIL) principles of Field Placements. In this new delivery model, students will be provided a mix and variety of short term, micro, as well as macro intensive hands-on practical experiences, in a multiple of settings with a variety

of populations relevant to their subjects of study and career pathways (reference: [CEWIL Canada - What is Work Integrated Learning (WIL)](#)).

This proposed top-down WIL approach integrates a greater connection of WIL (Experiential Learning-EL/Community Service Learning-CSL) in academic focused courses, from the point of completion of 45 credits (1.5 yr of program) all the way through to degree completion. In this way, students will be better able to understand how each of the individual courses offered throughout their program and in connection to WIL/EL/CSL electives, develop skills that are transferable across their degree and beyond into their careers. This proposed model of In the Field Learning provides greater flexibility to students in support of program completion, accessibility and inclusivity, and applied, active engaged outcome based learning through much broader sampling of populations and culturally diverse In the Field Learning opportunities they will be exposed to and choose to complete.

These proposed program, regulation, and course changes will have impacts to administration that are in line with the challenges the Faculty of KSR is experiencing in the current Practicum delivery model. Academic Instructors, who currently are assigned to the Practicum Seminar, will be assigned to individual courses in the new model and will need to be more fully engaged in the oversight and quality assurance of the In the Field Learning experiences unique to each course offering. As well, relationship building with both current and new placement partners, to coordinate high quality micro and macro work integrated experiences for KSR students will continue to be a large focus of the KSR Practicum Advisor position and administrative support will need to be added there. Administration process will also need to be established to ensure current students already enrolled in programming are provided the opportunity and option to transition to the new delivery model if appropriate. As well, a phased approach to course deletions (indicated in the proposal package), during the teach out phase, will be taken to ensure that students who either can not or do not want to transition to the new delivery model can continue and complete their current degree programs. KSR Academic Advisors and Student Services Office staff, as well key Leadership positions in the Faculty, have been consulted and included in the development of these proposed changes and will continue to be included in addressing these proposed changes and administrative, transactional impacts associated with the proposed changes, for implementation of the new structure in Fall 2024.

Calendar Copy

URL in current Calendar (or leave blank if it is a new page):
https://calendar.ualberta.ca/preview_program.php?catoid=36&poid=43054&returnto=11341

Current	Proposed
Research Certificate in Kinesiology	**Research Certificate in Kinesiology**
	Effective September 2024
Return to: [Faculty of Kinesiology, Sport, and Recreation - Programs](#)	Return to: [Faculty of Kinesiology, Sport, and Recreation - Programs](#)

The Research Certificate in Kinesiology is open to undergraduate students in the Faculty of Kinesiology, Sport, and Recreation's BSc Kin or BKin degree programs. Consent of the Faculty is required. Normally, a student will be able to fulfill the requirements for this certificate as part of a BSc Kin or BKin program although some students may need to complete more than the minimum number of credits required in order to qualify for both the degree and the certificate.

Students may pursue the Research Certificate in Kinesiology by fulfilling the existing requirements for their program and by completing 24 units as follows:

1. 9 units from a list of 300- and 400-level approved option courses that include instruction and experience in research methods, data collection, data handling and analysis, interpretation, and/or practical skills. A maximum of 6 units may be selected from KIN 398, KIN 399, KIN 498, or KRLS 495.
2. KIN 493 (15 units) Professional Practicum focused on research completed under the supervision of a University of Alberta academic faculty member or an approved research affiliate,
3. Presentation at a conference either on or off campus.

Students wishing to receive the Research Certificate in Kinesiology must apply through Undergraduate Student Services in the Faculty of Kinesiology, Sport, and Recreation by the application deadline for convocation (see Academic Schedule).

Removed language

The Research Certificate in Kinesiology is open to undergraduate students in the Faculty of Kinesiology, Sport, and Recreation's BSc Kin or BKin degree programs. Consent of the Faculty is required. Normally, a student will be able to fulfill the requirements for this certificate as part of a BSc Kin or BKin program although some students may need to complete more than the minimum number of credits required in order to qualify for both the degree and the certificate.

Students may pursue the Research Certificate in Kinesiology by fulfilling the existing requirements for their program and by completing a minimum of 21 to a maximum of 24 units as follows:

1. 9 to a maximum of 12 units from a list of 300- and 400-level approved option courses that include instruction and experience in research methods, data collection, data handling and analysis, interpretation, and/or practical skills. A maximum of 6 units may be selected from KIN 398, KIN 399, KIN 498, or KRLS 495.
2. Minimum of 9 to a maximum of 12 units of In Field Learning that is focused on research completed under the supervision of a University of Alberta academic faculty member or an approved research affiliate.
3. Presentation at a conference either on or off campus.

Students wishing to receive the Research Certificate in Kinesiology must apply through Undergraduate Student Services in the Faculty of Kinesiology, Sport, and Recreation by the application deadline for convocation (see Academic Schedule).

New language

Reviewed/Approved by:

KSR Undergraduate Programs Committee: April 6th, 2022 consultation; June 1st, 2022 consultation; September 7, 2022 consultation; November 16th, 2022 approval
KSR Faculty Executive: Sept 21st 2022 consultation; November 22nd, 2022 approval

KSR Faculty Council: Sept 28th 2022 consultation; November 30th, 2022 approval
Other Consultations: KSR Leadership Team: April 4th, 2022; August 8, 2022; October 18th, 2022 KSR Academic Council: April, 26th, 2022 KSR UG Students (upon completion of practicum): June 10, 2022 KSRSS Council: October 16th, 2022 KSRSS GFC Student Representative: October 24, 2022 Undergraduate Program Support Team (Undergraduate & Non-Credit): June 2, 2022; August 25, 2022 consultation Dr. Karsten Mundel, Provost Fellow, Experiential and Work-Integrated Learning & Associate Professor: June 13, 2022 Norma Rodenburg, Deputy Registrar, Office of the Registrar: June 13, 2022 Dr. Beverley Temple, Professor, Associate Dean, Undergrad Studies, Faculty of Nursing: June 20, 2022 Dr. Florence Glanfield, Vice-Provost Indigenous Programming & Research: July 14, 2022 Rebecca Liaw, University Calendar Editor: October 25, 2022

UNIVERSITY OF ALBERTA

Governance Executive Summary
Action Item

Agenda Title	Changes to Science Curriculum and Associated Program Changes, Augustana Faculty

Motion

THAT the GFC Programs Committee approve, with delegated authority from General Faculties Council, the proposed elimination of the Science Foundations curriculum, with resulting changes to Bachelor of Science, Bachelor of Arts and Bachelor of Science/Bachelor of Education Combined degree programs in Augustana Faculty, to take effect in Fall 2023.

Item

Action Requested	☒ Approval ☐ Recommendation
Proposed by	Demetres Tryphonopoulos, Dean, Augustana Faculty
Presenter(s)	Stacy Lorenz, Associate Dean (Academic), Augustana Faculty

Details

Office of Administrative Responsibility	Provost and Vice-President (Academic)
The Purpose of the Proposal is (*please be specific*)	The proposal is before the committee to discontinue the Science Foundations curriculum currently available as a component in several Bachelor of Science, Bachelor of Arts, and Bachelor of Science/Bachelor of Education Combined degree programs offered through Augustana Faculty, effective for students admitted for Fall 2023. The resulting program changes and accompanying course revisions will occur in the 2023-2024 University Calendar.
Executive Summary (*outline the specific item – and remember your audience*)	The Department of Science at the Augustana Campus is making a number of changes to courses and programs in response to problems with transferability, student mobility, and the completion of prerequisites. Students have raised numerous concerns about the separation of lecture and lab sections in introductory biology, chemistry, computing science, and physics courses at Augustana, as well as organic chemistry at the senior level. When students have tried to transfer to other faculties at the University of Alberta or to other institutions, they have found that these courses are not accepted, or that they need to complete 6 credits at Augustana in order to receive 3 credits elsewhere. At the same time, students trying to complete prerequisites for entry into other science-based programs are finding that it is extremely difficult to satisfy those prerequisites in a timely and logical way. This has become a serious problem for recruitment, retention, and reputation.

In response to these issues, Augustana's "Science Foundations" curriculum and associated AUSCI lab courses (implemented in Fall 2021) will be eliminated beginning in 2023-24. Introductory science courses and some senior-level chemistry courses will again consist of both lecture and laboratory sections together. Science disciplines will also return to offering two introductory 100-level courses rather than teaching one introductory course at the 100-level and one at the 200-level. The remaining components of Augustana's recently revised |

Item No. 8

	Science majors will largely remain intact. The primary programs affected by these proposed changes are as follows:
	In the Bachelor of Science: ● Major in Chemical and Physical Sciences ● Major in Computing Science and Mathematics ● Major in Environmental Science ● Major in Integrative Biology ● Major in Physical Education In the Bachelor of Arts: ● Major in Psychology and Mental Health In the Bachelor of Science/Bachelor of Education Combined degree ● Major in General Sciences, including the specializations in Biology, Chemistry, General Sciences, and Mathematics These revisions will bring Augustana's first-year program more in line with what students would experience in similar courses on North Campus and at other Canadian universities.
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](#)>	*Those who are actively **participating**:* ● Augustana Department of Science (Department Council includes undergraduate student representatives) ● Augustana Academic Council ● Augustana Assistant Dean, Enrollment Management and staff in the Augustana Student Academic Services office
	*Those who have been **consulted**:* ● Office of the Provost and Vice-President (Academic) ● Members of the Office of the Vice-Provost (Programs) ● University Governance ● Office of the Registrar ● Program Support Team (Undergraduate and Non-Credit): November 24, 2022, and December 15, 2022 ● Gerda DeVries, Associate Dean, Undergraduate, Faculty of Science ● Members of the Department of Biological Sciences and Department of Chemistry, Faculty of Science ● Members of the Faculty of Education, including Lynn McGarvey, Vice Dean and Associate Dean, Academic ● Edith Finczak, Director of Academic Budget and Planning in the Provost's Office ● Augustana Faculty Curriculum Committee (which includes voting undergraduate student representatives) ● Augustana Faculty Council (which includes voting undergraduate student representatives) ● Augustana Students' Association (ASA) Executive and Council

	● Augustana Student Association Student Forum: November 16, 2022 ● Augustana Budget Committee
	*Those who have been **informed**:* ●
Approval Route (Governance) (including meeting dates)	Augustana Department of Science Council – November 18, 2022 Augustana Curriculum Committee – November 24, 2022 Augustana Faculty Council - December 2, 2022 GFC Programs Committee (for approval) – January 12, 2023

Strategic Alignment

Alignment with *For the Public Good*	**EXPERIENCE**
	GOAL: Experience diverse and rewarding learning opportunities that inspire us, nurture our talents, expand our knowledge and skills, and enable our success.
	Objective 7:
	Increase graduate and undergraduate students' access to and participation in a broad range of curricular experiential learning opportunities that are well-integrated with program goals and enrich their academic experience.
	    ● Strategy 1
	      Increase students' experiential learning through mutually beneficial engagement with community, industry, professional, and government organizations locally, nationally, and internationally
	Objective 9:
	Enhance, support, and mobilize the unique experiences and cultures of all University of Alberta campuses to the benefit of the university as a whole.
	    ● Strategy 1
	      Facilitate and deepen inter-campus connections, communication, and collaborations with Augustana Campus, and ensure that it is strengthened as a leading a liberal arts college, and as a living laboratory for teaching and learning innovation, to the benefit of the entire university.
	
	EXCEL
	GOAL: Excel as individuals, and together, sustain a culture that fosters and champions distinction and distinctiveness in teaching, learning, research, and service.
	Objective 14:
	Inspire, model, and support excellence in teaching and learning.
	
	ENGAGE
	GOAL: 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.

	Objective 17: Facilitate, build, and support interdisciplinary, cross-faculty, and cross-unit engagement and collaboration. ● Strategy 2 Incent the development of interdisciplinary and cross-faculty graduate and undergraduate teaching and learning initiatives, including programs, courses, and embedded certificates	
Alignment with Core Risk Area	Please note below the specific institutional risk(s) this proposal is addressing.	
	☒ Enrolment Management ☐Faculty and Staff ☐Funding and Resource Management ☐IT Services, Software and Hardware ☒ Leadership and Change ☐Physical Infrastructure	☐Relationship with Stakeholders ☒ Reputation ☐Research Enterprise ☐Safety ☒ Student Success
Legislative Compliance and jurisdiction	Post-Secondary Learning Act GFC Programs Committee Terms of Reference	

Attachments:

1. Science Foundations Briefing Note January 2023 (4 pages)
2. Faculty of Science Transfer Credit Augustana 2022 (1 page)
3. Calendar Change Request Form for Program and Regulation Changes - Chemical and Physical Sciences (4 pages)
4. Calendar Change Request Form for Program and Regulation Changes - Computing Science and Mathematics (4 pages)
5. Calendar Change Request Form for Program and Regulation Changes - Environmental Science (4 pages)
6. Calendar Change Request Form for Program and Regulation Changes - Integrative Biology (5 pages)
7. Calendar Change Request Form for Program and Regulation Changes - Physical Education (3 pages)
8. Calendar Change Request Form for Program and Regulation Changes - Psychology and Mental Health (5 pages)
9. Calendar Change Request Form for Program and Regulation Changes - Bachelor of Science-Bachelor of Education (17 pages)
10. Calendar Change Request Form for Course Changes - Augustana Science (28 pages)
11. Calendar Change Request Form for Course Changes - Augustana AUSCI (3 pages)

Prepared by: Jonathan Hawkins, Faculty Governance and Academic Processes Officer – Augustana Campus, jonathan.hawkins@ualberta.ca.

Briefing Note
Science Foundations and Lab Courses at Augustana Faculty
January 2023
Prepared by Stacy L. Lorenz, Associate Dean (Academic)

Background
Beginning in the 2021-22 academic year, the Department of Science began offering a series of revised courses and restructured programs as part of a wider process of curriculum change and renewal at the Augustana Faculty. A key feature of the changes was the development of the "Science Foundations" curriculum in which each science discipline (with the exception of MAT) offers one introductory lecture course (LEC) and most disciplines (BIO, CHE, CSC, PHY) offer an introductory laboratory course (LAB), with the AUSCI designator to convey the common learning objectives across LAB courses. Each LEC and LAB course is a distinct 3-credit course. The traditional combination of 3 hours LEC and 3 hours LAB per week (or perhaps every second week) in a single 3-credit course has been replaced by separate LEC and LAB courses worth 3 credits each. For disciplines in which there had usually been a two-course introductory "general" sequence at the 100-level, the second general LEC course has been moved to the 200-level. In some cases, a corresponding 200-level LAB course has also been developed.

Since these changes were adopted, students have raised numerous concerns about the separation of lecture and lab sections in these introductory courses, as well as organic chemistry at the senior level. When students have tried to transfer to other faculties at the University of Alberta or to other institutions, they have found that these courses are not accepted, or that they need to complete 6 credits at Augustana in order to receive 3 credits elsewhere. At the same time, students trying to complete prerequisites for entry into other science-based programs are finding that it is extremely difficult to satisfy those prerequisites in a timely and logical way. This has become a serious problem for recruitment, retention, and reputation.

Proposal
Even though we are only in the second year of changes to the Science program, it is clear that the decision to adopt the Science Foundations curriculum has not been successful. As a result, Augustana proposes to reverse most of the course changes that were made in Science in 2021-22, and revise the affected majors to take these course changes into account. Science Foundations and the corresponding AUSCI lab courses will be eliminated, introductory science courses will again consist of both LEC and LAB sections together, and science disciplines will return to offering two introductory 100-level courses. The remaining components of the recently revised Science majors will largely remain intact.

Previous Changes and Perceived Advantages
The Science Foundations concept and the shift to separate LEC and LAB sections was motivated by a desire to create a more standard first-year program for students in the Department of Science, and therefore ensure greater flexibility for students who decided to change their desired major by their second year. Other considerations included providing students with more appropriate academic credit for laboratory experiences, a more pedagogically sound way of teaching laboratory skills, and the cost savings associated with stand-alone 3-credit lab courses. By streamlining first-year science offerings and reducing the overall workload involved with

combined LEC and LAB courses, it was hoped that student stress and anxiety would be reduced, as well. Finally, students would benefit from more flexibility in scheduling as 100-level LEC and LAB courses were offered in both fall and winter terms. Overall, the focus was on students who would start and finish their majors at Augustana, rather than on transferability and mobility.

Difficulties Following Implementation
While this distinctive approach to science degree programs offers some advantages, the uniqueness of the program – particularly the separation of LEC and LAB components – has created a number of significant difficulties and anxieties for students. The primary concerns are with how Augustana courses will be viewed by other faculties at the University of Alberta (particularly the Faculty of Science), and by professional programs at the University of Alberta and other universities across Canada and the United States. Students are concerned with how their courses will be evaluated if they decide to transfer elsewhere, especially after their first year, and with whether or not their courses will cover the prerequisites needed to for admission to other degree programs in science, such as medicine, dentistry, pharmacy, nursing, radiation therapy, medical laboratory science, veterinary medicine, dental hygiene, and optometry.

Because Augustana courses do not follow the traditional model of combining lectures and labs in a single course, there is a significant risk that students will need to take both the LEC and LAB courses in a particular area (6 credits) in order to present the equivalent of a combined LEC/LAB course (3 credits) elsewhere. For instance, students could complete 18 credits in BIO, CHE, and PHY, with the corresponding SCI LABS, at Augustana, and receive only 9 credits toward another program. In other cases, students need to complete both the LEC and LAB courses at Augustana (6 credits) to satisfy a single course prerequisite (3 credits), leading to significant scheduling challenges as they attempt to take all of the prerequisites required for admission to their desired program.

As an example, please see the attached "Faculty of Science Transfer Credit from Augustana Faculty" summary sheet, which demonstrates the difficulties with transferability faced by Augustana students who applied for admission to the Faculty of Science following the 2021-22 academic year. Please note, as well, the much more favourable treatment of courses that were offered in 2019-20 and 2020-21, before changes were made at Augustana. In almost all cases, Augustana's introductory courses were previously accepted for full equivalent credit.

Rationale for Proposed Changes
The separation of lecture and lab components in introductory courses is a clear departure from the way that science courses are taught at other universities across Canada. This degree of uniqueness puts Augustana at a high risk of being unattractive to potential students, who expect a high degree of transferability in their standard university science courses and the ability to complete prerequisites for their target program in a timely fashion. The uncertainty around recognition of our courses is calling into question the overall credibility of our programs, and threatening the trust and confidence that students and parents have in us. The damage to our reputation could be devastating. At a time when Augustana is expected to grow its enrolment, the transfer and prerequisite situation in science means that we are likely to continue to see a drop in applications among students who require first-year science courses, resulting in serious financial and budget implications for the campus.

Without the security of transferability and recognition of our courses, we are losing potential first-year students to programs that offer this security. Without the guarantee of being able to complete prerequisites, we are jeopardizing our ability to attract students hoping to enter specialized programs that require a year or more of university study in order to satisfy entrance requirements. Some students are now planning to spend their second year on North Campus in order to complete their requirements in a more timely fashion (and they may not return). Others are making plans to leave Augustana and pursue studies at a place where they see themselves having a better opportunity to meet their long-term goals. At the same time, some students are requesting exemptions to Augustana's core Foundation or Breadth of Knowledge requirements in order to be able to fit in all the science courses they need to satisfy prerequisites for such programs as dentistry.

Courses and programs that will be affected
Introductory AUSCI lab courses will be eliminated and lecture and lab sections will again be combined in 100-level AUBIO, AUCHE, AUCSC, and AUPHY courses. Lecture and lab sections will also be reunited in senior-level organic chemistry courses. The main programs affected will be Bachelor of Science programs in the following majors:

        Chemical and Physical Sciences
        Computing Science and Mathematics
        Environmental Science
        Integrative Biology

The course changes will result in a reduction of 3-9 required credits in each of these programs. Those credits will be replaced by open options, giving students some additional flexibility in completing their degree requirements and pursuing their particular academic interests.

For the Bachelor of Science (BSc)/Bachelor of Education (BEd) (Secondary) combined degree, Science Foundations lab courses will be replaced with appropriate discipline-based courses but the overall number of credits in each major subject area and subject specialization will remain the same.

Other Augustana majors that include required Science courses will also see minor revisions to some course names and numbers in accordance with the proposed course changes. The overall number of credits required in these majors will not be affected.

Timeline for implementation
Course and program changes will be made for the 2023-24 Calendar and new students will be admitted to the revised programs in the fall of 2023. This is an ambitious timeline, but these changes must be made as quickly as possible in order to minimize the difficulties experienced by students and to limit damage to Augustana's reputation as we recruit students for fall 2023.

Consultation process and feedback received
The decision to make these program changes was based initially on concerns expressed by current and prospective Augustana students. In response to these concerns, a plan emerged out of conversations between the Dean, Vice Dean, Associate Dean (Academic), Assistant Dean Enrolment Management, Student Academic Services (SAS) staff members, Chair and Associate

Chair of the Department of Science, Academic Council, and Science Department Council (which includes a student representative). The Dean and Associate Dean (Academic) have met with individual students as well as representatives of the Augustana Students' Association (ASA). Members of the administrative team attended an ASA Student Forum on November 16, 2022, to discuss this plan of action. Following these consultations, the Curriculum Committee (which includes two student representatives) approved the required program and course changes on November 24, 2022. Faculty Council then approved these program and course revisions on December 2, 2022. In addition, Augustana's Budget Committee has been considering the financial implications of these changes in planning for 2022-23 and beyond.

Consultation and information sharing beyond Augustana Campus has included the following people and groups:
- Gerda DeVries, Associate Dean, Undergraduate, Faculty of Science
- Members of the Department of Biological Sciences and Department of Chemistry, Faculty of Science
- Members of the Faculty of Education, including Lynn McGarvey, Vice Dean and Associate Dean, Academic
- Members of the Office of the Vice-Provost (Programs)
- Edith Finczak, Director of Academic Budget and Planning in the Provost's Office
- Program Support Team (Undergraduate and Non-Credit)

Plans for current students
The main challenge for 2023-24 is offering the required 200-level LAB and LEC courses to second-year students while also providing the equivalent revised 100-level combined LEC/LAB courses for first-year students. In Biology and Chemistry, two "transition courses" have been created (AUBIO 214 and AUCHE 214) for second-year students as equivalents to the previous versions of AUBIO 212 and AUCHE 212. These two courses will only be offered in 2023-24. There will be very few changes to other 200-, 300-, and 400-level offerings, or to the program requirements after second year. Some course substitutions and exceptions will need to be made, but we will ensure that the academic integrity of the current program will be maintained and that students will not be disadvantaged by the changes.

Other challenges and financial impacts
There is no doubt that these changes will be extremely challenging from a scheduling, budgetary, and communications perspective. The need to offer more Science courses in the transition year when changes are implemented, and the recombining of lectures and labs on an ongoing basis, will have short-term and long-term financial costs to the campus. However, the alternative of continuing with the current course and program structure is unacceptable and untenable, and presents a substantially greater risk to Augustana's reputation, credibility, future enrolment, and financial health than reversing curriculum changes which simply are not working.

Current Augustana Bachelor of Science programs
[Program: Bachelor of Science [Augustana] - University of Alberta - Acalog ACMS™ (ualberta.ca)](ualberta.ca)

Faculty of Science Transfer Credit from Augustana Faculty

Please note that these courses have been assessed as transferable to the Faculty of Science at the University of Alberta to the end of Fall 2021 - Winter 2022. Augustana courses completed after Winter 2022 may be subject to different transfer credit.

Augustana Course/Lab	Faculty of Science (North Campus) Equivalent 2021-2022
AUBIO 111	SCOPT 1XX (3)
AUSCI 115	**NC
**AUBIO 111 + AUSCI 115	**BIOL 107
AUBIO 212	SCOPT 2XX (3)
AUCHE 110	SCOPT 1XX(3)
AUSCI 125	NC
AUCHE 212	SCOPT 1XX(3)
**AUCHE 110 + AUSCI 125	SCOPT 1XX (3) **Students may apply to write a credit by special assessment examination in CHEM 101
AUCHE 213	NC
AUCHE 110 + AUSCI 125+ AUCHE 212 + 213	CHEM 101 + CHEM 102
AUCHE 250	CHEM 264 (can take CHEM 266 until end of 22/23)
AUCHE 251	NC
AUCSC 113	SCOPT 1XX(3)
AUSCI 135	NC
AUCSC 113 + AUSCI 135	CMPUT 174
AUCSC 211	SCOPT 1XX(3)
AUSCI 235	NC
AUCSC 211 + AUSCI 235	CMPUT 175
AUCSC 204	AROPT 2XX (3)
AUCSC 218	CMPUT 2XX (3)
AUCSC 220	CMPUT 301
AUPHY 120	SCOPT 1XX (3)
AUSCI 165	NC
AUPHY 120 + AUSCI 165	PHYS 130 (still need PHYS 124 or 144 from FofS)

Augustana Course/Lab	Faculty of Science (North Campus) Equivalent 2020-2021 & 2019-2020
AUCSC 111	CMPUT 174
AUCSC 112	CMPUT 175
AUSC 204	AROPT 2XX (3)
AUSC 218	CMPUT 2XX (3)
AUCSC 220	CMPUT 301
AUCHE 110	CHEM 101
AUCHE 112	CHEM 102
AUCHE 250	CHEM 261
AUCHE 252	CHEM 263
AUBIO 111	BIOL 107
AUBIO 112	BIOL 108
AUBIO 230	BIOL 201
AUBIO 253	BIOL 208
AUBIO 260	BIOL 207
AUPHY 120	SCOPT 1XX (3)

** Updated

Calendar Change Request Form
for Program and Regulation Changes
See the Calendar Guide for tips on how to complete this form.

UNIVERSITY OF ALBERTA

Faculty (& Department or Academic Unit):	Augustana
Contact Person:	Jonathan Hawkins (jh12@ualberta.ca)
Level of change: (choose one only)	☑ Undergraduate
	☐ Graduate
Type of change request: (check all that apply)	☑ Program
	☐ Regulation
For which term is this intended to take effect?	Fall 2023
Does this proposal have corresponding course changes? (Should be submitted at the same time)	Yes

Rationale
Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

The Department of Science at the Augustana Campus is making a number of changes to courses and programs in response to problems with transferability, student mobility, and the completion of prerequisites. Students have raised numerous concerns about the separation of lecture and lab sections in introductory biology, chemistry, computing science, and physics courses at Augustana, as well as organic chemistry at the senior level. When students have tried to transfer to other faculties at the University of Alberta or to other institutions, they have found that these courses are not accepted, or that they need to complete 6 credits at Augustana in order to receive 3 credits elsewhere. At the same time, students trying to complete prerequisites for entry into other science-based programs are finding that it is extremely difficult to satisfy those prerequisites in a timely and logical way. This has become a serious problem for recruitment, retention, and reputation.

In response to these issues, Augustana's "Science Foundations" curriculum and associated AUSCI lab courses (implemented in Fall 2021) will be eliminated beginning in 2023-24. Introductory science courses and some senior-level chemistry courses will again consist of both lecture and laboratory sections together. Science disciplines will also return to offering two introductory 100-level courses rather than teaching one introductory course at the 100-level and one at the 200-level. The remaining components of Augustana's recently revised Science majors will largely remain intact. These revisions will bring Augustana's first-year program more in line with what students would experience in similar courses on North Campus and at other Canadian universities.

Overall, the number of required units on the Major in Chemical and Physical Sciences has been reduced from 75 to 69.

In terms of consultation, the decision to make these program changes was based initially on concerns expressed by current and prospective Augustana students. In response to these concerns, a plan emerged out of conversations between the Dean, Associate Dean (Academic), Assistant Dean Enrolment Management, Student Academic Services (SAS) staff members, Chair and Associate Chair of the

Department of Science, Academic Council, and Science Department Council (which includes a student representative). The Dean and Associate Dean (Academic) have met with individual students as well as representatives of the Augustana Students' Association (ASA). Members of the administrative team attended an ASA Student Forum on November 16, 2022, to discuss this plan of action. Following these consultations, the Curriculum Committee (which includes two student representatives) approved the required program and course changes on November 24, 2022. In addition, Augustana's Budget Committee has been considering the financial implications of these changes in planning for 2022-23 and beyond.

Consultation and information sharing beyond Augustana Campus has included the following people and groups:
- Gerda DeVries, Associate Dean, Undergraduate, Faculty of Science
- Members of the Department of Biological Sciences and Department of Chemistry, Faculty of Science
- Members of the Faculty of Education, including Lynn McGarvey, Vice Dean and Associate Dean, Academic
- Members of the Office of the Vice-Provost (Programs)
- Edith Finczak, Director of Academic Budget and Planning in the Provost's Office
- Program Support Team (Undergraduate and Non-Credit)

Calendar Copy

URL in current Calendar (or "New page")
https://calendar.ualberta.ca/preview_program.php?catoid=36&poid=42720&returnto=11333

Current Copy: ~~Removed language~~	Proposed Copy: New language

Major in Chemical and Physical Sciences [Augustana]
Requirements
~~**18 units in Science Foundations for Chemical and Physical Sciences**~~
- ~~AUCHE 110 - General Chemistry I~~
- ~~AUPHY 120 - Introductory Physics~~
- ~~AUMAT 116 - Calculus Concepts and Modelling~~
  ~~**3 units from:**~~
   - ~~AUBIO 111 - Functional Biology~~
   - ~~AUCSC 113 - Foundational Introduction to Computational Thinking and Problem Solving~~
   - ~~AUENV 120 - Human Activities and the Natural Environment~~
~~**6 units from AUSCI foundations laboratory courses:**~~
   - ~~AUSCI 125 - General Chemistry Lab I~~
   - ~~3 units from any other science discipline lab foundation course~~
 	
~~**24**~~ **units in Chemical Sciences:**
	Major in Chemical and Physical Sciences [Augustana]
	Requirements
	27 units in Chemical Sciences:
	- AUCHE 110 - General Chemistry I
	- AUCHE 112 - General Chemistry II
	- AUCHE 220 - Analysis I
	- AUCHE 221 - Analysis I Lab
	- AUCHE 230 - Structure and Bonding
	- AUCHE 250 - Organic Chemistry I
	- AUCHE 279 - Physical Chemistry
	- AUCHE 350 - Introductory Synthesis
	- AUCHE 351 - Introductory Synthesis Lab
	
	3 units in Science:
	- AUSCI 405 - Chemical and Physical Sciences Capstone
	
	6 units in Physics:
	- AUPHY 110 - Mechanics
	- AUPHY 120 - Waves, Thermodynamics and Optics

- AUCHE ~~212~~ - General Chemistry II
- ~~AUCHE 213 - General Chemistry II Lab~~
- AUCHE 220 - Analysis I
- AUCHE 221 - Analysis I Lab
- AUCHE 230 - Structure and Bonding
- AUCHE 250 - ~~Synthesis I~~
- ~~AUCHE 251 - Synthesis I Lab~~
- AUSCI 405 - Chemical and Physical Sciences Capstone

~~18 units~~ in Chemical Sciences Specialization:
Students must complete one of the following specializations in Chemical Sciences:

Synthesis specialization:
~~12~~ units from:
- ~~AUCHE 350 - Synthesis II~~
- ~~AUCHE 351 - Synthesis II Lab~~
- AUCHE 352 - ~~Synthesis III~~
- AUCHE 353 - ~~Synthesis III Lab~~

6 units from:
- AUCHE 323 - Analysis II
- AUCHE 324 - Analysis II Lab
- AUCHE 325 - Analysis III
- AUCHE 341 - Introduction to Environmental Chemistry
- AUCHE 450 - Enzymes and Enzyme Mechanisms

Analysis Specialization
9 units from:
- AUCHE 323 - Analysis II
- AUCHE 324 - Analysis II Lab
- AUCHE 325 - Analysis III

9 units from:
- AUCHE 341 - Introduction to Environmental Chemistry
- ~~AUCHE 350 - Synthesis II~~
- ~~AUCHE 351 - Synthesis II Lab~~
- AUCHE 352 - ~~Synthesis III~~
- AUCHE 353 - ~~Synthesis III Lab~~
- AUCHE 450 - Enzymes and Enzyme Mechanisms

Additional Requirements
- 9 units from Fine Arts and Humanities with at least 3 units in each
- 6 units from Social Sciences

3 units in Math:
- AUMAT 116 - Calculus Concepts and Modelling

15 units in Chemical Sciences Specialization:
Students must complete one of the following specializations in Chemical Sciences:

Synthesis specialization:
9 units from:
- AUCHE 252 - Organic Chemistry II
- AUCHE 352 - Advanced Synthesis
- AUCHE 353 - Advanced Synthesis Lab

6 units from:
- AUCHE 323 - Analysis II
- AUCHE 324 - Analysis II Lab
- AUCHE 325 - Analysis III
- AUCHE 341 - Introduction to Environmental Chemistry
- AUCHE 450 - Enzymes and Enzyme

Analysis Specialization
9 units from:
- AUCHE 323 - Analysis II
- AUCHE 324 - Analysis II Lab
- AUCHE 325 - Analysis III

6 units from:
- AUCHE 252 - Organic Chemistry II
- AUCHE 341 - Introduction to Environmental Chemistry
- AUCHE 352 - Advanced Synthesis
- AUCHE 353 - Advanced Synthesis Lab
- AUCHE 450 - Enzymes and Enzyme Mechanisms

Additional Requirements
- 9 units from Fine Arts and Humanities with at least 3 units in each
- 6 units from Social Sciences

Reviewed/Approved by:

Augustana Faculty Council, December 2, 2022
Augustana Department of Science, November 18, 2022.   Augustana Curriculum Committee, November 22 & 24, 2022

Calendar Change Request Form
for Program and Regulation Changes
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Faculty (& Department or Academic Unit):	Augustana
Contact Person:	Jonathan Hawkins (jh12@ualberta.ca)
Level of change: (choose one only)	☑ Undergraduate
	☐ Graduate
Type of change request: (check all that apply)	☑ Program
	☐ Regulation
For which term is this intended to take effect?	Fall 2023
Does this proposal have corresponding course changes? (Should be submitted at the same time)	Yes

Rationale

Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

The Department of Science at the Augustana Campus is making a number of changes to courses and programs in response to problems with transferability, student mobility, and the completion of prerequisites. Students have raised numerous concerns about the separation of lecture and lab sections in introductory biology, chemistry, computing science, and physics courses at Augustana, as well as organic chemistry at the senior level. When students have tried to transfer to other faculties at the University of Alberta or to other institutions, they have found that these courses are not accepted, or that they need to complete 6 credits at Augustana in order to receive 3 credits elsewhere. At the same time, students trying to complete prerequisites for entry into other science-based programs are finding that it is extremely difficult to satisfy those prerequisites in a timely and logical way. This has become a serious problem for recruitment, retention, and reputation.

In response to these issues, Augustana's "Science Foundations" curriculum and associated AUSCI lab courses (implemented in Fall 2021) will be eliminated beginning in 2023-24. Introductory science courses will again consist of both lecture and laboratory sections together. Science disciplines will also return to offering two introductory 100-level courses rather than teaching one introductory course at the 100-level and one at the 200-level. The remaining components of Augustana's recently revised Science majors will largely remain intact. These revisions will bring Augustana's first-year program more in line with what students would experience in similar courses on North Campus and at other Canadian universities.

Overall, the number of required units in the Major in Computing Science and Mathematics has been reduced from 87 to 78 credits for the Computing Science Stream, and from 75 to 66 credits for the Computational and Applied Mathematics Stream.

In terms of consultation, the decision to make these program changes was based initially on concerns expressed by current and prospective Augustana students. In response to these concerns, a plan emerged out of conversations between the Dean, Associate Dean (Academic), Assistant Dean Enrolment Management, Student Academic Services (SAS) staff members, Chair and Associate Chair of the

Department of Science, Academic Council, and Science Department Council (which includes a student representative). The Dean and Associate Dean (Academic) have met with individual students as well as representatives of the Augustana Students' Association (ASA). Members of the administrative team attended an ASA Student Forum on November 16, 2022, to discuss this plan of action. Following these consultations, the Curriculum Committee (which includes two student representatives) approved the required program and course changes on November 24, 2022. In addition, Augustana's Budget Committee has been considering the financial implications of these changes in planning for 2022-23 and beyond.

Consultation and information sharing beyond Augustana Campus has included the following people and groups:
- Gerda DeVries, Associate Dean, Undergraduate, Faculty of Science
- Members of the Department of Biological Sciences and Department of Chemistry, Faculty of Science
- Members of the Faculty of Education, including Lynn McGarvey, Vice Dean and Associate Dean, Academic
- Members of the Office of the Vice-Provost (Programs)
- Edith Finczak, Director of Academic Budget and Planning in the Provost's Office
- Program Support Team (Undergraduate and Non-Credit)

Calendar Copy

URL in current Calendar (or "New page")
https://calendar.ualberta.ca/preview_program.php?catoid=36&poid=42720&returnto=11333

Current Copy: ~~Removed language~~	Proposed Copy: New language
Major in Computing Science and Mathematics [Augustana]	**Major in Computing Science and Mathematics [Augustana]**
Requirements	**Requirements**
• AUCSC ~~113 - Foundational~~ Introduction to Computational Thinking and Problem Solving	• AUCSC 111 - Introduction to Computational Thinking and Problem Solving
• AUCSC ~~211~~ - Data Structures and Algorithms	• AUCSC 112 - Data Structures and Algorithms
• AUCSC 250 - Computer Organization and Architecture I	• AUCSC 250 - Computer Organization and Architecture I
• AUCSC 310 - Algorithm Design and Analysis	• AUCSC 310 - Algorithm Design and Analysis
• AUMAT 116 - Calculus Concepts and Modelling	• AUMAT 116 - Calculus Concepts and Modelling
• AUMAT 120 - Linear Algebra I	• AUMAT 120 - Linear Algebra I
• AUMAT 216 - Intermediate Calculus	• AUMAT 216 - Intermediate Calculus
• AUMAT 250 - Discrete Mathematics	• AUMAT 240 - Introduction to Computational Methods
• ~~AUSCI 135 - Practical Introduction to Computational Thinking and Problem Solving~~	• AUMAT 250 - Discrete Mathematics
• ~~AUSCI 235 - Practices in Data Structures and Algorithms~~	• AUSCI 330 - History and Theory of Computing
• ~~AUSCI 250~~ - Introduction to Computational Methods	• AUSCI 430 - Ethical Issues in Computing and Mathematics
	• AUSTA 215 - Statistical Methods for the Natural Sciences

- AUSCI 330 - History and Theory of Computing
- AUSCI 430 - Ethical Issues in Computing and Mathematics
- AUSTA 215 - Statistical Methods for the Natural Sciences

~~3 units from~~

- ~~AUSCI 115 - Scientific Inquiry in Biological Sciences~~
- ~~AUSCI 125 - General Chemistry Lab I~~
- ~~AUSCI 165 - Physics Laboratory~~

Additional Requirements
- 3 units in AUBIO, AUCHE, AUENV, or AUPHY at the 100-level.
- 9 units in Fine Arts and Humanities, with at least 3 credits in each.
- 6 units in Social Sciences.

Computing Science Stream
Students in the Computing Science stream must also complete the following:

- AUCSC 220 - Software Engineering I
- AUCSC 370 - Programming Languages

18 units from
- AUCSC 204 - Computing Technology in Modern Society
- AUCSC 218 - Web Design, Development and Scripting
- AUCSC 320 - Software Engineering II
- AUCSC 330 - Database Management Systems I
- AUCSC 395 - Directed Study I
- AUCSC 401 - Professional Practicum I
- AUCSC 402 - Professional Practicum II
- AUCSC 450 - Parallel and Distributed Computing
- AUCSC 455 - Networks and Security
- AUCSC 460 - Artificial Intelligence
- AUCSC 480 - Operating Systems Project
- AUCSC 495 - Directed Study II

Computational and Applied Mathematics stream

Additional Requirements
- 3 units in AUBIO, AUCHE, AUENV, or AUPHY at the 100-level.
- 9 units in Fine Arts and Humanities, with at least 3 credits in each.
- 6 units in Social Sciences.

Computing Science Stream
Students in the Computing Science stream must also complete the following:

- AUCSC 220 - Software Engineering I
- AUCSC 370 - Programming Languages

18 units from
- AUCSC 204 - Computing Technology in Modern Society
- AUCSC 218 - Web Design, Development and Scripting
- AUCSC 320 - Software Engineering II
- AUCSC 330 - Database Management Systems I
- AUCSC 395 - Directed Study I
- AUCSC 401 - Professional Practicum I
- AUCSC 402 - Professional Practicum II
- AUCSC 450 - Parallel and Distributed Computing
- AUCSC 455 - Networks and Security
- AUCSC 460 - Artificial Intelligence
- AUCSC 480 - Operating Systems Project
- AUCSC 495 - Directed Study II

Computational and Applied Mathematics stream

Students in the Computational and Applied Mathematics stream must also complete the following: ● AUMAT 332 - ~~Mathematical Ecology and~~ Dynamical Systems **9 units from** ● AUMAT 320 - Numerical Linear Algebra ● AUMAT 328 - Cryptography ● AUMAT 350 - Optimization ● AUMAT 353 - Applied Probability	Students in the Computational and Applied Mathematics stream must also complete the following: ● AUMAT 332 - Dynamical Systems **9 units from** ● AUMAT 320 - Numerical Linear Algebra ● AUMAT 328 - Cryptography ● AUMAT 350 - Optimization ● AUMAT 353 - Applied Probability

Reviewed/Approved by:

Augustana Faculty Council, December 2, 2022
Augustana Department of Science, November 18, 2022. Augustana Curriculum Committee, November 22 & 24, 2022

Calendar Change Request Form
for Program and Regulation Changes
See the Calendar Guide for tips on how to complete this form.

Faculty (& Department or Academic Unit):	Augustana
Contact Person:	Jonathan Hawkins (jh12@ualberta.ca)
Level of change: (choose one only)	☑ Undergraduate
	☐ Graduate
Type of change request: (check all that apply)	☑ Program
	☐ Regulation
For which term is this intended to take effect?	Fall 2023
Does this proposal have corresponding course changes? (Should be submitted at the same time)	Yes

Rationale

Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

The Department of Science at the Augustana Campus is making a number of changes to their courses and programs as a result of eliminating the "Science Foundations" curriculum and recombining lecture and lab sections in several introductory classes. The following changes to the Major in Environmental Science bring the program in line with these changes, particularly the modifications to 100- and 200-level courses in Biology and Chemistry and the end of the corresponding AUSCI lab courses. The number of required units in the category of "Applied Environmental Studies" has been increased from 9 to 12. Overall, the number of required units on the Major in Environmental Science has been reduced from 75 to 72.

Calendar Copy

URL in current Calendar (or "New page") https://calendar.ualberta.ca/preview_program.php?catoid=36&poid=42720&returnto=11333	
Current Copy: ~~Removed language~~	**Proposed Copy:** New language
Major in Environmental Science [Augustana] **Requirements** **12 units in Environmental Science Core:** ● AUENV 120 - Human Activities and the Natural Environment ● AUENV 234 - Research and Field Skills in Environmental Science ● AUENV 324 - Resource and Environmental Management	**Major in Environmental Science [Augustana]** **Requirements** **12 units in Environmental Science Core:** ● AUENV 120 - Human Activities and the Natural Environment ● AUENV 234 - Research and Field Skills in Environmental Science ● AUENV 324 - Resource and Environmental Management

• AUENV 421 - Environmental Science: History and Impacts	• AUENV 421 - Environmental Science: History and Impacts
12 units in Biology:	**9 units in Biology:**
• AUBIO 111 - Functional Biology	• AUBIO 111 - Functional Biology
• AUBIO 212 Evolution and Biodiversity	• AUBIO 112 - Evolution and Biodiversity
• AUBIO 253 - Ecological Interactions	• AUBIO 253 - Ecological Interactions
• AUSCI 115 - Scientific Inquiry in Biological Sciences	
12 units in Chemistry:	**9 units in Chemistry:**
• AUCHE 110 - General Chemistry I	• AUCHE 110 - General Chemistry I
• AUCHE 212 General Chemistry II	• AUCHE 112 - General Chemistry II
• AUSCI 125 - General Chemistry Lab I	**3 units from:**
3 units from:	• AUCHE 220 - Analysis I
• AUCHE 220 - Analysis I	• AUCHE 341 - Introduction to Environmental Chemistry
• AUCHE 341 - Introduction to Environmental Chemistry	
6 units from Environmental Foundations:	**6 units from Environmental Foundations:**
• AUENV 230 - Geomorphology	• AUENV 230 - Geomorphology
• AUENV 231 - Climatology	• AUENV 231 - Climatology
• AUENV 233 - Soil Science and Soil Resources	• AUENV 233 - Soil Science and Soil Resources
• AUENV 252 - Wildlife Diversity of Alberta	• AUENV 252 - Wildlife Diversity of Alberta
6 units from Environmental Social Sciences:	**6 units from Environmental Social Sciences:**
• AUENV 327 - Environmental Education and Heritage Interpretation	• AUECO 346 - Agricultural Economics
• AUENV 341 - Environmental Economics	• AUENV 327 - Environmental Education and Heritage Interpretation
• AUHIS 375 - Canadian Environmental History	• AUENV 341 - Environmental Economics
• AUHIS 475 - Canadian Environmental History	• AUHIS 375 - Canadian Environmental History
• AUPOL 328 - Environmental Politics	• AUHIS 475 - Canadian Environmental History
• AUPSY 344 - Environmental Psychology	• AUPOL 328 - Environmental Politics
• AUSOC 358 - Environmental Sociology	• AUPSY 344 - Environmental Psychology
	• AUSOC 358 - Environmental Sociology
9 units from Applied Environmental Studies:	**12 units from Applied Environmental Studies:**
• AUBIO 315 - Advanced Biological Analysis	• AUBIO 315 - Advanced Biological Analysis
• AUBIO 334 - Field Studies in Environmental Science and Ecology	• AUBIO 334 - Field Studies in Environmental Science and Ecology
• AUBIO 350 - Conservation Theory and Biodiversity in Tropical Systems	• AUBIO 350 - Conservation Theory and Biodiversity in Tropical Systems
• AUBIO 351 - Biogeography	• AUBIO 351 - Biogeography
• AUBIO 354 - Freshwater Ecology and Management	• AUBIO 354 - Freshwater Ecology and Management
• AUBIO 459 - Field Studies in Tropical Ecology and Conservation	• AUBIO 459 - Field Studies in Tropical Ecology and Conservation
• AUCSC 113 - Foundational Introduction to Computational Thinking and Problem Solving	• AUCSC 111 - Introduction to Computational Thinking and Problem Solving
• AUECO 449 - Economic Methods of Project Evaluation	• AUECO 449 - Economic Methods of Project Evaluation
• AUENV 218 - Introduction to Geographic Information Systems	• AUENV 218 - Introduction to Geographic Information Systems

- AUENV 233 - Soil Science and Soil Resources - AUENV 252 - Wildlife Diversity of Alberta - AUENV 301 - Directed Studies - AUENV 302 - Directed Reading - AUENV 320 - Parks and Wilderness - AUENV 331 - Science of the Climate Crisis - AUENV 334 - Field Studies in Environmental Science and Ecology - AUENV 335 - Wildlife Ecology and Management - AUENV 351 - Biogeography - AUENV 354 - Freshwater Ecology and Management - AUENV 401 - Directed Studies - AUENV 402 - Directed Reading - AUENV 410 - Selected Topics in Environmental Studies - AUENV 420 - Parks and Wilderness - AUENV 425 - Environmental Impact Assessment - AUENV 434 - Advanced Field Studies in Environmental Science and Ecology	- AUENV 233 - Soil Science and Soil Resources - AUENV 252 - Wildlife Diversity of Alberta - AUENV 301 - Directed Studies - AUENV 302 - Directed Reading - AUENV 320 - Parks and Wilderness - AUENV 331 - Science of the Climate Crisis - AUENV 334 - Field Studies in Environmental Science and Ecology - AUENV 335 - Wildlife Ecology and Management - AUENV 351 - Biogeography - AUENV 354 - Freshwater Ecology and Management - AUENV 401 - Directed Studies - AUENV 402 - Directed Reading - AUENV 410 - Selected Topics in Environmental Studies - AUENV 420 - Parks and Wilderness - AUENV 425 - Environmental Impact Assessment - AUENV 434 - Advanced Field Studies in Environmental Science and Ecology
9 units in Fine Arts and Humanities:	**9 units in Fine Arts and Humanities:**
3-6 units from Humanities	**3-6 units from Humanities**
- AUENG 102 - Critical Reading, Critical Writing - AUENG 207 - AUENG 280 - Canadian Literature to 1950 - AUENG 368 - Ecofeminist Theory & Women's Writing - AUPHI 355 - Philosophy and the Environment - AUREL 263 - Spirituality and Globalization - AUREL 345 - Religion and Ecology - AUREL 365 - Storied Landscapes - AUSCA 231 - Scandinavian Culture and Civilization - AUSCA 271 - Personal Narratives of the North	- AUENG 102 - Critical Reading, Critical Writing - AUENG 207 - AUENG 280 - Canadian Literature to 1950 - AUENG 368 - Ecofeminist Theory & Women's Writing - AUPHI 355 - Philosophy and the Environment - AUREL 263 - Spirituality and Globalization - AUREL 345 - Religion and Ecology - AUREL 365 - Storied Landscapes - AUSCA 231 - Scandinavian Culture and Civilization - AUSCA 271 - Personal Narratives of the North
3-6 units of Fine Arts:	**3-6 units of Fine Arts:**
- AUART 100 - Introduction to Art History and Visual Culture - AUART 220 - Modern Life, Modern Art - AUART 231 - Drawing I: A Basic Toolkit - AUART 271 - Painting I: A Basic Toolkit (Oil) - AUART 289 - Studies in Visual Culture - AUDRA 250 - Applied Improvisation	- AUART 100 - Introduction to Art History and Visual Culture - AUART 220 - Modern Life, Modern Art ==AUART 230 - Special Topics (Art and the Environment)== - AUART 231 - Drawing I: A Basic Toolkit - AUART 271 - Painting I: A Basic Toolkit (Oil)

- AUMUS 170 - Tuning In: An Introduction to Music

3 units in Statistics:
- AUSTA 215 - Statistical Methods for the Natural Sciences

3 units from Mathematics:
- AUMAT 116 - Calculus Concepts and Modelling
- AUMAT 120 - Linear Algebra I

3 units from Experiential Learning:
- AUBIO 334 - Field Studies in Environmental Science and Ecology
- AUBIO 459 - Field Studies in Tropical Ecology and Conservation
- AUCSL 360 - Community Service-Learning Practicum
- AUCSL 361 - Community Service-Learning Practicum
- AUENV 334 - Field Studies in Environmental Science and Ecology
- AUENV 434 - Advanced Field Studies in Environmental Science and Ecology
- AUPED 184 - Introduction to Outdoor Education - Snowshoeing
- AUPED 281 - Explorations of the Canadian North
- AUPED 283 - Introduction to Outdoor Education - Backpacking
- AUPED 284 - Introduction to Outdoor Education - Canoeing
- AUPED 286 - Outdoor Education and Leadership
- AUPED 388 - Arctic Canoe Expedition

6 units in
- overlapping credits at the 400 level

- AUART 289 - Studies in Visual Culture
- AUDRA 250 - Applied Improvisation
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- AUPED 284 - Introduction to Outdoor Education - Canoeing
- AUPED 286 - Outdoor Education and Leadership
- AUPED 388 - Arctic Canoe Expedition

6 units in
- overlapping credits at the 400 level

Reviewed/Approved by:

Augustana Faculty Council, December 2, 2022

Augustana Department of Science, November 18, 2022.
Augustana Curriculum Committee, November 22 & 24, 2022

![University of Alberta logo]

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Contact Person:	Jonathan Hawkins (jh12@ualberta.ca)
Level of change: (choose one only)	☑ Undergraduate
	☐ Graduate
Type of change request: (check all that apply)	☑ Program
	☐ Regulation
For which term is this intended to take effect?	Fall 2023
Does this proposal have corresponding course changes? (Should be submitted at the same time)	Yes

Rationale

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In response to these issues, Augustana's "Science Foundations" curriculum and associated AUSCI lab courses (implemented in Fall 2021) will be eliminated beginning in 2023-24. Introductory science courses will again consist of both lecture and laboratory sections combined together. Science disciplines will also return to offering two introductory 100-level courses rather than teaching one introductory course at the 100-level and one at the 200-level. The remaining components of Augustana's recently revised Science majors will largely remain intact.

Recombining lecture and lab sections in introductory biology courses will help to provide a biology program that is aligned with the biological sciences offerings at other campuses and institutions, where students receive credit for combined lecture-lab courses. The following revisions to the Major in Integrative Biology bring the program in line with the removal of the Science Foundations component, and move the program closer to the structure that was previously in place for the Biology major. These changes will provide our students with added flexibility in the types of courses they can take at Augustana as part of their degree, and also ensure that students who are planning to transfer to North Campus or enter into professional programs receive appropriate credit for the courses that they take.

Overall, the number of required units on the Major in Integrative Biology has been reduced from 81 to 75 or 72.

In terms of consultation, the decision to make these program changes was based initially on concerns expressed by current and prospective Augustana students. In response to these concerns, a plan emerged out of conversations between the Dean, Associate Dean (Academic), Assistant Dean Enrolment Management, Student Academic Services (SAS) staff members, Chair and Associate Chair of the Department of Science, Academic Council, and Science Department Council (which includes a student representative). The Dean and Associate Dean (Academic) have met with individual students as well as representatives of the Augustana Students' Association (ASA). Members of the administrative team attended an ASA Student Forum on November 16, 2022, to discuss this plan of action. Following these consultations, the Curriculum Committee (which includes two student representatives) approved the required program and course changes on November 24, 2022. In addition, Augustana's Budget Committee has been considering the financial implications of these changes in planning for 2022-23 and beyond.

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- Gerda DeVries, Associate Dean, Undergraduate, Faculty of Science
- Members of the Department of Biological Sciences and Department of Chemistry, Faculty of Science
- Members of the Faculty of Education, including Lynn McGarvey, Vice Dean and Associate Dean, Academic
- Members of the Office of the Vice-Provost (Programs)
- Edith Finczak, Director of Academic Budget and Planning in the Provost's Office
- Program Support Team (Undergraduate and Non-Credit)

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Current Copy: Removed language	Proposed Copy: New language

Major in Integrative Biology [Augustana]
Requirements:
18 units in Science Foundations for Biology
• AUBIO 111 - Functional Biology
• AUCHE 110 - General Chemistry I
• AUPHY 120 - Introductory Physics
3 units from
   • AUMAT 116 - Calculus Concepts and Modelling
   • AUMAT 120 - Linear Algebra I
6 units from
AUSCI foundations laboratory courses, including
   • AUSCI 115 - Scientific Inquiry in Biological Sciences
	Major in Integrative Biology [Augustana]
	
	24 units in Biology
	• AUBIO 111 - Functional Biology
	• AUBIO 112 - Evolution and Biodiversity
	• AUBIO 230 - Molecular Cell Biology
	• AUBIO 253 - Ecological Interactions
	• AUBIO 260 - Principles of Genetics
	• AUBIO 338 - Developmental Biology
	• AUBIO 380 - Biochemistry: Proteins, Enzymes & Energy
	• AUBIO 411 - History and Theory of Biology

- ~~3 units from any other science discipline lab foundation course~~

~~39~~ units in ~~Integrative~~ Biology:
- AUBIO ~~212~~ - Evolution and Biodiversity
- AUBIO 230 - Molecular Cell Biology
- AUBIO 253 - Ecological Interactions
- AUBIO 260 - Principles of Genetics
- AUBIO 338 - Developmental Biology
- AUBIO 380 - Biochemistry: Proteins, Enzymes and Energy
- AUBIO 411 - History and Theory of Biology

6 units in Cell Biology from:
- AUBIO 336 - ~~Integrative~~ Histology
- AUBIO 337 - Histology of Reproduction and Sensation
- AUBIO ~~374~~ - Microbiology
- AUBIO 381 - Biochemistry: Intermediary Metabolism
- AUBIO 388 - Biochemistry Laboratory
- AUBIO 389 - Molecular Biology of the Gene
- AUBIO 438 - Evolutionary Development Biology
- AUBIO 475 - Pathogenic Mechanisms of Microorganisms
- AUBIO 485 - Selected Topics in Biochemistry

6 units in Organisms from:
- AUBIO 323 - Plant Biology
- AUBIO 390 - Animal Behaviour
- AUBIO 394 - Comparative Invertebrate Zoology
- AUBIO 395 - Vertebrate Form and Function
- AUBIO 397 - Vertebrate Physiology
- AUBIO 413 - Advanced Topics in Evolutionary Ecology
- AUBIO 471 - Immunology

6 units in Ecosystems from:
- AUBIO 315 - Advanced Biological Analysis
- AUBIO 334 - Field Studies in Environmental Science and Ecology
- AUBIO 350 - Conservation Theory and Biodiversity in Tropical Systems
- AUBIO 351 - Biogeography
- AUBIO 354 - Freshwater Ecology and Management

6 units in Cell Biology from:
- AUBIO 336 - Histology
- AUBIO 337 - Histology of Reproduction and Sensation
- AUBIO 274 - Microbiology
- AUBIO 381 - Biochemistry: Intermediary Metabolism
- AUBIO 388 - Biochemistry Laboratory
- AUBIO 389 - Molecular Biology of the Gene
- AUBIO 438 - Evolutionary Development Biology
- AUBIO 475 - Pathogenic Mechanisms of Microorganisms
- AUBIO 485 - Selected Topics in Biochemistry

6 units in Organisms from:
- AUBIO 323 - Plant Biology
- AUBIO 390 - Animal Behaviour
- AUBIO 394 - Comparative Invertebrate Zoology
- AUBIO 395 - Vertebrate Form and Function
- AUBIO 397 - Vertebrate Physiology
- AUBIO 413 - Advanced Topics in Evolutionary Ecology
- AUBIO 471 - Immunology

6 units in Ecosystems from:
- AUBIO 315 - Advanced Biological Analysis
- AUBIO 334 - Field Studies in Environmental Science and Ecology
- AUBIO 350 - Conservation Theory and Biodiversity in Tropical Systems
- AUBIO 351 - Biogeography
- AUBIO 354 - Freshwater Ecology and Management
- AUBIO 355 - Ecological Dynamics

- AUBIO 355 - Ecological Dynamics
- AUBIO 459 - Field Studies in Tropical Ecology and Conservation
- AUENV 335 - Wildlife Ecology and Management
- AUENV 434 - Advanced Field Studies in Environmental Science and Ecology

9 units in Overlapping Requirements (may overlap with the Integrative Biology requirements):
3 units from
- AUBIO at the 400-level

6 units involving laboratory or field work from:
- AUBIO 323 - Plant Biology
- AUBIO 334 - Field Studies in Environmental Science and Ecology
- AUBIO 354 - Freshwater Ecology and Management
- AUBIO 374 - Microbiology
- AUBIO 388 - Biochemistry Laboratory
- AUBIO 390 - Animal Behaviour
- AUBIO 394 - Comparative Invertebrate Zoology
- AUBIO 395 - Vertebrate Form and Function
- AUBIO 459 - Field Studies in Tropical Ecology and Conservation
- AUBIO 471 - Immunology
- AUBIO 475 - Pathogenic Mechanisms of Microorganisms
- AUENV 434 - Advanced Field Studies in Environmental Science and Ecology

9 units in Scientific Perspectives
- AUCHE 212 - General Chemistry II
- AUCHE 250 - Synthesis I
- AUSTA 215 - Statistical Methods for the Natural Sciences

- AUBIO 459 - Field Studies in Tropical Ecology and Conservation
- AUENV 335 - Wildlife Ecology and Management
- AUENV 434 - Advanced Field Studies in Environmental Science and Ecology

9 units in Overlapping Requirements (may overlap with the Integrative Biology requirements):
3 units from
- AUBIO at the 400-level

6 units involving laboratory or field work from:
- AUBIO 323 - Plant Biology
- AUBIO 334 - Field Studies in Environmental Science and Ecology
- AUBIO 354 - Freshwater Ecology and Management
- AUBIO 274 - Microbiology
- AUBIO 388 - Biochemistry Laboratory
- AUBIO 390 - Animal Behaviour
- AUBIO 394 - Comparative Invertebrate Zoology
- AUBIO 395 - Vertebrate Form and Function
- AUBIO 459 - Field Studies in Tropical Ecology and Conservation
- AUBIO 471 - Immunology
- AUBIO 475 - Pathogenic Mechanisms of Microorganisms
- AUENV 434 - Advanced Field Studies in Environmental Science and Ecology

15 or 18 units in Scientific Perspectives
- AUCHE 110 - General Chemistry I
- AUCHE 112 - General Chemistry II
- AUCHE 250 - Organic Chemistry I
- AUSTA 215 - Statistical Methods for the Natural Sciences
  3 units from
  - AUMAT 116 - Calculus Concepts and Modelling
  - AUMAT 120 - Linear Algebra I
- 3 units in AUPHY

Note: 3 units in AUPHY is not required if a student presents credit in Physics 20 or Physics 30.

15 units in Additional Requirements ● 9 units in Fine Arts and Humanities, with at least 3 units in each ● 6 units in Social Sciences	**15 units in Additional Requirements** ● 9 units in Fine Arts and Humanities, with at least 3 units in each ● 6 units in Social Sciences

Reviewed/Approved by:

Augustana Faculty Council, December 2, 2022
Augustana Department of Science, November 18, 2022. Augustana Curriculum Committee, November 22 & 24, 2022

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UNIVERSITY OF ALBERTA

Faculty (& Department or Academic Unit):	Augustana
Contact Person:	Jonathan Hawkins (jh12@ualberta.ca)
Level of change: (choose one only)	☑ Undergraduate
	☐ Graduate
Type of change request: (check all that apply)	☑ Program
	☐ Regulation
For which term is this intended to take effect?	Fall 2023
Does this proposal have corresponding course changes? (Should be submitted at the same time)	Yes

Rationale

Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

The Department of Science at the Augustana Campus is making a number of changes to courses and programs as a result of eliminating the "Science Foundations" curriculum and recombining lecture and lab sections in several introductory classes. The following changes to the Major in Physical Education (BSc) bring the requirements for the "Broader Scientific Perspectives" category in line with these changes, while also adding new course options to this category from Chemistry, Physics, and Psychology.

Calendar Copy

URL in current Calendar (or "New page")
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Current Copy: ~~Removed language~~	Proposed Copy: New language

Major in Physical Education (BSc) [Augustana]
 	
Requirements
  27-unit Core:
  ● AUPED 112 - Structural Human Anatomy
  ● AUPED 160 - Sociocultural Aspects of Sport and Physical Activity
  ● AUPED 215 - Introduction to Human Physiology I
  ● AUPED 293 - Introduction to Research in Physical Education
  ● AUPED 314 - Exercise Physiology
	Major in Physical Education (BSc) [Augustana]
	
	Requirements
	  27-unit Core:
	  ● AUPED 112 - Structural Human Anatomy
	  ● AUPED 160 - Sociocultural Aspects of Sport and Physical Activity
	  ● AUPED 215 - Introduction to Human Physiology I
	  ● AUPED 293 - Introduction to Research in Physical Education
	  ● AUPED 314 - Exercise Physiology

- AUPED 393 - Tests and Measurements in Physical Education
- AUPED 462 - Issues in Physical Education
- AUPSY 103 - Introduction to Psychology
- AUSTA 153 - Introductory Applied Statistics

3 units in
- AUPED 216 - Introduction to Human Physiology II

3 units in
- 3 units in AUPAC (Physical Activity Courses) **or any 1 of**
  - AUPED 184 - Introduction to Outdoor Education - Snowshoeing
  - AUPED 281 - Explorations of the Canadian North
  - AUPED 283 - Introduction to Outdoor Education - Backpacking
  - AUPED 284 - Introduction to Outdoor Education - Canoeing
  - AUPED 286 - Outdoor Education and Leadership
  - AUPED 387 - Arctic Expedition Planning
  - AUPED 388 - Arctic Canoe Expedition

6 units in Historical and Cultural Perspectives from:
- AUHIS 212 - Sport, Physical Activity, and the Body: Historical Perspectives
- AUHIS 312 - The Modern Olympic Games
- AUHIS 368 - History of Sport in Canada
- AUIDS 302 - Exploring Body Issues
- AUMGT 360 - Hockey: Culture and Commerce
- AUPED 266 - Gender in Sport and Physical Activity
- AUPED 469 - Sport and Canadian Popular Culture

12 units in Scientific Perspectives from:
- AUPED 232 - Introduction to Biomechanics
- AUPED 251 - Prevention and Care of Athletic Injuries
- AUPED 317 - Exercise in Special Populations
- AUPED 343 - Training Methodologies and Athletic Performance
- AUPED 344 - Introduction to Human Nutrition
- AUPED 375 - Selected Topics in Physical Education and Sport
- AUPED 414 - Advanced Exercise and Occupational Physiology

15 units in Broader Scientific Perspectives from:
- AUBIO 111 - Functional Biology
- ~~AUSCI 115 - Scientific Inquiry in Biological Sciences~~

9 units from:
- AUBIO ~~212~~ - Evolution and Biodiversity
- AUBIO 230 - Molecular Cell Biology
- AUBIO 260 - Principles of Genetics
- AUCHE 110 - General Chemistry I
- AUENV 120 - Human Activities and the Natural Environment
- AUMAT 116 - Calculus Concepts and Modelling
- AUMAT 120 - Linear Algebra I
- AUPHY 120 - ~~Introductory Physics~~
- AUPSY 263 - Memory and Cognition
- AUPSY 269 - Principles of Learning
- AUPSY 275 - An Introduction to the Brain and Nervous System

3 units in Ethics and Philosophy from:
- AUREL 257 - Modern Ethics
- AUREL 259 - Bioethics, Suffering and the Soul
- AUPHI 260 - Ethics
- AUPHI 350 - Philosophy of Science

3 units in Fine Arts
- Any Fine Arts course

3 units in Humanities
- Any Humanities course

15 units in Broader Scientific Perspectives from:
- AUBIO 111 - Functional Biology

12 units from:
- AUBIO 112 - Evolution and Biodiversity
- AUBIO 230 - Molecular Cell Biology
- AUBIO 260 - Principles of Genetics
- AUCHE 110 - General Chemistry I
- AUCHE 112 - General Chemistry II
- AUENV 120 - Human Activities and the Natural Environment
- AUMAT 116 - Calculus Concepts and Modelling
- AUMAT 120 - Linear Algebra I
- AUPHY 110 - Mechanics
- AUPHY 120 - Waves, Thermodynamics and Optics
- AUPSY 263 - Memory and Cognition
- AUPSY 269 - Principles of Learning
- AUPSY 275 - An Introduction to the Brain and Nervous System
- AUPSY 375 - Neuroplasticity
- AUPSY 475 - Brain Injury

3 units in Ethics and Philosophy from:
- AUREL 257 - Modern Ethics
- AUREL 259 - Bioethics, Suffering and the Soul
- AUPHI 260 - Ethics
- AUPHI 350 - Philosophy of Science

3 units in Fine Arts
- Any Fine Arts course

3 units in Humanities
- Any Humanities course

Reviewed/Approved by:

Augustana Faculty Council, December 2, 2022

Augustana Department of Social Sciences, November 18, 2022.
Augustana Curriculum Committee, November 22, 2022

Calendar Change Request Form
for Program and Regulation Changes
See the Calendar Guide for tips on how to complete this form.

Faculty (& Department or Academic Unit):	Augustana
Contact Person:	Jonathan Hawkins (jh12@ualberta.ca)
Level of change: (choose one only)	☑ Undergraduate
	☐ Graduate
Type of change request: (check all that apply)	☑ Program
	☐ Regulation
For which term is this intended to take effect?	Fall 2023
Does this proposal have corresponding course changes? (Should be submitted at the same time)	Yes

Rationale

Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

The Department of Science at the Augustana Campus is making a number of changes to courses and programs as a result of eliminating the "Science Foundations" curriculum and recombining lecture and lab sections in several introductory classes. The following changes to the Major in Psychology and Mental Health (BA) bring the requirements and notes to students for the Brain and Behaviour stream in line with these changes, while making minor modifications to the AUPSY science category to take into account new course offerings in Psychology.

Calendar Copy

URL in current Calendar (or "New page")
https://calendar.ualberta.ca/preview_program.php?catoid=36&poid=42718&returnto=11333

Current Copy: ~~Removed language~~	Proposed Copy: New language
Major in Psychology and Mental Health (BA) [Augustana] **Requirements** ● AUPSY 103 - Introduction to Psychology ● AUPSY 408 - History and Systems of Psychology ● AUPSY 483 - Psychological Disorders ● AUIND 300 - Selected Topics in Indigenous Studies ● AUSTA 153 - Introductory Applied Statistics ● AUSTA 217 - Applied Statistics: Quantitative Analysis in the Social Sciences	**Major in Psychology and Mental Health (BA) [Augustana]** **Requirements** ● AUPSY 103 - Introduction to Psychology ● AUPSY 408 - History and Systems of Psychology ● AUPSY 483 - Psychological Disorders ● AUIND 300 - Selected Topics in Indigenous Studies ● AUSTA 153 - Introductory Applied Statistics ● AUSTA 217 - Applied Statistics: Quantitative Analysis in the Social Sciences

• AUSTA 313 - Advanced Research Design	• AUSTA 313 - Advanced Research Design

6 units in Ethics and Philosophy from:

- AUART 260 - Selected Topics in Art History
- AUENG 299 - Selected Topics in English Studies
- AUPHI 210 - Epistemology: Theories of Knowledge
- AUPHI 260 - Ethics
- AUREL 250 - Theories of Religion
- AUREL 257 - Modern Ethics
- AUREL 259 - Bioethics, Suffering and the Soul

3 units in Embodied Expressions from:

- AUART 231 - Drawing I: A Basic Toolkit
- AUART 271 - Painting I: A Basic Toolkit (Oil)
- AUDRA 144 - Introduction to the Dramatic Process
- AUDRA 250 - Applied Improvisation
- AUENG 215 - Creative Writing
- AUMUS 246 - Choral Ensemble
- AUMUS 250 - Introduction to Music Education
- AUMUS 356 - Music and Wellness
- AUREL 291 - Selected Topics in Religion

Co-curricular Certification (choose at least 1)

- CESL certificate
- Mental Health First Aid course
- Brain Story certification (required for Brain and Behaviour Stream) (Alberta Family Wellness Initiative)

39 units in one of the following Streams:

Mental Health and Well-Being Stream
   12 units from:

- AUSOC 101 - Introducing Sociology: Principles and Practice
- AUSOC 105 - Social Anthropology
- AUSSC 300 - Selected Topics in Social Sciences
- AUPSY 342 - Health Psychology

   6 units from:

- AUPSY 220 - Personality
- AUPSY 240 - Social Psychology
- AUPSY 256 - Developmental Psychology

   6 units from:

- AUPSY 263 - Memory and Cognition

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- AUPSY 269 - Principles of Learning
- AUPSY 275 - An Introduction to the Brain and Nervous System

6 units at:
- a 300-level or 400-level in Psychology

6 units additional at:
- a 400-level in Psychology

3 units in Youth, Diversity, and Society from:
- AUART 281 - Sex, Gender and Art
- AUART 382 - Selected Topics in Art History
- AUCRI 200 - Young Offenders and the Law
- AUCRI 224 - Studies in Deviant Behaviour
- AUENG 205 - Children's Literature
- AUENG 206 - Native Children's Literature
- AUSOC 275 - Sex, Gender, and Society
- AUPOL 355 - Gender, Law, and Politics

Brain and Behaviour Stream
12 units from:
- AUPSY 256 - Developmental Psychology
- AUPSY 263 - Memory and Cognition
- AUPSY 269 - Principles of Learning
- AUPSY 275 - An Introduction to the Brain and Nervous System

3 units from:
- AUPSY 220 - Personality
- AUPSY 240 - Social Psychology

3 units from AUPSY arts:
- AUPSY 338 - Intimate Relationships and Human Sexuality
- AUPSY 342 - Health Psychology
- AUPSY 344 - Environmental Psychology
- AUPSY 346 - Community Psychology
- AUPSY 414 - Program Evaluation in Psychology
- AUPSY 442 - Psychology in a Cultural Context
- AUPSY 486 - Clinical and Counselling Psychology
- AUPSY 488 - Forensic Psychology

9 units from AUPSY science:
- AUPSY 305 - Selected Topics in Psychology
- AUPSY 361 - Cognitive Development
- AUPSY 373 - Psychology of Language
- AUPSY 377 - Human Neuropsychology

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- AUPSY 269 - Principles of Learning
- AUPSY 275 - An Introduction to the Brain and Nervous System

6 units at:
- a 300-level or 400-level in Psychology

6 units additional at:
- a 400-level in Psychology

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- AUPSY 375 - Neuroplasticity
- AUPSY 377 - Human Neuropsychology

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</table>

Left column:

- AUPSY 407 - Selected Topics in Psychology
- AUPSY 441 - Emotion
- AUPSY 471 - Language Acquisition
- ~~AUPSY 477 - The Neurobiology of Learning, Memory, and Addiction~~

3 units in Science and Society:

- AUART 381 - Selected Topics in Art History
- AUPHI 210 - Epistemology: Theories of Knowledge
- AUPHI 350 - Philosophy of Science
- AUPHI 351 - Thinking About Sex: Philosophy, Science, and the Construction of Sex

9 units in Science from ~~(including at least 3 units at the senior level)~~:

- AUBIO 111 - Functional Biology
- AUBIO 260 - Principles of Genetics
- AUBIO 380 - Biochemistry: Proteins, Enzymes and Energy
- AUBIO 390 - Animal Behaviour
- AUCSC ~~113 - Foundational~~ Introduction to Computational Thinking and Problem Solving
- AUCSC 204 - Computing Technology in Modern Society
- AUCSC 460 - Artificial Intelligence
- ~~AUSCI 115 - Scientific Inquiry in Biological Sciences~~
- ~~AUSCI 135 - Practical Introduction to Computational Thinking and Problem Solving~~

Note for students in the Brain and Behaviour stream:
The following courses would be advantageous for students taking this stream:

- AUCHE 110 - General Chemistry I
- AUCHE ~~212~~ - General Chemistry II
- AUCHE 250 - ~~Synthesis I~~
- AUPED 112 - Structural Human Anatomy
- AUPED 215 - Introduction to Human Physiology I
- AUPED 216 - Introduction to Human Physiology II

Right column:

- AUPSY 407 - Selected Topics in Psychology
- AUPSY 441 - Emotion
- AUPSY 471 - Language Acquisition
- AUPSY 475 - Brain Injury

3 units in Science and Society:

- AUART 381 - Selected Topics in Art History
- AUPHI 210 - Epistemology: Theories of Knowledge
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Note for students in the Brain and Behaviour stream:
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- AUCHE 250 - Organic Chemistry I
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- AUPED 216 - Introduction to Human Physiology II

Reviewed/Approved by:

Augustana Faculty Council, December 2, 2022

Augustana Department of Social Sciences, November 18, 2022.
Augustana Curriculum Committee, November 22, 2022

Calendar Change Request Form
for Program and Regulation Changes
See the [Calendar Guide](#) for tips on how to complete this form.

Faculty (& Department or Academic Unit):	Augustana
Contact Person:	Jonathan Hawkins (jh12@ualberta.ca)
Level of change: (choose one only)	☑ Undergraduate
	☐ Graduate
Type of change request: (check all that apply)	☑ Program
	☐ Regulation
For which term is this intended to take effect?	Fall 2023
Does this proposal have corresponding course changes? (Should be submitted at the same time)	Yes

Rationale

Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

The Department of Science at the Augustana Campus is making a number of changes to courses and programs in response to problems with transferability, student mobility, and the completion of prerequisites. Students have raised numerous concerns about the separation of lecture and lab sections in introductory biology, chemistry, computing science, and physics courses at Augustana, as well as organic chemistry at the senior level. When students have tried to transfer to other faculties at the University of Alberta or to other institutions, they have found that these courses are not accepted, or that they need to complete 6 credits at Augustana in order to receive 3 credits elsewhere. At the same time, students trying to complete prerequisites for entry into other science-based programs are finding that it is extremely difficult to satisfy those prerequisites in a timely and logical way. This has become a serious problem for recruitment, retention, and reputation.

In response to these issues, Augustana's "Science Foundations" curriculum and associated AUSCI lab courses (implemented in Fall 2021) will be eliminated beginning in 2023-24. Introductory science courses and some senior-level chemistry courses will again consist of both lecture and laboratory sections together. Science disciplines will also return to offering two introductory 100-level courses rather than teaching one introductory course at the 100-level and one at the 200-level. The remaining components of Augustana's recently revised Science majors will largely remain intact.

As a result of the proposed changes to Science courses and majors at Augustana, the Bachelor of Science (BSc)/Bachelor of Education (BEd) (Secondary) combined degree must also be revised, although the overall structure of the program will stay the same. The primary change is that Science Foundations lab courses will be replaced with appropriate discipline-based courses. The BSc/BEd degree will also be revised to accommodate the switch of some 200-level science courses back to the 100-level, and the recombining of lectures and labs in some AUCHEM courses. However, the number of credits in each major subject area, subject specialization, and minor subject area will remain unchanged. Overall, these program modifications will have minimal impact on students enrolled in the BSc/BEd combined degree, although they will bring the

Augustana elements of the program more in line with what students would experience in similar courses on North Campus.

During the preparation of these changes, Augustana's Associate Dean (Academic) consulted with members of the Faculty of Education, including Lynn McGarvey, Vice Dean and Associate Dean, Academic, and invited feedback on the proposed revisions. This consultation confirmed the Faculty of Education's support for these changes, and their view that the revisions to the program are suitable, appropriate, and in line with the objectives and requirements of the BSc/BEd combined degree.

Calendar Copy

URL in current Calendar (or "New page")
https://calendar.ualberta.ca/preview_program.php?catoid=36&poid=42721&returnto=11333

Current Copy: ~~Removed language~~	Proposed Copy: <mark>New language</mark>
Bachelor of Science (BSc)/Bachelor of Education (BEd) (Secondary) Combined Degrees Program (Augustana)	**Bachelor of Science (BSc)/Bachelor of Education (BEd) (Secondary) Combined Degrees Program (Augustana)**
Overview	**Overview**
The Bachelor of Science (BSc)/Bachelor of Education (BEd) (Secondary) Combined Degrees Program (Augustana) is offered jointly by the Augustana Faculty and the Faculty of Education as an alternative to the BSc followed by a BEd After-Degree (a six-year route). It provides less flexibility in course choice and scheduling than taking the degrees consecutively, because it is designed to meet the minimum requirements of both degrees, as well as teacher certification requirements, in five years.	The Bachelor of Science (BSc)/Bachelor of Education (BEd) (Secondary) Combined Degrees Program (Augustana) is offered jointly by the Augustana Faculty and the Faculty of Education as an alternative to the BSc followed by a BEd After-Degree (a six-year route). It provides less flexibility in course choice and scheduling than taking the degrees consecutively, because it is designed to meet the minimum requirements of both degrees, as well as teacher certification requirements, in five years.
The program is normally completed in five years, three years in the Augustana Faculty and two years in the Faculty of Education.	The program is normally completed in five years, three years in the Augustana Faculty and two years in the Faculty of Education.
Residence Requirement	**Residence Requirement**
A student in the Bachelor of Science (BSc)/Bachelor of Education (BEd) (Secondary) Combined Degrees Program (Augustana) normally will be required to complete at least 60 units of the first 90 units of the program at the Augustana Campus while registered in the Augustana Faculty. Of the courses taken at the Augustana campus, at least 54 units must consist of	A student in the Bachelor of Science (BSc)/Bachelor of Education (BEd) (Secondary) Combined Degrees Program (Augustana) normally will be required to complete at least 60 units of the first 90 units of the program at the Augustana Campus while registered in the Augustana Faculty. Of the courses taken at the Augustana campus, at least 54 units must consist of <mark>courses from year 2 and year 3 of the program. In</mark>

courses from year 2 and year 3 of the program. In addition, at least 45 units must be completed while registered in the Faculty of Education in the final years of the program.

A student may take as many as 115 units at the Augustana Campus, but will be registered as a student in the Faculty of Education for the final 45 units of the program.

Program Requirements
The Bachelor of Science (BSc)/Bachelor of Education (BEd) (Secondary) Combined Degrees Program (Augustana) consists of 102 units in arts and science plus 48 units in Education. The 150 units in the program are made up of core and general requirements, Education requirements, a major subject, a minor subject, and options, as follows:

Core Requirements (33 units) [Augustana]

Part A: The Augustana Core: Foundation (12 units)
The Augustana Foundation requirement is met by the completion of the following courses:

- AUIDS 101 - Topics in Liberal Studies
- AUIDS 201 - Collaborative Learning
- AUIDS 301 - Community Partnership Project

Note:
The courses that satisfy this requirement may not overlap with Augustana Core: Knowledge requirements.

Part B. The Augustana Core: Knowledge (21 units)
- 3 units in Fine Arts: any AUART; any AUDRA except AUDRA 301; any AUMUS except AUMUS 375, AUMUS 475.
- 6 units in Humanities.
- 6 units in Science.
- 6 units in Social Sciences.

See Classification of Courses for the definition of humanities, science and social sciences courses.

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- 3 units in Fine Arts: any AUART; any AUDRA except AUDRA 301; any AUMUS except AUMUS 375, AUMUS 475.
- 6 units in Humanities.
- 6 units in Science.
- 6 units in Social Sciences.

See Classification of Courses for the definition of humanities, science and social sciences courses.

Courses that satisfy these requirements may overlap with the general requirements, the student's major, minor, prerequisites and supporting courses, but not with the Augustana Core: Foundation.

Notes
Students will satisfy the humanities requirement by satisfying the language and literature requirement under (2) General Requirements, below and the science requirement will be satisfied by completion of the major requirements, and by AUPSY 103, since it is a prerequisite for AUEPS 258.

General Requirements (12 units) [Augustana]
6 units in language or literature from
- AUCLA 102 - Greek and Roman Mythology
- AUENG 102 - Critical Reading, Critical Writing
- AUGER 291 - German Drama in Translation
- AUGER 293 - Women and German Literature in Translation
- AUSCA 161 - Scandinavian Folk Literature
- AUSCA 261 - Scandinavian Folk Literature

3 units in computing science or educational computing
- AUEDC 210 - Introduction to Educational Technology

3 units in history, philosophy, and theory of science: one of
- AUBIO 411 - History and Theory of Biology
- AUENV 421 - Environmental Science: History and Impacts
- AUMAT 480 - History of Mathematics and Physics
- AUPHI 350 - Philosophy of Science
- AUPHI 355 - Philosophy and the Environment
- AUPHY 480 - History of Physics and Mathematics

Notes
Courses that satisfy these requirements may overlap with the core requirements, the Education requirements, and/or with the student's major.

Courses that satisfy these requirements may overlap with the general requirements, the student's major, minor, prerequisites and supporting courses, but not with the Augustana Core: Foundation.

Notes
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6 units in language or literature from
- AUCLA 102 - Greek and Roman Mythology
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3 units in computing science or educational computing
- AUEDC 210 - Introduction to Educational Technology

3 units in history, philosophy, and theory of science: one of
- AUBIO 411 - History and Theory of Biology
- AUENV 421 - Environmental Science: History and Impacts
- AUMAT 480 - History of Mathematics and Physics
- AUPHI 350 - Philosophy of Science
- AUPHI 355 - Philosophy and the Environment
- AUPHY 480 - History of Physics and Mathematics

Notes
Courses that satisfy these requirements may overlap with the core requirements, the Education requirements, and/or with the student's major.

Education Requirements (48 units) [Arts]
Requirements
- 9 units in EDSE (Major): See the notes under each major, below, for the EDSE courses to be taken during the Introductory Professional Term (IPT) and Advanced Professional Term (APT).
- 3 units in EDSE (Minor): See the notes under each minor, below, for the EDSE course to be taken
- 3 units in Education Elective.
- AUEPS 258 - Educational Psychology for Teaching
- EDU 211 - Aboriginal Education and Contexts for Professional and Personal Engagement
- EDPY 301 - Introduction to Inclusive Education: Adapting Classroom Instruction for Students with Special Needs
- EDPY 303 - Educational Assessment
- EDFX 350 - Secondary Route Field Experience for the Introductory Professional Term
- EDFX 450 - Secondary Route: Advanced Field Experience
- EDPS 410 - Ethics and Law in Teaching
- EDSE 307 - Language, Literacy and Society in Educational Contexts

Notes
- The field experience component of the Education requirements will be fulfilled in a rural or small-city school placement.
- Students should be aware that under the Protection for Persons in Care Act, they may be required to satisfy a criminal record check before being allowed to serve a period of internship/practicum placement/field experience placement. Refer to Requirement for Police Information Checks for more information.
- AUEFX 200 is recommended as an Education elective. ~~AUEDC 210 is recommended as an Education elective except for students with a major in Mathematical Sciences.~~

Major Subject (42 units) [Augustana]

Education Requirements (48 units) [Arts]
Requirements
- 9 units in EDSE (Major): See the notes under each major, below, for the EDSE courses to be taken during the Introductory Professional Term (IPT) and Advanced Professional Term (APT).
- 3 units in EDSE (Minor): See the notes under each minor, below, for the EDSE course to be taken
- 3 units in Education Elective.
- AUEPS 258 - Educational Psychology for Teaching
- EDU 211 - Aboriginal Education and Contexts for Professional and Personal Engagement
- EDPY 301 - Introduction to Inclusive Education: Adapting Classroom Instruction for Students with Special Needs
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- EDPS 410 - Ethics and Law in Teaching
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- AUEFX 200 is recommended as an Education elective.

Major Subject (42 units) [Augustana]

General Sciences

Students in the General Sciences major will complete 18 units in ~~Science Foundations~~ and 24 units in a subject specialization in Biology, Chemistry, General Sciences, or Mathematics:

~~**Science Foundations**~~ **(18 units):**
- AUBIO 111 - Functional Biology
- AUCHE 110 - General Chemistry I
- AUMAT 116 - Calculus Concepts and Modelling
- ~~3~~ units from
  - AUCSC ~~113~~ - ~~Foundational~~ Introduction to Computational Thinking and Problem Solving
  - AUENV 120 - Human Activities and the Natural Environment
  - AUMAT 120 - Linear Algebra I
  - AUPHY 120 - ~~Introductory Physics~~
- ~~6 units from AUSCI foundations laboratory courses (may be specified as overlapping credits in stream requirements)~~

Subject Specialization (24 units):

Biology:
- ~~AUBIO 212 - Evolution and Biodiversity~~
- AUBIO 230 - Molecular Cell Biology
- AUBIO 253 - Ecological Interactions
- AUBIO 260 - Principles of Genetics
- AUSTA 215 - Statistical Methods for the Natural Sciences
- 6 units in Biology at the 300-or-400-level
- ~~3~~ units in additional senior-level Biology
- Overlapping requirement with ~~Science Foundations:~~
  - ~~AUSCI 115 - Scientific Inquiry in the Biological Sciences~~
  - ~~AUSCI 125 - General Chemistry Lab I~~

Chemistry:
- ~~AUCHE 212 - General Chemistry II~~
- ~~AUCHE 213 – General Chemistry Lab II~~

General Sciences

Students in the General Sciences major will complete 18 units in Introductory Science and 24 units in a subject specialization in Biology, Chemistry, General Sciences, or Mathematics:

Introductory Science (18 units):
- AUBIO 111 - Functional Biology
- AUCHE 110 - General Chemistry I
- AUMAT 116 - Calculus Concepts and Modelling
- 9 units from
  - AUBIO 112 - Evolution and Biodiversity (may be specified as overlapping credits in stream requirements)
  - AUCHE 112 - General Chemistry II (may be specified as overlapping credits in stream requirements)
  - AUCSC 111 - Introduction to Computational Thinking and Problem Solving
  - AUENV 120 - Human Activities and the Natural Environment
  - AUMAT 120 - Linear Algebra I
  - AUPHY 110 - Mechanics
  - AUPHY 120 - Waves, Thermodynamics and Optics

Subject Specialization (24 units):

Biology:
- AUBIO 230 - Molecular Cell Biology
- AUBIO 253 - Ecological Interactions
- AUBIO 260 - Principles of Genetics
- AUSTA 215 - Statistical Methods for the Natural Sciences
- 6 units in Biology at the 300-or-400-level
- 6 units in additional senior-level Biology
- Overlapping requirement with Introductory Science:
  - AUBIO 112 - Evolution and Biodiversity

Chemistry:
- AUCHE 230 - Structure and Bonding
- 6 units from:
  - AUCHE 220 - Analysis I and

- 6 units from:
  - AUCHE 220 - Analysis I and AUCHE 221 - Analysis I Lab **OR**
  - AUCHE 250 - Synthesis I and AUCHE 251 - Synthesis Lab I
- ~~12~~ units in additional senior Chemistry from (may not overlap with above requirements):
  - AUCHE 220 - Analysis I
  - AUCHE 221 - Analysis I Lab
  - ~~AUCHE 230 - Structure and Bonding~~
  - AUCHE 250 - ~~Synthesis I~~
  - ~~AUCHE 251 - Synthesis Lab I~~
  - AUCHE 323 - Analysis II
  - AUCHE 324 - Analysis II Lab
  - AUCHE 325 - Analysis III
  - AUCHE 341 - Introduction to Environmental Chemistry
  - AUCHE 350 - Synthesis ~~II~~
  - AUCHE 351 - Synthesis ~~II~~ Lab
  - AUCHE 352 - Synthesis ~~III~~
  - AUCHE 353 - Synthesis ~~III~~ Lab
  - AUCHE 450 - Enzymes and Enzyme Mechanisms
  - AUSCI 405 - Chemical and Physical Science Capstone
  - AUSCI 425 - Senior Mentorship Experience

General Sciences:
- ~~AUSCI 165 – Physics Laboratory~~
- ~~24~~ units additional but with no more than 12 units in each of:
  - Biology
  - Chemistry
  - Computing Science
  - Environmental Science
  - Mathematics
  - Physics

AUCHE 221 - Analysis I Lab **OR**
- AUCHE 250 - Organic Chemistry I and AUCHE 252 - Organic Chemistry II **OR**
- AUCHE 350 - Introductory Synthesis and AUCHE 351 - Introductory Synthesis Lab
- 15 units in additional senior Chemistry from (may not overlap with above requirements):
  - AUCHE 220 - Analysis I
  - AUCHE 221 - Analysis I Lab
  - AUCHE 250 - Organic Chemistry I
  - AUCHE 252 - Organic Chemistry II
  - AUCHE 279 - Physical Chemistry
  - AUCHE 323 - Analysis II
  - AUCHE 324 - Analysis II Lab
  - AUCHE 325 - Analysis III
  - AUCHE 341 - Introduction to Environmental Chemistry
  - AUCHE 350 - Introductory Synthesis
  - AUCHE 351 - Introductory Synthesis Lab
  - AUCHE 352 - Advanced Synthesis
  - AUCHE 353 - Advanced Synthesis Lab
  - AUCHE 450 - Enzymes and Enzyme Mechanisms
  - AUSCI 405 - Chemical and Physical Science Capstone
  - AUSCI 425 - Senior Mentorship Experience
- Overlapping requirement with Introductory Science:
  - AUCHE 112 - General Chemistry II

General Sciences:
- 24 units additional but with no more than 12 units in each of:
  - Biology
  - Chemistry
  - Computing Science
  - Environmental Science
  - Mathematics
  - Physics
- Overlapping requirement with Introductory Science:

Left column:

- ~~Overlapping requirement with Science Foundations:~~
    - ~~AUPHY 120 – Introductory Physics~~
    - ~~AUSCI 115 – Scientific Inquiry in the Biological Sciences~~
    - ~~AUSCI 125 – General Chemistry Lab I~~

Mathematics:
- ~~AUMAT 120 Linear Algebra I~~
- AUMAT 216 Intermediate Calculus
- AUMAT 250 Discrete Mathematics
- ~~AUSCI 250~~ Introduction to Computational Methods
- AUSCI 330 History and Theory of Computing
- 9 units from:
    - AUMAT 320 Numerical Linear Algebra
    - AUMAT 328 Cryptography
    - AUMAT 332 ~~Mathematical Ecology and~~ Dynamical Systems
    - AUMAT 350 Optimization
    - AUMAT 353 Applied Probability
- Overlapping requirement with ~~Science Foundations:~~
    - AUCSC 113 - ~~Foundational~~ Introduction to Computational Thinking and Problem Solving

Note:
Students must take EDSE 355 during the IPT, which is normally offered in both the Fall and Winter Terms. Students must take EDSE 451 and EDSE 455 during the APT, which are normally offered in both the Fall and Winter Terms.

Minor Subject (18 units plus prerequisite courses) [Augustana]
Art
- 9 units in additional senior AUART, at least 3 units of which must be in a studio course.

- AUART 100 - Introduction to Art History and Visual Culture

Right column:

- AUPHY 110 - Mechanics

Mathematics:
- AUMAT 216 - Intermediate Calculus
- AUMAT 240 - Introduction to Computational Methods
- AUMAT 250 - Discrete Mathematics
- AUSCI 330 - History and Theory of Computing
- 12 units from:
    - AUMAT 320 - Numerical Linear Algebra
    - AUMAT 328 - Cryptography
    - AUMAT 332 - Dynamical Systems
    - AUMAT 350 - Optimization
    - AUMAT 353 - Applied Probability
- Overlapping requirements with Introductory Science:
    - AUCSC 111 - Introduction to Computational Thinking and Problem Solving

    - AUMAT 120 - Linear Algebra

Note:
Students must take EDSE 355 during the IPT, which is normally offered in both the Fall and Winter Terms. Students must take EDSE 451 and EDSE 455 during the APT, which are normally offered in both the Fall and Winter Terms.

Minor Subject (18 units plus prerequisite courses) [Augustana]
Art
- AUART 100 - Introduction to Art History and Visual Culture
- AUART 111 - Studio Foundation I
- AUART 231 - Drawing I
- 9 units in additional senior AUART, at least 3 units of which must be in a studio course.

- AUART 111 - Studio Foundation I
- AUART 231 - Drawing I

Notes

- An additional 6 units in studio courses is recommended.
- Students must take EDSE 313 which is normally offered in the Fall Term only.

Biology

- AUBIO ~~212~~ - Evolution and Biodiversity
- AUBIO 253 - Ecological Interactions
- AUBIO 260 - Principles of Genetics
- 3 units in additional senior Biology at the 300- or 400-level.
- 6 units additional senior Biology

- ~~Overlapping requirement with Science Foundations:~~
  - ~~AUBIO 111 - Integrative Biology I~~
  - ~~AUSCI 115 - Scientific Inquiry in the Biological Sciences~~

Note:

Students must take EDSE 356 which is normally offered in both the Fall and Winter Terms.

EDSE 356 is not open to students whose major is Biological Sciences, Chemistry, General Sciences, Physical Sciences or Physics. These students must either choose to register for another EDSE (Minor) provided they meet the course prerequisites, OR register in an additional Education Elective.

Chemistry

- 9 units in additional senior Chemistry, at least 3 units of which must be at the 300- or 400-level
- AUCHE ~~212~~ - General Chemistry II
- AUCHE 250 - Synthesis I

3 units in senior chemistry: ~~one~~ of

- AUCHE 220 – Analysis I
- AUCHE 230 – Structure and Bonding
- AUCHE 279 - Physical Chemistry

Notes

- An additional 6 units in studio courses is recommended.
- Students must take EDSE 313 which is normally offered in the Fall Term only.

Biology

- AUBIO 112 - Evolution and Biodiversity
- AUBIO 253 - Ecological Interactions
- AUBIO 260 - Principles of Genetics
- 3 units in additional senior Biology at the 300- or 400-level.
- 6 units additional senior Biology

Note:

Students must take EDSE 356 which is normally offered in both the Fall and Winter Terms.

EDSE 356 is not open to students whose major is Biological Sciences, Chemistry, General Sciences, Physical Sciences or Physics. These students must either choose to register for another EDSE (Minor) provided they meet the course prerequisites, OR register in an additional Education Elective.

Chemistry

- AUCHE 112 - General Chemistry II

6 units in senior chemistry: two of

- AUCHE 220 - Analysis I
- AUCHE 230 - Structure and Bonding
- AUCHE 250 - Organic Chemistry I
- AUCHE 279 - Physical Chemistry
- AUCHE 350 - Introductory Synthesis

- ~~Overlapping requirement with Science Foundations:~~
    - ~~AUCHE 110 - General Chemistry I~~
    - ~~AUSCI 125 - General Chemistry Lab I~~

Note:

Students must take EDSE 356 which is normally offered in both the Fall and Winter Terms.

EDSE 356 is not open to students whose major is Biological Sciences, Chemistry, General Sciences, Physical Sciences or Physics. These students must either choose to register for another EDSE (Minor) provided they meet the course prerequisites, OR register in an additional Education Elective.

Drama
- 3 units in additional senior AUDRA
- AUDRA 101 - Play Analysis
- AUDRA 230 - Acting Techniques I
- AUDRA 340 - Movement for the Theatre
- AUDRA 350 - Introduction to Directing

3 units in a senior ensemble production course:
- AUDRA 238 - Theatre Company
- AUDRA 239 - Theatre Company

Notes
- An additional 6 units in AUDRA is recommended.
- Students must take EDSE 323 which is normally offered in the Fall Term only.

English Language Arts
3 units in **English literature from:**
- AUENG 102 - Critical Reading, Critical Writing

3 units in language studies: one of
- AUENG 213 - The English Language
- AULAN 101 - Introduction to Linguistic Analysis

3 units in aboriginal/indigenous or Canadian literature: one of

- 9 units in additional senior Chemistry, at least 3 units of which must be at the 300- or 400-level

Note:

Students must take EDSE 356 which is normally offered in both the Fall and Winter Terms.

EDSE 356 is not open to students whose major is Biological Sciences, Chemistry, General Sciences, Physical Sciences or Physics. These students must either choose to register for another EDSE (Minor) provided they meet the course prerequisites, OR register in an additional Education Elective.

Drama
- AUDRA 101 - Play Analysis
- AUDRA 230 - Acting Techniques I
- AUDRA 340 - Movement for the Theatre
- AUDRA 350 - Introduction to Directing
- 3 units in additional senior AUDRA

3 units in a senior ensemble production course:
- AUDRA 238 - Theatre Company
- AUDRA 239 - Theatre Company

Notes

- An additional 6 units in AUDRA is recommended.
- Students must take EDSE 323 which is normally offered in the Fall Term only.

English Language Arts
3 units in **English literature from:**
- AUENG 102 - Critical Reading, Critical Writing

3 units in language studies: one of
- AUENG 213 - The English Language
- AULAN 101 - Introduction to Linguistic Analysis

3 units in aboriginal/indigenous or Canadian literature: one of

- AUENG 207 - Aboriginal/Indigenous Literature
- AUENG 280 - Canadian Literature to 1950
- AUENG 281 - Canadian Literature since 1950
- AUENG 307 - Aboriginal/Indigenous Literature
- AUENG 380 - Canadian Literature to 1950
- AUENG 381 - Canadian Literature since 1950

3 units in literature written before 1800: one of
- AUENG 221 - Chaucer
- AUENG 225 - Middle Ages
- AUENG 230 - The Early English Renaissance
- AUENG 231 - The Later English Renaissance
- AUENG 233 - Shakespeare
- AUENG 239 - Milton
- AUENG 330 - The Early English Renaissance
- AUENG 331 - The Later English Renaissance
- AUENG 333 - Shakespeare
- AUENG 339 - Milton

6 units in additional senior AUENG or senior literature course taught in translation, including
- AUGER 291 - German Drama in Translation
- AUGER 293 - Women and German Literature in Translation
- AUSCA 261 - Scandinavian Folk Literature
- AUSCA 271 - Personal Narratives of the North

Note:
Students must take EDSE 328 which is normally offered in both the Fall and Winter Terms.

Mathematical Sciences
- 6 units in additional senior Mathematics or Statistics (AUSTA 215 recommended).
- AUMAT 216 – Intermediate Calculus

- AUENG 207 - Aboriginal/Indigenous Literature
- AUENG 280 - Canadian Literature to 1950
- AUENG 281 - Canadian Literature since 1950
- AUENG 307 - Aboriginal/Indigenous Literature
- AUENG 380 - Canadian Literature to 1950
- AUENG 381 - Canadian Literature since 1950

3 units in literature written before 1800: one of
- AUENG 221 - Chaucer
- AUENG 225 - Middle Ages
- AUENG 230 - The Early English Renaissance
- AUENG 231 - The Later English Renaissance
- AUENG 233 - Shakespeare
- AUENG 239 - Milton
- AUENG 330 - The Early English Renaissance
- AUENG 331 - The Later English Renaissance
- AUENG 333 - Shakespeare
- AUENG 339 - Milton

6 units in additional senior AUENG or senior literature course taught in translation, including
- AUGER 291 - German Drama in Translation
- AUGER 293 - Women and German Literature in Translation
- AUSCA 261 - Scandinavian Folk Literature
- AUSCA 271 - Personal Narratives of the North

Note:
Students must take EDSE 328 which is normally offered in both the Fall and Winter Terms.

Mathematical Sciences
- AUMAT 216 - Intermediate Calculus
- AUSCI 250 - Introduction to Computational Methods
- 6 units in additional senior Mathematics or

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- AUPAC 109 – Cross-Country Skiing
- AUPAC 123 - Aquatics
- AUPAC 125 - Canoeing
- AUPAC 134 - Indoor Climbing
- AUPAC 152 - Luge
- AUPAC 253 - Advanced Luge
- AUPED 184 - Introduction to Outdoor Education - Snowshoeing

Dance: 1 unit
- AUPAC 114 - Dance

Gymnastics: 1 unit
- AUPAC 161 - Gymnastics

Games: at least 2 units from
- AUPAC 103 - Tennis
- AUPAC 124 - Badminton
- AUPAC 173 - Football
- AUPAC 177 - Soccer
- AUPAC 178 - Basketball
- AUPAC 179 - Volleyball
- AUPAC 180 - Softball (Fast Pitch)
- AUPAC 181 - Team Handball
- AUPAC 224 - Advanced Badminton
- AUPAC 270 - Adventure Games
- AUPAC 277 - Advanced Soccer
- AUPAC 278 – Advanced Basketball
- AUPAC 279 - Advanced Volleyball

Individual Activities: at least 1 unit from
- AUPAC 109 – Cross-Country Skiing
- AUPAC 125 - Canoeing
- AUPAC 133 - Strength Training
- AUPAC 151 - Track and Field

Notes
- The same credit may not be counted twice in courses that relate to more than one of the five activity dimensions
- Students must take EDSE 348 which is normally offered in both the Fall and Winter Terms.

Physical Sciences
- 15 units in senior Chemistry, Physics, or senior science courses in Environmental

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- AUPAC 109 - Cross-Country Skiing
- AUPAC 123 - Aquatics
- AUPAC 125 - Canoeing
- AUPAC 134 - Indoor Climbing
- AUPAC 152 - Luge
- AUPAC 253 - Advanced Luge
- AUPED 184 - Introduction to Outdoor Education - Snowshoeing

Dance: 1 unit
- AUPAC 114 - Dance

Gymnastics: 1 unit
- AUPAC 161 - Gymnastics

Games: at least 2 units from
- AUPAC 103 - Tennis
- AUPAC 124 - Badminton
- AUPAC 173 - Football
- AUPAC 177 - Soccer
- AUPAC 178 - Basketball
- AUPAC 179 - Volleyball
- AUPAC 180 - Softball (Fast Pitch)
- AUPAC 181 - Team Handball
- AUPAC 224 - Advanced Badminton
- AUPAC 270 - Adventure Games
- AUPAC 277 - Advanced Soccer
- AUPAC 278 -Advanced Basketball
- AUPAC 279 - Advanced Volleyball

Individual Activities: at least 1 unit from
- AUPAC 109 - Cross-Country Skiing
- AUPAC 125 - Canoeing
- AUPAC 133 - Strength Training
- AUPAC 151 - Track and Field

Notes
- The same credit may not be counted twice in courses that relate to more than one of the five activity dimensions
- Students must take EDSE 348 which is normally offered in both the Fall and Winter Terms.

Physical Sciences
- 15 units in senior Chemistry, Physics, or senior science courses in Environmental

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Studies or Geography (see Classification of Courses (1)).

- AUCHE ~~212~~ - General Chemistry II
- Overlapping requirement with ~~Science Foundations:~~
    - ~~AUCHE 110 - General Chemistry I~~
    - AUPHY 120 – ~~Introductory Physics~~
    - ~~AUSCI 125 – General Chemistry Lab I~~
    - ~~AUSCI 165 – Physics Laboratory~~

Note:
Students must take EDSE 356 which is normally offered in both the Fall and Winter Terms.

EDSE 356 is not open to students whose major is Biological Sciences, Chemistry, General Sciences, Physical Sciences or Physics. These students must either choose to register for another EDSE (Minor) provided they meet the course prerequisites, OR register in an additional Education Elective.

Social Studies
6 units in Canadian Studies:
- AUHIS 261 - An Introduction to the Study of Canadian History, 1867 to the Present
- AUPOL 221 - Canadian National Government and Politics

6 units in World Studies chosen from
- AUHIS 104 - World History: The West
- AUHIS 105 - World History: The East and the South
- AUHIS 201 - European History I: Fall of the Roman Empire to the French Revolution
- AUHIS 202 - European History II: French Revolution to the Present
- AUHIS 250 - United States History to 1865
- AUHIS 251 - United States History since 1865
- AUHIS 260 - An Introduction to the Study of Canadian History to 1867
- AUHIS 322 - Nineteenth-Century Europe to 1849
- AUHIS 323 - Nineteenth-Century Europe since 1849
- AUHIS 325 - Twentieth-Century Europe

Studies or Geography (see Classification of Courses (1)).

- AUCHE 112 - General Chemistry II
- Overlapping requirement with Introductory Science:
    - AUPHY 110 - Mechanics

Note:
Students must take EDSE 356 which is normally offered in both the Fall and Winter Terms.

EDSE 356 is not open to students whose major is Biological Sciences, Chemistry, General Sciences, Physical Sciences or Physics. These students must either choose to register for another EDSE (Minor) provided they meet the course prerequisites, OR register in an additional Education Elective.

Social Studies
6 units in Canadian Studies:
- AUHIS 261 - An Introduction to the Study of Canadian History, 1867 to the Present
- AUPOL 221 - Canadian National Government and Politics

6 units in World Studies chosen from
- AUHIS 104 - World History: The West
- AUHIS 105 - World History: The East and the South
- AUHIS 201 - European History I: Fall of the Roman Empire to the French Revolution
- AUHIS 202 - European History II: French Revolution to the Present
- AUHIS 250 - United States History to 1865
- AUHIS 251 - United States History since 1865
- AUHIS 260 - An Introduction to the Study of Canadian History to 1867
- AUHIS 322 - Nineteenth-Century Europe to 1849
- AUHIS 323 - Nineteenth-Century Europe since 1849
- AUHIS 325 - Twentieth-Century Europe
- AUHIS 337 - History of the Soviet Union,

- AUHIS 337 - History of the Soviet Union, 1917 to 1941
- AUHIS 338 - History of the Soviet Union, 1941 to 1991
- AUPOL 240 - Introduction to International Relations I
- AUPOL 248 - Model United Nations/International Organization
- AUPOL 324 - Selected Topics in Canadian Politics
- AUPOL 341 - The Global South and World Politics
- AUPOL 348 - Model United Nations/International Organization
- AUPOL 424 - Selected Topics in Canadian Politics
- AUSOC 218 - Sociology of Global and Development Issues
- AUSOC 391 - Social Change from Development to Globalization

6 units in Cultural Studies chosen from
- AUCRI 160 - Introduction to Crime, Correction, and Community
- AUCRI 225 - Criminology: A Canadian Perspective
- AUIDS 230 - Introduction to Gender and Women's Studies
- AUREL 282 - Major Religious Traditions: Middle East
- AUSOC 101 - Introducing Sociology: Principles and Practice
- AUSOC 103 - Introducing Sociology: Institutions and Insight
- AUSOC 105 - Social Anthropology
- AUSOC 222 - Canadian Social Issues
- AUSOC 275 - Sex, Gender, and Society
- AUSOC 358 - Environmental Sociology
- AUSOC 377 - Theoretical Approaches to Gender

Note:
Students must take EDSE 374 which is normally offered in both the Fall and Winter Terms.

Options (0-18 units) [Augustana]
0–18 units non-Education options, depending on the number of prerequisites and supporting courses

1917 to 1941
- AUHIS 338 - History of the Soviet Union, 1941 to 1991
- AUPOL 240 - Introduction to International Relations I
- AUPOL 248 - Model United Nations/International Organization
- AUPOL 324 - Selected Topics in Canadian Politics
- AUPOL 341 - The Global South and World Politics
- AUPOL 348 - Model United Nations/International Organization
- AUPOL 424 - Selected Topics in Canadian Politics
- AUSOC 218 - Sociology of Global and Development Issues
- AUSOC 391 - Social Change from Development to Globalization

6 units in Cultural Studies chosen from
- AUCRI 160 - Introduction to Crime, Correction, and Community
- AUCRI 225 - Criminology: A Canadian Perspective
- AUIDS 230 - Introduction to Gender and Women's Studies
- AUREL 282 - Major Religious Traditions: Middle East
- AUSOC 101 - Introducing Sociology: Principles and Practice
- AUSOC 103 - Introducing Sociology: Institutions and Insight
- AUSOC 105 - Social Anthropology
- AUSOC 222 - Canadian Social Issues
- AUSOC 275 - Sex, Gender, and Society
- AUSOC 358 - Environmental Sociology
- AUSOC 377 - Theoretical Approaches to Gender

Note:
Students must take EDSE 374 which is normally offered in both the Fall and Winter Terms.

Options (0-18 units) [Augustana]
0–18 units non-Education options, depending on the number of prerequisites and supporting

required on the selected major and minor and on the degree of overlap between the core, general, major and minor requirements

Selection of Courses
The following regulations govern the degrees program:
- A student's program must be approved by an advisor in the appropriate Faculty prior to the start of each Fall/Winter.
- Within the 150-units program, a student must complete a minimum of 48 units in science, 24 units in arts, and 48 units in Education. (See Classification of Courses).
- Normally, no more than 48 units at the 100-level are permitted in the degrees program.
- If there is overlap between the requirements of the selected major and minor, additional courses must be taken in the area of the major and/or minor such that the total number of credits on the major and minor is 60. This provision does not apply to courses listed as prerequisites or supporting courses. The courses to be taken to compensate for the overlap in requirements between a student's major and minor subjects must be approved by the Chair of the Department of Science.

Additional information for Students
Many of the Augustana Faculty's senior science courses are offered only in alternate years, and some are offered only if there is sufficient student demand.

Academic Standing and Graduation
Continuation in the Bachelor of Science (BSc)/Bachelor of Education (BEd) (Secondary) Combined Degrees Program (Augustana) requires a Fall/Winter Grade Point Average (GPA) of at least 2.3. [See Grade Point Average (GPA) regarding the rules for calculating Grade Point Average.]

A student who fails to meet the continuation requirement must withdraw from the BSc/BEd Degrees program. Such a student may transfer to another program in the Augustana Faculty, the Faculty of Education, or another Faculty, if entrance

courses required on the selected major and minor and on the degree of overlap between the core, general, major and minor requirements

Selection of Courses
The following regulations govern the degrees program:
- A student's program must be approved by an advisor in the appropriate Faculty prior to the start of each Fall/Winter.
- Within the 150-units program, a student must complete a minimum of 48 units in science, 24 units in arts, and 48 units in Education. (See Classification of Courses).
- Normally, no more than 48 units at the 100-level are permitted in the degrees program.
- If there is overlap between the requirements of the selected major and minor, additional courses must be taken in the area of the major and/or minor such that the total number of credits on the major and minor is 60. This provision does not apply to courses listed as prerequisites or supporting courses. The courses to be taken to compensate for the overlap in requirements between a student's major and minor subjects must be approved by the Chair of the Department of Science.

Additional information for Students
Many of the Augustana Faculty's senior science courses are offered only in alternate years, and some are offered only if there is sufficient student demand.

Academic Standing and Graduation
Continuation in the Bachelor of Science (BSc)/Bachelor of Education (BEd) (Secondary) Combined Degrees Program (Augustana) requires a Fall/Winter Grade Point Average (GPA) of at least 2.3. [See Grade Point Average (GPA) regarding the rules for calculating Grade Point Average.]

A student who fails to meet the continuation requirement must withdraw from the BSc/BEd Degrees program. Such a student may transfer to another program in the Augustana Faculty, the

and promotion requirements for that program are met. After transfer, all requirements for the new program must be met. (See Academic Standing and Graduation for academic standing regulations pertaining to the Augustana Faculty BA and BSc programs and Academic Standing and Promotional Standards for academic standing regulations for admission to the Faculty of Education BEd program.) Graduation requirements for the Bachelor of Science (BSc)/Bachelor of Education (BEd) (Secondary) Combined Degrees Program (Augustana) are specified in Bachelor of Science (BSc)/Bachelor of Education (BEd) (Secondary) Combined Degrees Program (Augustana).	Faculty of Education, or another Faculty, if entrance and promotion requirements for that program are met. After transfer, all requirements for the new program must be met. (See Academic Standing and Graduation for academic standing regulations pertaining to the Augustana Faculty BA and BSc programs and Academic Standing and Promotional Standards for academic standing regulations for admission to the Faculty of Education BEd program.) Graduation requirements for the Bachelor of Science (BSc)/Bachelor of Education (BEd) (Secondary) Combined Degrees Program (Augustana) are specified in Bachelor of Science (BSc)/Bachelor of Education (BEd) (Secondary) Combined Degrees Program (Augustana).

Reviewed/Approved by:

Augustana Faculty Council, December 2, 2022
Augustana Department of Science, November 18, 2022. Augustana Curriculum Committee, November 22 & 24, 2022

UNIVERSITY OF ALBERTA

Calendar Change Request Form for Course Changes

See the Calendar Guide for tips on how to complete this form.

Faculty (& Department or Academic Unit):	Augustana Faculty	
Contact Person:	Jonathan Hawkins jh12@ualberta.ca	
Level of change (choose one only) [?]	☑	Undergraduate
	☐	Graduate
For which term will this change take effect?	Fall 2023	

Rationale

These course changes are in support of the program change proposals from Augustana to eliminate its 'Science Foundations' curriculum beginning in Fall 2023. Changes include revisions to course titles and descriptions, prerequisites and corequisites and the deletion of some courses along with the creation of some new courses and reintroduction of some that previously existed prior to the introduction of Science Foundations.

Course Template

Current	Proposed
AUBIO 111 - Functional Biology	**AUBIO 111 - Functional Biology**
Course Career Undergraduate **Units** 3 **Approved Hours** 3-0-~~0~~ **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term	**Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-3/2 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term
Description An introduction to functional biology from molecules to systems, focusing on how organisms integrate different levels of organization in order to live. This course covers key topics of biochemistry (metabolism, respiration, photosynthesis), cell biology (organelles, membranes, cell cycle), and physiology (gas exchange, circulation, osmoregulation, excretion). Prerequisites: Biology 30 and Chemistry 30.	**Description** An introduction to functional biology from molecules to systems, focusing on how organisms integrate different levels of organization in order to live. This course covers key topics of biochemistry (metabolism, respiration, photosynthesis), cell biology (organelles, membranes, cell cycle), and physiology (gas exchange, circulation, osmoregulation, excretion). Prerequisites: Biology 30 and Chemistry 30.

Course Template

Current	Proposed
New	**AUBIO 112 - Evolution and Biodiversity** **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-3/2 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term **Description** An introduction to the biology of organisms, focusing on the evolution of biological diversity, including the mechanisms responsible for evolutionary change and the adaptations associated with the evolution of the major groups of organisms. Prerequisites: AUBIO 111. Note: Credit may be obtained for only one of AUBIO 112, AUBIO 212 (2022) or AUBIO 214.

Course Template

Current	Proposed
~~**AUBIO 212 - Evolution and Biodiversity**~~ ~~**Course Career** Undergraduate~~ ~~**Units** 3~~ ~~**Approved Hours** 3-0-0~~ ~~**Fee index** 6~~ ~~**Faculty** Augustana Faculty~~ ~~**Department** AU Science~~ ~~**Typically Offered** either term~~ ~~**Description**~~ ~~An introduction to the biology of organisms, focusing on the evolution of biological diversity, including the mechanisms responsible for evolutionary change and the adaptations associated with the evolution of the major groups of organisms. Prerequisites: AUBIO 111 and AUSCI 115. Note: Credit may be obtained for only one of AUBIO 112 (2021) and AUBIO 212.~~	**To be deleted**

Course Template

Current	Proposed
New	**AUBIO 214 - Evolution and Biodiversity** **Course Career** Undergraduate **Units** 3.0 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term **Description** The course focuses on the evolution of biological diversity, including the mechanisms responsible for evolutionary change and the adaptations associated with the evolution of the major groups of organisms. Prerequisites: AUBIO 111 and AUSCI 115 (2022). Note: Credit may be obtained for only one of AUBIO 112, AUBIO 212 (2022) or AUBIO 214.

Course Template

Current	Proposed
AUBIO 219 - Research Experience in Biology **Course Career** Undergraduate **Units** 1.5 **Approved Hours** 0-0-3 **Fee index** 3 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** variable **Description** Research experience in a faculty research project. Normally taken in addition to a full course load after the successful completion of at least *24 but not more than *60 in a program in the Augustana Faculty. Prerequisites: AUBIO 111 and 112 (2021) or 212 and consent of the Department. Notes: This course is offered on a pass/fail (credit/no-credit) basis. An 'Application for Individual Study', normally requiring a minimum GPA of 2.5 in Biology, must be completed and approved before registration in the course. Credit may be obtained twice.	**AUBIO 219 - Research Experience in Biology** **Course Career** Undergraduate **Units** 1.5 **Approved Hours** 0-0-3 **Fee index** 3 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** variable **Description** Research experience in a faculty research project. Normally taken in addition to a full course load after the successful completion of at least 24 units but not more than 60 units in a program in the Augustana Faculty. Prerequisites: AUBIO 111 and 112 or 212 (2022) or AUBIO 214 and consent of the Department. Notes: This course is offered on a pass/fail (credit/no-credit) basis. An 'Application for Individual Study', normally requiring a minimum GPA of 2.5 in Biology, must be completed and approved before registration in the course. Credit may be obtained twice.

Course Template

Current	Proposed
AUBIO 253 - Ecological Interactions **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-3/2 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term **Description** An exploration of basic concepts and methods in ecology and of the relevance of ecological thinking in the life sciences. Emphasis is on interactions at the level of the organism, including physiological and evolutionary perspectives, and on their consequences on the composition and diversity of populations and communities within ecosystems. Prerequisite: AUBIO 112 (2021) or AUBIO 212.	**AUBIO 253 - Ecological Interactions** **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-3/2 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term **Description** An exploration of basic concepts and methods in ecology and of the relevance of ecological thinking in the life sciences. Emphasis is on both biotic and abiotic interactions at the level of the organism, including physiological and evolutionary perspectives, and on their consequences on the composition and diversity of ecological populations and communities within ecosystems. Prerequisite: AUBIO 112 or AUBIO 212 (2022) or AUBIO 214.

Course Template

Current	Proposed
AUBIO 260 - Principles of Genetics **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-3/2 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term **Description** Mendelian inheritance and its cytological features including the molecular and cellular basis for the transmission of hereditary characteristics. Topics that are emphasized include microbial genetics, cytoplasmic inheritance, linkage and genetic mapping, DNA as genetic material, gene action, and the genetic code. Prerequisites: AUBIO 111 and AUSCI 115.	**AUBIO 260 - Principles of Genetics** **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-3/2 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term **Description** Mendelian inheritance and its cytological features including the molecular and cellular basis for the transmission of hereditary characteristics. Topics that are emphasized include microbial genetics, cytoplasmic inheritance, linkage and genetic mapping, DNA as genetic material, gene action, and the genetic code. Prerequisites: AUBIO 111.

Course Template

Current	Proposed
New	**AUBIO 274 - Microbiology** **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-3/2 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term **Description** Introduction to the prokaryotic members of the microbial world. Microbiological diversity will be examined by comparing cellular morphology, structure and metabolism. Topics include how to grow and study microbes, classification approaches and problems, control of microbial growth, pathogenesis and microbial ecology. Co-requisite: AUBIO 260. Credit may be obtained for only one of AUBIO 274 or AUBIO 374 (2022).

Course Template

Current	Proposed
AUBIO 323 - Plant Biology **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-1.5 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term **Description** Comparative survey of the anatomy, morphology, function, life cycles, and evolutionary features of algae and non-vascular and vascular plants. Taxonomic and ecological considerations are also presented. Prerequisite: AUBIO 112 (2021) or AUBIO 212.	**AUBIO 323 - Plant Biology** **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-1.5 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term **Description** Comparative survey of the anatomy, morphology, function, life cycles, and evolutionary features of algae and non-vascular and vascular plants. Taxonomic and ecological considerations are also presented. Prerequisite: AUBIO 112 or AUBIO 212 (2022) or AUBIO 214.

Course Template

Current	Proposed
AUBIO 336 - ~~Integrative~~ Histology	**AUBIO 336 - Histology**
Course Career Undergraduate **Units** 3 **Approved Hours** 2-0-1 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term	**Course Career** Undergraduate **Units** 3 **Approved Hours** 2-0-1 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term
Description Systematic and sequential consideration of fundamental cytology, the normal histology of the basic tissues, and the embryological development and microscopic organization of mammalian ~~integument, circulatory, respiratory, digestive, and urinary~~ systems. Emphasis is placed on the light- and electron-microscopic features of cells and tissues with direct correlation of structure and function ~~and how these systems integrate to maintain homeostasis~~. Prerequisites: AUBIO 230. Notes: AUBIO 395 is recommended as a pre or corequisite.	**Description** Systematic and sequential consideration of fundamental cytology, the normal histology of the basic tissues, and the embryological development and microscopic organization of <u>the major</u> mammalian organisms and organ systems. Emphasis is placed on the light- and electron-microscopic features of cells and tissues with direct correlation of structure and function. Prerequisites: AUBIO 230. Notes: AUBIO 395 is recommended as a pre or corequisite.

Course Template

Current	Proposed
~~AUBIO 374 - Microbiology~~	**To be deleted**
~~Course Career~~ ~~Undergraduate~~ **~~Units~~** ~~3~~ **~~Approved Hours~~** ~~3-0-3/2~~ **~~Fee index~~** ~~6~~ **~~Faculty~~** ~~Augustana Faculty~~ **~~Department~~** ~~AU Science~~ **~~Typically Offered~~** ~~either term~~	
~~Description~~ ~~Introduction to the prokaryotic members of the microbial world. Microbiological diversity will be examined by comparing cellular morphology, structure and metabolism. Topics include how to grow and study~~	

~~microbes, classification approaches and problems, control of microbial growth, pathogenesis and microbial ecology. Prerequisite: AUBIO 260. Note: Credit may be obtained for only one of AUBIO 274 (2021) and AUBIO 374.~~

Course Template

Current	Proposed
AUBIO 388 - Biochemistry Laboratory **Course Career** Undergraduate **Units** 3 **Approved Hours** 1-0-3 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term **Description** Laboratory course in biochemical techniques. Prerequisites: AUBIO 380 and AUCHE 213.	**AUBIO 388 - Biochemistry Laboratory** **Course Career** Undergraduate **Units** 3 **Approved Hours** 1-0-3 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term **Description** Laboratory course in biochemical techniques. Prerequisites: AUBIO 380 and AUCHE 112.

Course Template

Current	Proposed
AUBIO 390 - Animal Behaviour **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-3/2 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term **Description** Introduction to key concepts and methods in animal behaviour. Both mechanistic and evolutionary points of view are considered. Topics include genetics, developmental processes, learning, neurophysiological aspects, orientation, communication, foraging and habitat use, social behaviour, parental care and mating. Prerequisite: AUBIO 112 ~~(2021)~~ or 212; AUBIO 260 and AUSTA 215.	**AUBIO 390 - Animal Behaviour** **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-3/2 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term **Description** Introduction to key concepts and methods in animal behaviour. Both mechanistic and evolutionary points of view are considered. Topics include genetics, developmental processes, learning, neurophysiological aspects, orientation, communication, foraging and habitat use, social behaviour, parental care and mating. Prerequisites: AUBIO 112 or 212 (2022) or AUBIO 214; AUBIO 260 and AUSTA 215.

Course Template

Current	Proposed
AUBIO 394 - Comparative Invertebrate Zoology	**AUBIO 394 - Comparative Invertebrate Zoology**
Course Career Undergraduate **Units** 3 **Approved Hours** 2-0-1 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term	**Course Career** Undergraduate **Units** 3 **Approved Hours** 2-0-1 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term
Description Functional anatomy and life cycles of the major invertebrate taxa. Emphasis is on the comparative approach to understanding of phylogenetic relations between invertebrate taxa and their respective positions on the tree of life. Rich invertebrate biodiversity will be observed and placed into an environmental context. Prerequisite: AUBIO 112 ~~(2021)~~ or AUBIO 212.	**Description** Functional anatomy and life cycles of the major invertebrate taxa. Emphasis is on the comparative approach to understanding of phylogenetic relations between invertebrate taxa and their respective positions on the tree of life. Rich invertebrate biodiversity will be observed and placed into an environmental context. Prerequisite: AUBIO 112 or AUBIO 212 (2022) or AUBIO 214.

Course Template

Current	Proposed
AUBIO 395 - Vertebrate Form and Function	**AUBIO 395 - Vertebrate Form and Function**
Course Career Undergraduate **Units** 3 **Approved Hours** 3-0-1.5 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term	**Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-1.5 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term
Description Study of the structure, function, and diversity of vertebrates. Prerequisite: AUBIO 112 ~~(2021)~~ or AUBIO 212.	**Description** Study of the structure, function, and diversity of vertebrates. Prerequisite: AUBIO 112 or AUBIO 212 (2022) or AUBIO 214.

Course Template

Current	Proposed
AUBIO 471 - Immunology	**AUBIO 471 - Immunology**
Course Career Undergraduate **Units** 3 **Approved Hours** 3-0-3/2 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term	**Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-3/2 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term
Description An introduction to the structure and function of the immune system. Topics include the ontogeny of immune structures and cells, the generation of B and T cell receptor diversity, antigens and antibodies, clonal selection and expansion, MHC restriction, self tolerance and cytokines. Discussion of infectious disease, vaccines, and immunity will be used to synthesize these topics into a unified conceptual framework. Prerequisites: AUBIO 374. Note: Credit may be obtained for only one of AUBIO 371 (2021) and AUBIO 471.	**Description** An introduction to the structure and function of the immune system. Topics include the ontogeny of immune structures and cells, the generation of B and T cell receptor diversity, antigens and antibodies, clonal selection and expansion, MHC restriction, self tolerance and cytokines. Discussion of infectious disease, vaccines, and immunity will be used to synthesize these topics into a unified conceptual framework. Prerequisites: AUBIO 274 or AUBIO 374 (2022). Note: Credit may be obtained for only one of AUBIO 371 (2021) and AUBIO 471.

Course Template

Current	Proposed
AUBIO 475 - Pathogenic Mechanisms of Microorganisms	**AUBIO 475 - Pathogenic Mechanisms of Microorganisms**
Course Career Undergraduate **Units** 3 **Approved Hours** 3-0-3 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term	**Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-3 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term
Description Examination of the pathogenic mechanisms used by selected bacteria, and protists that cause human diseases. Pathogens will be compared with a focus on the method of entry, colonization and invasion of host tissue used by various microbes and the microbial factors	**Description** Examination of the pathogenic mechanisms used by selected bacteria, and protists that cause human diseases. Pathogens will be compared with a focus on the method of entry, colonization and invasion of host tissue used by various microbes and the microbial factors

required to cause infection and disease. Epidemiological approaches, antimicrobials and antibiotic resistance will also be presented. Prerequisites: AUBIO 274 ~~(2021)~~ or 374.	required to cause infection and disease. Epidemiological approaches, antimicrobials and antibiotic resistance will also be presented. Prerequisites: AUBIO 274 or 374 (2022).

Course Template

Current	Proposed
AUCHE 110 - General Chemistry I **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-~~0~~ **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** ~~first~~ term **Description** A general introduction to chemistry. Topics include molecular shames and Lewis structures; states of matter and intermolecular forces; ~~qualitative and quantitative aspects of equilibrium, acid/base chemistry and buffers.~~ Prerequisites: Chemistry 30 and Mathematics 30-1.	**AUCHE 110 - General Chemistry I** **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-3 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term **Description** A general introduction to chemistry. Topics include atomic structure, periodic trends, bonding, molecular shapes and Lewis structures, states of matter and intermolecular forces, functional groups and IR spectroscopy. Prerequisites: Chemistry 30 and Mathematics 30-1.

Course Template

Current	Proposed
New	**AUCHE 112 - General Chemistry II** **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-3 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term **Description** Continuation of AUCHE 110. Topics include thermodynamics, free energy, reaction kinetics, chemical equilibria, acid-base chemistry, buffers, oxidation-reduction reactions, and electrochemistry. Prerequisite: AUCHE 110. Note: Credit may be obtained

	~~for only one of AUCHE 112, AUCHE 212 (2022) or AUCHE 214.~~

Course Template

Current	Proposed
~~**AUCHE 212 - General Chemistry II**~~ ~~**Course Career** Undergraduate~~ ~~**Units** 3~~ ~~**Approved Hours** 3-0-0~~ ~~**Fee index** 6~~ ~~**Faculty** Augustana Faculty~~ ~~**Department** AU Science~~ ~~**Typically Offered** second term~~ ~~**Description**~~ ~~Continuation of AUCHE 110. Topics include atomic structure, periodic trends, reaction kinetics, thermodynamics, chemical equilibria, and hybrid theory. Prerequisite: AUCHE 110. Note: Credit may be obtained for only one of AUCHE 112 (2021) and AUCHE 212.~~	**To be deleted**

Course Template

Current	Proposed
AUCHE 213 - General Chemistry II Lab **Course Career** Undergraduate **Units** 3 **Approved Hours** 1-0-3 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** ~~second~~ term **Description** This lab course introduces students to fundamental concepts in chemistry and foundational chemistry lab techniques. Concepts include atomic structure, reaction kinetics and electrochemistry. Techniques include rudimentary reaction set-ups, analytical testing, product characterization and use of basic chemical laboratory instrumentation. Co-requisites: AUCHE 212	**AUCHE 213 - General Chemistry II Lab** **Course Career** Undergraduate **Units** 3 **Approved Hours** 1-0-3 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term **Description** This lab course introduces students to fundamental concepts in chemistry and foundational chemistry lab techniques. Concepts include atomic structure, reaction kinetics and electrochemistry. Techniques include rudimentary reaction set-ups, analytical testing, product characterization and use of basic chemical laboratory instrumentation. Co-requisites: AUCHE 212 (2022) or AUCHE 214.

Course Template

Current	Proposed
New	**AUCHE 214 - General Chemistry II** **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term **Description** Continuation of AUCHE 110. Topics include atomic structure, periodic trends, reaction kinetics, thermodynamics, chemical equilibria, and hybrid theory. Prerequisite: AUCHE 110. Note: Credit may be obtained for only one of AUCHE 112, AUCHE 212 (2022) or AUCHE 214.

Course Template

Current	Proposed
AUCHE 220 - Analysis I **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term **Description** Theoretical and practical aspects of chemical analysis. Topics include titrimetry, separations, acid-base equilibria, chromatography, and spectrophotometry. Examples emphasize the utility and limitations of analytical techniques. Prerequisite: AUCHE 212. Recommended corequisite: AUMAT 110 or 116.	**AUCHE 220 - Analysis I** **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term **Description** Theoretical and practical aspects of chemical analysis. Topics include titrimetry, separations, acid-base equilibria, chromatography, and spectrophotometry. Examples emphasize the utility and limitations of analytical techniques. Prerequisite: AUCHE 112 or AUCHE 212 (2022) or AUCHE 214. Recommended corequisite: AUMAT 110 or 116.

Course Template

Current	Proposed
AUCHE 221 - Analysis I Lab	**AUCHE 221 - Analysis I Lab**
Course Career Undergraduate **Units** 3 **Approved Hours** 1-0-3 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term	**Course Career** Undergraduate **Units** 3 **Approved Hours** 1-0-3 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term
Description This is a lab course that introduces students to the principles and techniques of analytical chemistry. Laboratory experiments will include analysis techniques that involve titrimetry, electrochemistry, spectrophotometry and chromatography. Prerequisites: AUCHE ~~213~~. Corequisites: Recommended AUCHE 220.	**Description** This is a lab course that introduces students to the principles and techniques of analytical chemistry. Laboratory experiments will include analysis techniques that involve titrimetry, electrochemistry, spectrophotometry and chromatography. Prerequisites: AUCHE 112 or AUCHE 213. Corequisites: Recommended AUCHE 220.

Course Template

Current	Proposed
AUCHE 230 - Structure and Bonding	**AUCHE 230 - Structure and Bonding**
Course Career Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term	**Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term
Description An introduction to the principles of molecular structure and chemical bonding. Topics include: the electronic structure of atoms, bonding models and Molecular Orbital Theory, symmetry and point groups, structure and bonding of ionic solids, structure and bonding of transition metal complexes, stereochemistry and conformational isomerism. Prerequisite: AUCHE ~~110~~.	**Description** An introduction to the principles of molecular structure and chemical bonding. Topics include: the electronic structure of atoms, bonding models and Molecular Orbital Theory, symmetry and point groups, structure and bonding of ionic solids, structure and bonding of transition metal complexes, stereochemistry and conformational isomerism. Prerequisite: AUCHE 112. Note: Students who completed AUCHE 110 between 2021 and 2023 may also use that course as a prerequisite to AUCHE 230.

Course Template

Current	Proposed
AUCHE 250 - ~~Synthesis I~~	**AUCHE 250 - <mark>Organic Chemistry I</mark>**
Course Career Undergraduate **Units** 3 **Approved Hours** 3-0-~~0~~ **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** first term	**Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-<mark>3</mark> **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** first term
Description An introduction to bonding and functionality in organic compounds. ~~Qualitative factors affecting acidity and basicity will be introduced, as well as the concept of aromaticity. A mechanistic approach to learning reactions will be emphasized, with discussion of the nucleophilic acyl additions and substitutions, nucleophilic reactions adjacent to carbonyls, simple substitutions, and electrophilic aromatic substitutions.~~ The three-dimensional structure of molecules and the concept of stereochemistry will also be examined. Prerequisite: AUCHE ~~212; AUCHE 230 is recommended~~.	**Description** An introduction to bonding and functionality in organic compounds. <mark>Mechanistic approach to solving problems will be emphasized, with discussion of the reactions of alkanes, alkenes, alkynes, and alkyl halides.</mark> The three-dimensional structure of molecules and the concept of stereochemistry will be examined. <mark>Infrared spectroscopy and Nuclear Magnetic Resonance spectroscopy will be applied in both the lecture and the lab.</mark> Prerequisite: AUCHE <mark>112 or AUCHE 212 (2022). AUCHE 214 may be a corequisite</mark>.

Course Template

Current	Proposed
~~AUCHE 251 - Synthesis I Lab~~	**<mark>To be deleted</mark>**
~~Course Career~~ ~~Undergraduate~~ **~~Units~~** ~~3~~ **~~Approved Hours~~** ~~1-0-3~~ **~~Fee index~~** ~~6~~ **~~Faculty~~** ~~Augustana Faculty~~ **~~Department~~** ~~AU Science~~ **~~Typically Offered~~** ~~first term~~	
~~Description~~ ~~This lab course introduces students to the principles and techniques of inorganic and organic synthesis. Concepts~~	

~~include organic redox reductions, nucleophilic acyl addition and substitution reactions, elimination reactions and additions to alkenes. Techniques introduced include melting point analysis, liquid-liquid extraction, reflux, distillation, thin-layer chromatography and interpretation of gas chromatographs and infrared spectra. Prerequisite: AUCHE 213. Corequisite: AUCHE 250.~~	

Course Template

Current	Proposed
New	**AUCHE 252 - Organic Chemistry II** **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-3 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term **Description** Continuation of AUCHE 250, again emphasizing a mechanistic approach. The chemistry of alcohols, conjugated unsaturated systems, aromatic rings, carbonyl-containing compounds, organic reduction-oxidation reactions, and beta-dicarbonyl compounds will be discussed. Carbohydrate chemistry will be introduced as a way to explore many concepts in a biochemical context. Prerequisite: AUCHE 250.

Course Template

Current	Proposed
AUCHE 279 - Physical Chemistry **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science	**AUCHE 279 - Physical Chemistry** **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science

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Typically Offered either term

Description
Study of the principles and concepts of physical chemistry. Topics include the laws of thermodynamics, chemical equilibrium, phase equilibria, surface chemistry, chemical kinetics and catalysis and spectroscopy and photochemistry. Prerequisites: AUCHE ~~212~~ and AUMAT 110 or 116.

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Typically Offered either term

Description
Study of the principles and concepts of physical chemistry. Topics include the laws of thermodynamics, chemical equilibrium, phase equilibria, surface chemistry, chemical kinetics and catalysis and spectroscopy and photochemistry. Prerequisites: AUCHE <mark>112 or</mark> AUCHE 212 <mark>(2022) or AUCHE 214:</mark> and AUMAT 110 or 116

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Current

AUCHE 341 - Introduction to Environmental Chemistry

Course Career Undergraduate
Units 3
Approved Hours 3-0-0
Fee index 6
Faculty Augustana Faculty
Department AU Science
Typically Offered either term

Description
This course serves as an introduction to the chemical processes responsible for natural environmental phenomena and anthropogenic environmental sampling, climate change, pollution, waste management, fossil fuels and alternative energy technologies, toxic organic compounds and the principles of green chemistry. Prerequisites: AUCHE <mark>212</mark>, third year standing, AUCHE 220 recommended.

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Proposed

AUCHE 341 - Introduction to Environmental Chemistry

Course Career Undergraduate
Units 3
Approved Hours 3-0-0
Fee index 6
Faculty Augustana Faculty
Department AU Science
Typically Offered either term

Description
This course serves as an introduction to the chemical processes responsible for natural environmental phenomena and anthropogenic environmental <mark>problems. Topics to be discussed include atmospheric chemistry, water and soil chemistry, environmental</mark> sampling, climate change, pollution, waste management, fossil fuels and alternative energy technologies, toxic organic compounds and the principles of green chemistry. Prerequisites: AUCHE <mark>112 or AUCHE 212 (2022) or AUCHE 214</mark>, third year standing, AUCHE 220 recommended.

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Course Template

Current	Proposed
AUCHE 350 - ~~Synthesis II~~	**AUCHE 350 - Introductory Synthesis**
Course Career Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term	**Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term
Description An introduction to inorganic chemistry with particular emphasis on the bonding, reactivity and characterization of transition metal complexes. Topics include: Donor-acceptor chemistry, ligand substitution, ~~redox chemistry,~~ photochemical reactions, electronic spectra, ~~magnetochemistry, NMR spectroscopy~~ and an introduction to ~~organometallic chemistry~~. Prerequisite: AUCHE ~~250~~.	**Description** An introduction to inorganic chemistry with particular emphasis on the bonding, reactivity and characterization of transition metal complexes. Topics include: Donor-acceptor chemistry, ligand substitution, photochemical reactions, electronic spectra, and an introduction to inorganic material synthesis. Prerequisite: AUCHE 230. Note: Students who completed AUCHE 250 between 2021 and 2023 may also use that course as a prerequisite to AUCHE 350.

Course Template

Current	Proposed
AUCHE 351 - ~~Synthesis II Lab~~	**AUCHE 351 - Introductory Synthesis Lab**
Course Career Undergraduate **Units** 3 **Approved Hours** 1-0-3 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term	**Course Career** Undergraduate **Units** 3 **Approved Hours** 1-0-3 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term
Description This lab course ~~is an extension of AUCHE 251 and~~ introduces students to ~~intermediate and advanced~~ synthetic laboratory principles and techniques. Concepts include the synthesis of transition metal ~~and organometallic~~ complexes, the rational design and synthesis of organic ligand systems, reactions of metal complexes and ~~inert atmosphere synthesis~~. Students will	**Description** This lab course introduces students to synthetic laboratory principles and techniques. Concepts include the synthesis of transition metal complexes, the rational design and synthesis of organic ligand systems, reactions of metal complexes, catalysis and nanomaterial synthesis. Students will also gain experience analyzing and interpreting real-world data acquired from a variety of characterization

also gain experience analyzing and interpreting real-world data acquired from a variety of characterization techniques, including NMR, UV-Vis, IR and magnetic susceptibility. Prerequisite: AUCHE ~~251~~.	techniques, including NMR, UV-Vis, IR and magnetic susceptibility. Prerequisite: AUCHE 230 or AUCHE 251 (2022). Corequisites: Recommended AUCHE 350.

Course Template

Current	Proposed
AUCHE 352 - ~~Synthesis III~~	**AUCHE 352 - Advanced Synthesis**
Course Career Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term	**Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term
Description An extension of AUCHE 350 and an introduction to catalysis. Topics include: Common organometallic ligand systems, organometallic reactions and related mechanisms, homogenous, heterogeneous and asymmetric catalysis, catalyst synthesis and design, flow chemistry and industrial catalytic applications. Prerequisite: AUCHE 350.	**Description** An extension of AUCHE 350 and an introduction to catalysis. Topics include: Common organometallic ligand systems, organometallic reactions and related mechanisms, homogenous, heterogeneous and asymmetric catalysis, catalyst synthesis and design, flow chemistry and industrial catalytic applications. Prerequisite: AUCHE 350.

Course Template

Current	Proposed
AUCHE 353 - Synthesis ~~III~~ Lab	**AUCHE 353 - Advanced SynthesisLab**
Course Career Undergraduate **Units** 3 **Approved Hours** 1-0-3 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term	**Course Career** Undergraduate **Units** 3 **Approved Hours** 1-0-3 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term
Description This course is a guided-inquiry laboratory course that is	**Description** This course is a guided-inquiry laboratory course that is

focused on the development of modern organic and inorganic synthetic skills and techniques. Students will gain hands-on experience in researching, developing and implementing synthetic methodologies and analyzing experimental results. In addition, student will strengthen their communication skills through oral and written assignments. Prerequisites: AUCHE 351. Note: Credit may be obtained for only one of AUCHE 353 and AUCHE 360 (2021).	focused on the development of modern organic and inorganic synthetic skills and techniques. Students will gain hands-on experience in researching, developing and implementing synthetic methodologies and analyzing experimental results. In addition, students will strengthen their communication skills through oral and written assignments. Prerequisites: AUCHE 351. Note: Credit may be obtained for only one of AUCHE 353 and AUCHE 360 (2021).

Course Template

Current	Proposed
AUCSC 113 - Foundational Introduction to Computational Thinking and Problem Solving	**AUCSC 111 - Introduction to Computational Thinking and Problem Solving**
Course Career Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term	**Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-3 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term
Description An introduction to computational thinking, problem solving, and the fundamental ideas of computing. Topics include algorithms, abstraction, and modelling; the syntax and semantics of a high-level language (e.g. Python); fundamental programming concepts and data structures, including simple containers (variables, arrays, lists, strings, dictionaries); sequencing, conditionals and repetition; documentation and style; object-oriented programming; exceptions and error handling; recursion; simple algorithm analysis and run- time efficiency. Prerequisite: Mathematics 30-1. Note: Credit may be obtained for only one of AUCSC 111 (2021), AUCSC 113 and AUCSC 120 (2019).	**Description** An introduction to computational thinking, problem solving, and the fundamental ideas of computing. Topics include algorithms, abstraction, and modelling; the syntax and semantics of a high-level language (e.g. Python); fundamental programming concepts and data structures, including simple containers (variables, arrays, lists, strings, dictionaries); sequencing, conditionals and repetition; documentation and style; object-oriented programming; exceptions and error handling; graphical user interfaces and event-driven programming; recursion; simple algorithm analysis and run- time efficiency. Prerequisite: Mathematics 30-1. Note: Credit may be obtained for only one of AUCSC 111, AUCSC 113 (2023), and AUCSC 120 (2019).

Course Template

Current	Proposed
New	**AUCSC 112 - Data Structures and Algorithms** **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-3 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term **Description** An introduction to object-oriented design and programming in Java; algorithm analysis; data structures and container classes including arrays, lists, arraylists, stacks, queues, user-defined structures and an introduction to trees, along with associated algorithms such as insertion, removal, sorting and retrieval; introduction to recursion. Prerequisite: AUCSC 111, AUCSC 113 (2023) or AUSCI 135. Corequisites: AUMAT 116 and 120. Note: Credit may be obtained for only one of AUCSC 112 and AUCSC 211, and for only one of AUCSC 112 and AUSCI 235.

Course Template

Current	Proposed
AUCSC 218 - Web Design, Development and Scripting **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-1.5 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term **Description** Introduction to modern web architectures and technologies. Web platforms and standards. Client-side/server-side programming and web languages (e.g. HTML, JavaScript, PHP, CSS, Node.js). Introduction to internet security. Design and implementation of a	**AUCSC 218 - Web Design, Development and Scripting** **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-1.5 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term **Description** Introduction to modern web architectures and technologies. Web platforms and standards. Client-side/server-side programming and web languages (e.g. HTML, JavaScript, PHP, CSS, Node.js). Introduction to internet security. Design and implementation of a

simple web application. Prerequisite: ~~AUCSC 112 (2021),~~ ~~or~~ one of AUCSC 113 or AUSCI 135.	simple web application. Prerequisite: one of AUCSC 113 (2023) or AUSCI 135, or AUCSC 111.

Course Template

Current	Proposed
AUCSC 220 - Software Engineering I **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-1.5 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** ~~first~~ term **Description** Software engineering paradigms, requirements specification, iterative software development, object-oriented design patterns, visual modeling with UML, software architecture; testing, verification and maintenance; software development environments and software engineering tools; societal implications such as the cost of failure and professional responsibilities. Prerequisite: AUCSC 112 ~~(2021)~~, or AUCSC 211 and AUSCI 235.	**AUCSC 220 - Software Engineering I** **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-1.5 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term **Description** Software engineering paradigms, requirements specification, iterative software development, object-oriented design patterns, visual modeling with UML, software architecture; testing, verification and maintenance; software development environments and software engineering tools; societal implications such as the cost of failure and professional responsibilities. Prerequisite: AUCSC 112, or AUCSC 211 and AUSCI 235.

Course Template

Current	Proposed
AUCSC 250 - Computer Organization and Architecture I **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-1.5 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** ~~first~~ term **Description** Introduction to computer systems as multilevel machines. Topics include data representation; the organization and	**AUCSC 250 - Computer Organization and Architecture I** **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-1.5 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term **Description** Introduction to computer systems as multilevel machines. Topics include data representation; the organization and

execution cycle of Von Neumann machines; assembly-level programming, addressing modes, control flow, procedure calls, input/output, interrupts, caching; finite state machines, Boolean algebra, logic gates, and digital circuits. Prerequisite: AUCSC 112 ~~(2021)~~, or ~~AUCSC 113 and AUSCI 135~~.	execution cycle of Von Neumann machines; assembly-level programming, addressing modes, control flow, procedure calls, input/output, interrupts, caching; finite state machines, Boolean algebra, logic gates, and digital circuits. Prerequisite: AUCSC 112, or <mark>AUCSC 211 and AUSCI 235</mark>.

Course Template

Current	Proposed
AUCSC 310 - Algorithm Design and Analysis **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-1.5 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term **Description** Algorithm design techniques (divide-and-conquer, dynamic programming, the greedy method). Merge-sort and the analysis of divide-and- conquer algorithms with recurrence relations; bucket-sort, radix-sort, and the lower bound on sorting; comparison of sorting algorithms. Trees, binary trees, search trees, their implementation, traversal, and search and update operations. Introduction to graph theory; data structures for the representation of graphs, digraphs, and networks, and their associated algorithms (traversal, connected components, topological sorting, minimum- spanning trees, shortest paths, transitive closure). Dynamic equivalence relations and union-find sets; amortized analysis. String matching. Prerequisites: AUCSC 112 ~~(2021)~~, or AUCSC 211 and AUSCI 235; and AUMAT 250.	**AUCSC 310 - Algorithm Design and Analysis** **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-1.5 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term **Description** Algorithm design techniques (divide-and-conquer, dynamic programming, the greedy method). Merge-sort and the analysis of divide-and- conquer algorithms with recurrence relations; bucket-sort, radix-sort, and the lower bound on sorting; comparison of sorting algorithms. Trees, binary trees, search trees, their implementation, traversal, and search and update operations. Introduction to graph theory; data structures for the representation of graphs, digraphs, and networks, and their associated algorithms (traversal, connected components, topological sorting, minimum- spanning trees, shortest paths, transitive closure). Dynamic equivalence relations and union-find sets; amortized analysis. String matching. Prerequisites: AUCSC 112, or AUCSC 211 and AUSCI 235; and AUMAT 250.

Course Template

Current	Proposed
AUCSC 330 - Database Management Systems I **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-1.5 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** ~~second~~ term **Description** Introduction to current database management systems in theory and practice. Topics include relational database design (including entity-relationship modeling, relational schema, and normal forms); relational algebra, use of a query language (typically SQL) and other components of a current database management system; overview of database system architecture, file structures (including B-tree indices), query processing, and transaction management; new directions. Prerequisites: AUCSC 112 ~~(2021)~~, or AUCSC 211 ~~and~~ AUSCI 235. Corequisite: AUMAT 250.	**AUCSC 330 - Database Management Systems I** **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-1.5 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term **Description** Introduction to current database management systems in theory and practice. Topics include relational database design (including entity-relationship modeling, relational schema, and normal forms); relational algebra, use of a query language (typically SQL) and other components of a current database management system; overview of database system architecture, file structures (including B-tree indices), query processing, and transaction management; new directions. Prerequisites: AUCSC 112, or AUCSC 211 or AUSCI 235. Corequisite: AUMAT 250.

Course Template

Current	Proposed
AUCSC 370 - Programming Languages **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-1.5 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** ~~first~~ term **Description** Principles of language design, abstraction, syntax and parsing, operational semantics (declaration, allocation, evaluation, run-time environment, typing, activation), and programming language paradigms (procedural, object-	**AUCSC 370 - Programming Languages** **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-1.5 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term **Description** Principles of language design, abstraction, syntax and parsing, operational semantics (declaration, allocation, evaluation, run-time environment, typing, activation), and programming language paradigms (procedural, object-

oriented, functional, logic programming). Prerequisites: AUCSC 112 <s>(2021)</s>, or AUCSC 211 and AUSCI 235. Corequisite: AUCSC 250.	oriented, functional, logic programming). Prerequisites: AUCSC 112, or AUCSC 211 and AUSCI 235. Corequisite: AUCSC 250 <u>and AUMAT 250</u>.

Course Template

Current	Proposed
New	**AUMAT 240 - Introduction to Computational Methods** **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-1.5 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term **Description** Computational methods and software packages and libraries in the mathematical sciences with applications to differentiation and integrations, data fitting, nonlinear systems and differential equations. Prerequisites: AUCSC 111 or AUCSC 113 (2023), and AUMAT 110 or 116; or consent of the instructor. Corequisite: AUMAT 120. Note: Credit may be obtained for only one of AUMAT 240 and AUSCI 250 (2023).

Course Template

Current	Proposed
AUMAT 320 - Numerical Linear Algebra **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term **Description** Computational problems in linear algebra, including linear	**AUMAT 320 - Numerical Linear Algebra** **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term **Description** Computational problems in linear algebra, including linear

systems and least squares and eigenvalues problems, with matrix factorizations as a main tool for tackling these problems. Prerequisites: AUSCI 250.	systems and least squares and eigenvalues problems, with matrix factorizations as a main tool for tackling these problems. Prerequisites: ==AUMAT 240 or== AUSCI 250 ==(2023)==.

Course Template

Current	**Proposed**
AUMAT 328 - Cryptography	**AUMAT 328 - Cryptography**
Course Career Undergraduate	**Course Career** Undergraduate
Units 3	**Units** 3
Approved Hours 3-0-0	**Approved Hours** 3-0-0
Fee index 6	**Fee index** 6
Faculty Augustana Faculty	**Faculty** Augustana Faculty
Department AU Science	**Department** AU Science
Typically Offered either term	**Typically Offered** either term
Description Introduction to cryptography in theory and practice, including its applications and mathematical foundations. Topics include classical cryptosystems, private-key cryptosystems (including DES and AES), hashing and public-key cryptosystems (including RSA), digital signatures, selected topics in cryptography. Prerequisite: AUMAT 250 and AUSCI 250.	**Description** Introduction to cryptography in theory and practice, including its applications and mathematical foundations. Topics include classical cryptosystems, private-key cryptosystems (including DES and AES), hashing and public-key cryptosystems (including RSA), digital signatures, selected topics in cryptography. Prerequisite: AUMAT 250 and ==one of AUMAT 240 or== AUSCI 250 ==(2023)==.

Course Template

Current	**Proposed**
AUMAT 332 - ==Mathematical Ecology and== Dynamical Systems	**AUMAT 332 - Dynamical Systems**
Course Career Undergraduate	**Course Career** Undergraduate
Units 3	**Units** 3
Approved Hours 3-0-0	**Approved Hours** 3-0-0
Fee index 6	**Fee index** 6
Faculty Augustana Faculty	**Faculty** Augustana Faculty
Department AU Science	**Department** AU Science
Typically Offered either term	**Typically Offered** either term
Description Fundamental concepts of discrete and continuous	**Description** Fundamental concepts of discrete and continuous dynamical systems, both linear and nonlinear; nonlinear differential equations; deterministic, nondeterministic, and

dynamical systems, both linear and nonlinear; nonlinear differential equations; deterministic, nondeterministic, and chaotic dynamics; strange attractors and fractals. Applications in ecology, biology and physics. Prerequisites: AUMAT 216.	chaotic dynamics; strange attractors and fractals. Applications in ecology, biology and physics. Prerequisites: AUMAT 216.

Course Template

Current	Proposed
AUMAT 350 - Optimization	**AUMAT 350 - Optimization**
Course Career Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term	**Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term
Description Introduction to optimization (definition, notation and taxonomy); unconstrained optimization using gradient descent and stochastic gradient descent; linear programming: The Simplex Method; constrained optimization and Lagrange multipliers; convex optimization and quadratic programming. Prerequisites: ~~AUSCI 250 and~~ AUMAT 216.	**Description** Introduction to optimization (definition, notation and taxonomy); unconstrained optimization using gradient descent and stochastic gradient descent; linear programming: The Simplex Method; constrained optimization and Lagrange multipliers; convex optimization and quadratic programming. Prerequisites: AUMAT 216 and one of AUMAT 240 or AUSCI 250 (2023).

Course Template

Current	Proposed
New	**AUPHY 110 - Mechanics**
	Course Career Undergraduate **Units** 3 **Approved Hours** 3-0-3/2 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term
	Description

	<mark>Particle motion, force, Newton's Laws, gravity, work, kinetic energy, potential energy, momentum, systems of particles, rigid body motion, rotational motion, rotational dynamics, angular momentum, conservation principles. Prerequisites: Mathematics 30-1.</mark>

Course Template

Current	Proposed
AUPHY 120 - <mark>~~Introductory Physics~~</mark>	**AUPHY 120 - <mark>Waves, Thermodynamics, and Optics</mark>**
Course Career Undergraduate **Units** 3 **Approved Hours** 3-0-<mark>~~0~~</mark> **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term	**Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-<mark>3/2</mark> **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term
Description Oscillatory motion, waves on a string, sound waves, interference of waves, temperature, heat, entropy, first and second laws of thermodynamics, geometric optics, interference of light. Prerequisites: Mathematics 30-1.	**Description** Oscillatory motion, waves on a string, sound waves, interference of waves, temperature, heat, entropy, first and second laws of thermodynamics, geometric optics, interference of light. Prerequisites: Mathematics 30-1.

Course Template

Current	Proposed
<mark>~~AUSCI 250 - Introduction to Computational Methods~~</mark>	**<mark>To be deleted</mark>**
<mark>~~Course Career~~</mark> <mark>~~Undergraduate~~</mark> <mark>~~Units 3~~</mark> **<mark>~~Approved Hours~~</mark>** <mark>~~3-0-1.5~~</mark> **<mark>~~Fee index~~</mark>** <mark>~~6~~</mark> **<mark>~~Faculty~~</mark>** <mark>~~Augustana Faculty~~</mark> **<mark>~~Department~~</mark>** <mark>~~AU Science~~</mark> **<mark>~~Typically Offered~~</mark>** <mark>~~either term~~</mark>	
<mark>~~Description~~</mark> <mark>~~Computational methods and software packages and libraries in the mathematical sciences with applications to differentiation and integrations, data fitting, nonlinear systems and differential equations. Prerequisites: AUCSC~~</mark>	

| ~~111 (2021) or AUCSC 113, and AUMAT 110 or 116; or consent of the instructor. Corequisite: AUMAT 120.~~ | |

Course Template

Current	Proposed
AUSCI 330 - History and Theory of Computing	**AUSCI 330 - History and Theory of Computing**
Course Career Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term	**Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-0 **Fee index** 6 **Faculty** Augustana Faculty **Department** AU Science **Typically Offered** either term
Description History and models of computers including finite automata and Turing machines, computability, basics of formal languages and complexity classes (P, NP, NP-complete). Prerequisite: AUCSC 111 ~~(2021)~~, or AUCSC 113 and AUSCI 135; and AUMAT 250. Note: Credit may be obtained for only one of AUMAT 355, AUCSC 315 and AUCSC 415 (2021).	**Description** History and models of computers including finite automata and Turing machines, computability, basics of formal languages, and complexity classes (P, NP, NP-complete). Prerequisite: AUCSC 111, or AUCSC 113 (2023) and AUSCI 135; and AUMAT 250. Note: Credit may be obtained for only one of AUMAT 355, AUCSC 315 and AUCSC 415 (2021).

Reviewed/Approved by:

Augustana Faculty Council, December 2, 2022
Augustana Department of Science, November 18, 2022. Augustana Curriculum Committee, November 22 & 24, 2022

Calendar Change Request Form
for Course Changes
See the Calendar Guide for tips on how to complete this form.

Faculty (& Department or Academic Unit):	Augustana Faculty
Contact Person:	Jonathan Hawkins jh12@ualberta.ca
Level of change: (choose one only) [?]	☑ Undergraduate
	☐ Graduate
For which term will this change take effect?	Fall 2024

Rationale
Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

These course changes are in support of the program change proposals from Augustana to eliminate its 'Science Foundations' curriculum beginning in Fall 2023. The following courses were created as disciplinary laboratory courses in the Science Foundations and will no longer be needed following the elimination of 'Science Foundations'. This proposal calls for the deletion of these courses effective Fall 2024; if approved, the courses will be placed on 'Reserve' for the 2023-2024 academic year. While there is not currently an anticipated need for any of these courses, the intent is to keep them for one year, in case student need requires a final offering of any of them in order to assist in meeting degree requirements.

Course Template

Current: ~~Removed language~~	Proposed: New language
~~**AUSCI 115 - Scientific Inquiry in Biological Sciences**~~ ~~**Course Career** Undergraduate~~ ~~**Units** 3~~ ~~**Approved Hours** 1-0-3~~ ~~**Fee index** 6~~ ~~**Faculty** Augustana Faculty~~ ~~**Department** AU Science~~ ~~**Typically Offered** either term~~ ~~**Description**~~ ~~Introduction to the scientific process and methods in biological sciences. Hands-on, project-based introduction to the scope of biology, diversity of life, levels of organization of biological systems and essential laboratory and field techniques. Prerequisite: At least one of Biology 30, Chemistry 30, Physics 30, or Science 30.~~	To be Deleted

Course Template

Current: ~~Removed language~~	Proposed: New language
~~AUSCI 125 - General Chemistry Lab I~~ ~~**Course Career** Undergraduate~~ ~~**Units** 3~~ ~~**Approved Hours** 1-0-3~~ ~~**Fee index** 6~~ ~~**Faculty** Augustana Faculty~~ ~~**Department** AU Science~~ ~~**Typically Offered** either term~~ ~~**Description**~~ ~~Introduction to the scientific process and methods in chemical sciences. Hands-on experiments will be used to introduce key techniques and concepts in the chemistry lab, including simple aqueous reactions, manipulation of solids and liquids, titrations and stoichiometry. Prerequisite: At least one of Biology 30, Chemistry 30, Physics 30, or Science 30.~~	**To be Deleted**

Course Template

Current: ~~Removed language~~	Proposed: New language
~~AUSCI 135 - Practical Introduction to Computational Thinking and Problem Solving~~ ~~**Course Career** Undergraduate~~ ~~**Units** 3~~ ~~**Approved Hours** 0-0-3~~ ~~**Fee index** 6~~ ~~**Faculty** Augustana Faculty~~ ~~**Department** AU Science~~ ~~**Typically Offered** either term~~ ~~**Description**~~ ~~Through teamwork and programming in a scripting language (such as Python or Ruby), this course introduces computational thinking, problem solving, and the fundamental ideas of computing science. Driven by building a computer application, students will use algorithms, abstraction and modelling, learning the syntax and semantics of a high-level language, investigate fundamental programming concepts and data structures, and use basic software development methods and tools. Documentation standards, object-orientated programming, and exception handling will be required in~~	**To be Deleted**

~~the computer application. Geographical user interfaces and event-driven programming may also be included. Prerequisite. Mathematics 30-1. Note: Credit may be obtained for only one of AUCSC 111 (2021) and AUSCI 135.~~	

Course Template

Current: ~~Removed language~~	Proposed: New language
~~**AUSCI 165 - Physics Laboratory**~~ ~~**Course Career** Undergraduate~~ ~~**Units** 3~~ ~~**Approved Hours** 1-0-3~~ ~~**Fee index** 6~~ ~~**Faculty** Augustana Faculty~~ ~~**Department** AU Science~~ ~~**Typically Offered** either term~~ ~~**Description**~~ ~~Introduction to the scientific process and experimental methods in physics. Hands-on experiments, spanning several branches of physics, will develop skills in experimental design, quantitative data analysis, experiment evaluation and scientific communication. Prerequisite: At least one of Biology 30, Chemistry 30, Physics 30, or Science 30.~~	To be Deleted

Reviewed/Approved by:

Augustana Faculty Council, December 2, 2022.

Augustana Department of Science, November 18, 2022. Augustana Curriculum Committee, November 22 & 24, 2022

Governance Executive Summary
Action Item

Agenda Title	New Second-level Specialization - Artificial Intelligence Option, Faculty of Science

Motion

THAT the GFC Programs Committee approves, under delegated authority from the General Faculties Council, the new second-level specialization entitled "Artificial Intelligence Option", effective July 1, 2024.

Item

Action Requested	**X** Approval ☐ Recommendation
Proposed by	Frederick West, Acting Dean, Faculty of Science
Presenter(s)	Gerda de Vries, Associate Dean (Undergraduate), Faculty of Science Ken Wong, Professor and Associate Chair (Undergraduate), Department of Computing Science

Details

Office of Administrative Responsibility	Provost and Vice-President (Academic)
The Purpose of the Proposal is (*please be specific*)	Artificial Intelligence (AI) is of current and increasing importance, affecting, disrupting, and amplifying many other disciplines and industrial sectors, fueling innovations and change that will have major societal and economic impact, much like the internet has over the past decades. Massive streams of data are produced in many areas, including business applications, medical data, personal and home devices, scientific experiments, environmental monitoring, energy systems, and transportation networks. There is a need for AI-related approaches, such as machine learning (ML) and data science (DS) to discover useful insights in this data and enable increased productivity and automation. In 2017, the Government of Canada established a $125 million Pan-Canadian AI strategy that works closely with three national AI institutes: Amii in Edmonton, Mila in Montreal, and the Vector Institute in Toronto, in partnership with universities and other organizations across the country. As well, AI4Society was endorsed as one of five signature areas at the University of Alberta, with engagements across eleven faculties. Also, the Department of Computing Science currently ranks ninth in the world in the combined areas of AI, ML, and data mining, according to csrankings.org as of 2022. This expertise has attracted industry partners such as Google, Amazon, IBM, Microsoft Research, Royal Bank of Canada, and Scotiabank. In 2017, DeepMind, the world leader in AI research and application opened its first international AI research lab in Edmonton, with close connections to the University of Alberta. Given the world-class strengths in AI research, the demand for AI-related computing courses, and the capacity to teach those courses, it

	is only natural to establish AI second-level specializations at the undergraduate level, namely the notion of a computing science AI Option. Employers are increasingly looking for expertise in AI, and the AI Option would help in identifying and recognizing that focus among undergraduate students at the University of Alberta. The AI Option would also help graduates to transition to a job requiring these skills.
Executive Summary (*outline the specific item – and remember your audience*)	Under the new BSc Renewal degree framework, the Artificial Intelligence Option would only be available to students in the BSc Major in Computing Science and BSc with Honors in Computing Science. Therefore, all computing science students have the option of completing the Artificial Intelligence Option as part of their 4-year degree program. When incorporated into either the BSc Major in Computing Science or BSc with Honors in Computing Science, the AI Option comprises 30-33 units. See Appendix 1 of the attached template for the structure of the Artificial Intelligence Option (as it would appear added to the BSc Major in Computing Science and BSc with Honors in Computing Science). This proposal is part of an effort to improve and reorganize our undergraduate AI curriculum, resulting in a clearer pathway for students who wish to focus on AI topics (crossing through AI theory, applications, and projects). We are using existing courses to ensure this proposal can be adopted in Fall 2024 alongside the Software Practice Option as part of the new BSc Renewal degree framework. To ensure a solid expertise in artificial intelligence, the AI Option requires: - five foundational courses (CMPUT 261, 267, 365, 366, and 367 or 466) - two courses from an approved list for students in the BSc Major in Computing Science and three courses from an approved list for students in the BSc with Honors in Computing Science - one capstone course (CMPUT 469) for students in the BSc with Honors in Computing Science At a high level, there are a number of science, computing, and math skills as outcomes of the AI Option. In particular, students will develop automated solutions to problems by: formalizing the problem; identifying and applying appropriate AI algorithms to address the problem; characterizing the properties and limitations of the possible algorithms; and evaluating the implemented AI systems. There are also professional skills. In particular, students will know the correct terminology used in the AI field, to communicate concisely and precisely in collaborations with other practitioners. Given the potential for dramatic advances, the AI Option is not about operating specific AI technologies or tools. Thus, one outcome is having students gain an ability to learn new methods, languages, and tools. As well, the students will need to critically assess the limits of their own knowledge, to

	identify areas of personal growth, and mitigate unsafe deployments of AI systems.
	If students wish work experience, possibly building upon the AI expertise they would gain within the AI Option, there is also the Science Internship Program. Also orthogonal to the certificate courses could be relevant independent studies courses that further investigate and apply AI techniques.
	The Department of Computing Science is already a world leader in artificial intelligence research. As well, the Department is an innovator in computing science education, including hybrid/remote delivery and MOOCs, and has recently developed a variety of new courses, including ones on AI topics.
	The proposed AI Option does not include the creation of any further courses. Total registrations in Computing Science degree programs are also not expected to increase, as a result of the AI Option, beyond the projected growth rates in Computing Science.
	To gauge student interest in artificial intelligence and gather feedback about the AI Option, we also conducted a survey of over 2200 computing science undergraduate students over a one week period in late October 2022. The results, presented in the attached template, were very positive.
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](#)>	*Those who are actively **participating**:* ● Computing Science departmental curriculum committee, Faculty of Science, 2021 - 2022 ● Associate Chairs (Undergraduate), Faculty of Science; Fall 2022 ● Academic advisors, Faculty of Science; Fall 2022
	*Those who have been **consulted**:* ● Undergraduate computing science students (feedback received via online survey); Fall 2022 ● Provost's Office (Vice-Provost, Programs); various meetings between 2021 and 2022 ● Provost's Office (Vice-Provost, Indigenous Programming and Research); various meetings between 2021 and 2022
	*Those who have been **informed**:* ● N/A
Approval Route (Governance) (including meeting dates)	Department of Computing Science Council (approval obtained October 31, 2022) Associate Chairs (Undergraduate) on the delegated authority of the Science Faculty Council (approval obtained November 29, 2022)

	Programs Support Team (December 15, 2022) GFC Programs Committee (January 12, 2023)

Strategic Alignment

Alignment with *For the Public Good*	**Experience** To help "experience diverse and rewarding learning opportunities that inspire us, nurture our talents, expand our knowledge and skills, and enable our success". **Excel** To help "excel as individuals, and together, sustain a culture that fosters and champions distinction and distinctiveness in teaching, learning, research, and service".	
Alignment with Core Risk Area	Please note below the specific institutional risk(s) this proposal is addressing.	
	X Enrolment Management ☐Faculty and Staff ☐Funding and Resource Management ☐IT Services, Software and Hardware ☐Leadership and Change ☐Physical Infrastructure	**X** Relationship with Stakeholders **X** Reputation ☐Research Enterprise ☐Safety **X** Student Success
Legislative Compliance and jurisdiction	Post-Secondary Learning Act GFC Committees Terms of Reference	

Attachments

1. Artificial Intelligence Option - New Second-level Specialization Template (pages 1 - 18)
2. Letter of Support from the Dean of Science (page 1)
3. Proposed Calendar Changes - Artificial Intelligence Option (pages 1 - 21)

Prepared by: Gerda de Vries, Associate Dean (Undergraduate), Faculty of Science, sciadu@ualberta.ca

UNIVERSITY OF ALBERTA

Internal Program Proposal Template
- for-credit programs not requiring Ministry approval -

This template is to be used for proposals to create or modify programs that do not require Ministry of Advanced Education approval.

Faculties and Departments 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). All program proponents must also consult with the Vice-Provost (Indigenous Programming & Research) during the early development stage.

PROPOSAL TYPE

This proposal is for a (select one):
X   <mark>Creation of a new second-level specialization (e.g., minors of undergraduate programs and second-level specializations of graduate programs)</mark>
☐   The addition of an Honors stream to an existing undergraduate program
☐   Creation of a combined degree program where both contributing degrees have been approved by the Ministry of Advanced Education
☐   Embedded Certificate
☐   Substantive program changes that do not require Ministry approval

1: Basics		
Program/Specialization /Embedded Certificate/Combined Degree Name	Artificial Intelligence Option	
Faculty/Department	Faculty of Science / Department of Computing Science	
Contact information	Name and Title	Dr. Kenny Wong, Associate Chair (Undergraduate)
	Phone	
	Email	csacu@ualberta.ca
Proposed effective date	July 1, 2024	
Attachments		
- Letter of Support from the Dean of the Faculty - Proposed Calendar changes		

2: Rationale, Implications, and Impacts

| **Rationale for the Proposal**
Identify the purpose of the proposal with supporting rationale and evidence of demand. | Artificial Intelligence (AI) is of current and increasing importance, affecting, disrupting, and amplifying many other disciplines and industrial sectors, fueling innovations and change that will have major societal and economic impact, much like the internet has over the past decades.

Massive streams of data are produced in many areas, including business applications, medical data, personal and home devices, scientific experiments, environmental monitoring, energy systems, and transportation networks. There is a need for AI-related approaches, such as machine learning (ML) and data science (DS) to discover useful insights in this data and enable increased productivity and automation.

In 2017, the Government of Canada established a $125 million Pan-Canadian AI strategy that works closely with three national AI institutes: Amii in Edmonton, Mila in Montreal, and the Vector Institute in Toronto, in partnership with universities and other organizations across the country. As well, AI4Society was endorsed as one of five signature areas at the University of Alberta, with engagements across eleven faculties. Also, the Department of Computing Science currently ranks ninth in the world in the combined areas of AI, ML, and data mining, according to csrankings.org as of 2022.

This expertise has attracted industry partners such as Google, Amazon, IBM, Microsoft Research, Royal Bank of Canada, and Scotiabank. In 2017, DeepMind, the world leader in AI research and application opened its first international AI research lab in Edmonton, with close connections to the University of Alberta.

Given the world-class strengths in AI research, the demand for AI-related computing courses, and the capacity to teach those courses, it is only natural to establish AI second-level specializations at the undergraduate level, namely the notion of a computing science AI Option. Employers are increasingly looking for expertise in AI, and the AI Option would help in identifying and recognizing that focus among undergraduate students at the University of Alberta. The AI Option would also help graduates to transition to a job requiring these skills.

Under the new BSc Renewal degree framework, the Artificial Intelligence Option would only be available to students in the BSc Major in Computing Science and BSc with Honors in Computing Science. |
| **Length of the Program**
Identify the length of the program in years and credit units per year. | Computing science students have the option of completing the Artificial Intelligence Option as part of their 4-year degree program.

When incorporated into either the BSc Major in Computing Science or BSc with Honors in Computing Science, the AI Option comprises 30-33 units. See Appendix 1 for the structure of the Artificial Intelligence Option (as it would appear added to the BSc Major in Computing Science and BSc with Honors in Computing Science). |

Provide the anticipated enrolments by head count for the next 5 years

Computing science (CS) students already take artificial intelligence courses as options. In estimating student demand, we can consider the historical enrollment numbers as of the add-drop date for some of the key required courses: CMPUT 261 (formerly CMPUT 366), CMPUT 267 (formerly CMPUT 296), CMPUT 365 (formerly CMPUT 397), the new version of CMPUT 366, CMPUT 367 (formerly CMPUT 396), and CMPUT 466. For Winter 2023, we show the current registration numbers.

	CMPUT 261	CMPUT 267	CMPUT 365	CMPUT 366	CMPUT 367	CMPUT 466
Fall 2019	137	n/a	121	n/a	n/a	42
Winter 2020	61	121	60	n/a	n/a	82
Fall 2020	126	41	154	n/a	n/a	32
Winter 2021	128	117	77	n/a	n/a	104
Fall 2021	188	118	66	n/a	31	45
Winter 2022	190	109	86	n/a	n/a	34
Fall 2022	61	150	67	135	46	63
Winter 2023	110	157	91	190	n/a	90

For 2021/2022 in particular, there were 527 such students in second year, and 89 of them (16.9%) took CMPUT 267 (and passed). The proposed second-level specializations would essentially cause a redistribution of the students in CS programs, with perhaps 1/6 undertaking the requirements of the AI Option. It will not significantly capture new students who would otherwise not take computing science. I.E. This proposal is not aiming to increase the number of Computing Science students beyond what is already happening with current growth projections.

Scaled by the approximately 2278 students currently in computing science programs, compounded with an estimated 16% in yearly growth (the typical growth rate over the past 10 years: from 491 students in 2012/13 to 2278 students in 2022/23), there is significant potential demand. The estimates provided below are of how many Computing Science students we expect will add the Artificial Intelligence Option to their Computing Science degree.

Enrolment	2024	2025	2026	2027	2028
Total Headcount	490	530	580	625	655
• Year 1	145	150	160	170	175
• Year 2	125	145	150	160	170
• Year 3	110	125	145	150	160
• Year 4	110	110	125	145	150

Work-Integrated Learning Describe how learners in this program will have access to Work-Integrated Learning *(see [CEWIL definitions](#))*.	All Bachelor of Science students have the option of completing the Science Internship Program (SIP), which allows students to integrate work experience for 4, 8, 12 or 16 months into their degree.
Consultation Describe the consultation process that occurred with students and other relevant stakeholders, and the feedback received.	**Process** May 2021 - Department of Computing Science approves AI Certificate Dec 2021 - AI Certificate proposal presented to Program Support Team Sep 2022 - Recommendation from Science to create AI Option instead of AI Certificate Oct 2022 - Consultation with Vice-Provost (Programs) and Vice-Provost (Indigenous Programming & Research) Oct 2022 - Department of Computing Science approval of AI Option Oct 2022 - Survey of CS undergraduate students about AI Option **Student Survey** To gauge student interest in artificial intelligence and gather feedback about the AI Option, we also conducted a survey of over 2200 computing science undergraduate students over a one week period in late October 2022. We received 133 responses. There could be some bias since mostly interested students would respond. We were also interested in their feedback and concerns about the AI Option itself. Here is the breakdown of the respondents by CS program.

B.Sc. Specialization in Computing Science	24.8%
B.Sc. General with Major in Computing Science	33.8%
B.Sc. Honors in Computing Science	24.8%
B.Sc. Specialization in CS - Software Practice	6.0%
B.Sc. Specialization in CS - Business Minor	3.0%
B.Sc. General with Minor in Computing Science	2.3%
Other	5.3%

By academic year, 36.1% were year one, 25.6% were year two, 24.1% were year three, and 14.3% were in year four or higher. Naturally, there were more responses from year one and two students, since they still may have chances to add the AI Option. There were somewhat fewer responses from year four students, who are nearly about to graduate in their current program.

We asked if students would consider adding the AI Option if it was offered starting in 2024/2025.

Yes, I would probably add the CS Major - AI Option.	42.1%
Yes, I would probably add the CS Honors - AI Option.	28.6%
I would like to add it, but I cannot complete the requirements before I plan to graduate.	18.8%
No	10.0%

We also asked the respondents if they would have chosen to add the AI Option if it was available at the start of their studies.

Yes - I would likely have added the CS Major - AI Option	36.1%
Yes - I would likely have added the CS Honors - AI Option	26.8%
Perhaps - I would have considered adding the CS Major - AI Option.	18.8%
Perhaps - I would have considered adding the CS Honors - AI Option.	10.5%
No	6.0%

Ignoring the 8 respondents (6% of all respondents) not interested in the AI Option, we asked the remaining 125 students whether they agreed with certain statements about the courses in the AI Option.

	This course covers material that is relevant and interesting to me.	If I had the opportunity, I would consider taking this course.	I have taken this course.
CMPUT 200	72 (57.6%)	74 (59.2%)	4 (3.2%)
CMPUT 261	89 (71.2%)	48 (38.4%)	21 (16.8%)
CMPUT 267	92 (73.6%)	41 (32.8%)	31 (24.8%)
CMPUT 365	94 (75.2%)	55 (44.0%)	18 (14.4%)
CMPUT 366	96 (76.8%)	56 (44.8%)	16 (12.8%)
CMPUT 367	86 (68.8%)	59 (47.2%)	12 (9.6%)
CMPUT 466	94 (75.2%)	62 (49.6%)	8 (6.4%)
CMPUT 312	66 (52.8%)	56 (44.8%)	2 (1.6%)
CMPUT 328	86 (68.8%)	62 (49.6%)	9 (7.2%)
CMPUT 340	61 (48.8%)	54 (43.2%)	13 (10.4%)
CMPUT 350	69 (55.2%)	55 (44.0%)	2 (1.6%)
CMPUT 412	67 (53.6%)	47 (37.6%)	2 (1.6%)
CMPUT 455	78 (62.4%)	51 (40.8%)	13 (10.4%)

CMPUT 461	81 (64.8%)	58 (46.4%)	6 (4.8%)
CMPUT 463	73 (58.4%)	47 (37.6%)	2 (1.6%)
CMPUT 469	101 (80.8%)	64 (51.2%)	1 (0.8%)

Of the interested students, their comments about the AI Option and related courses are collected and grouped in Appendix B.

One of the general main concerns was about adding or graduatng with the AI Option, even as soon as in the year that it launches. Senior students nearing graduation may not want to take the required 200-level classes.

There were a few responses who would rather have done the previously proposed AI certificate, since they had planned their courses around that, and were disappointed about the change.

There were a number of comments about CMPUT 200 and its prerequisites, particularly requiring CMPUT 191, and how that seemed unnecessary or could put someone over their limit on 100-level courses. This has actually already been addressed by allowing alternative prerequisites for CMPUT 200 (e.g., CMPUT 174 or 274 and an introductory STAT course). In addition, there were concerns about "wasting" credits on CMPUT 200, thinking it is mostly a soft course requiring essay writing and class discussions. In actuality, it is a technical course.

There were some concerns about the difficulty of CMPUT 267, that the corequisites should be prerequisites, and there should be more prerequisites for students to succeed. Since the course is quite foundational, it may not suit students who want to see something more practical, sooner rather than later.

A few respondents did not like how CMPUT 365 was based on a Reinforcement Learning MOOC, suggesting that the MOOC content should be better integrated into the on-campus learning experience or should go fully online.

There was some confusion among students between the purpose of CMPUT 367 and CMPUT 466. For example, CMPUT 367 is harder than 466, yet is 300-level, and there are overlapping topics. Like CMPUT 267, the CMPUT 367 takes a more foundational approach, while CMPUT 466 takes a more practical approach to machine learning. CMPUT 466 also suits a CS student not doing the AI Option, with a "one-stop shop" or "nutshell" course that covers machine learning. There are new calendar changes, so students cannot get credit for both courses.

Indigenous Perspectives Describe the outcomes of the consultation with the Vice Provost (Indigenous Programming and Research) regarding how the program will integrate/include indigenous perspectives and content, and any action items that may result.	The Faculty of Science aspires to indigenize its curriculum. We recognize this has to occur at the course level, and that it may also occur at the program requirement level. To address indigenization at the course level, Acting Dean Frederick West tasked our Teaching and Learning Committee (TLC), chaired by Jocelyn Hall (Professor, Biological Sciences), with beginning the important process of decolonizing and indigenizing Science courses. The Faculty of Science recognizes that indigenization must be Indigenous led. While the scope of the committee is still being fine-tuned, some goals have been identified. First, survey Science teaching staff to determine (a) what is currently being done to decolonize/indigenize their courses, (b) what are barriers to

decolonize/indigenize, and (c) what do instructors need to further the decolonization/indigenization of their courses. Second, the committee will make recommendations on some next steps in the process of decolonization/ indigenization of Faculty of Science courses. Also, the committee will facilitate connecting our instructors to resources on indigenization and decolonization (Centre for Teaching and Learning, Office of the Vice-Provost [Indigenous Programming and Research], etc.).

To address indigenization at the program requirement level, we established the indigenization of the Bachelor of Science Curriculum Working Group, chaired by Tara McGee (Professor and Associate Dean, Engagement & EDI) and co-chaired by Shawn Desaulniers (Faculty Service Officer, Mathematical and Statistical Sciences). The working group's task was to address the following question: Will indigenization occur only at the course level or should an explicitly-stated, faculty-level program requirement (i.e. at least 3 units worth of a 120-unit degree) also be implemented?

The working group strongly recommends that the Faculty of Science implement a faculty-level Indigenous course requirement for all BSc programs. The requirement would be that all undergraduate Bachelor of Science students in the Faculty of Science must complete at least 3 units (one course) from a curated list of Indigenous courses. The curated list should consist of courses that focus on themes such as Indigenous knowledge, ways of knowing, culture, history, languages, and contemporary Indigenous issues. Courses fulfilling this Indigenous course requirement must contain substantial Indigenous content (by consideration of the contact hours, reading list, learning objectives, and general syllabus material). The whole course should focus predominantly on the Indigenous peoples in the lands that are currently known as Canada. Whenever possible, the course should be designed and taught by appropriate knowledge holders (i.e. Indigenous instructors, Indigenous scholars, or non-Indigenous instructors trained in such areas). In relation to BSc Renewal, the Indigenous course easily can be incorporated as a breadth requirement; students can use this course to satisfy either the communication/writing requirement or the breadth from outside the Faculty of Science requirement. Eventually, when the Faculty of Science creates its own Indigenous courses, they can be used to satisfy the breadth from within the Faculty of Science requirement or even be used toward the Major/Minor/Honors requirements. More details are provided in the working group's [Recommendation Document](#).

Work on the Indigenous course requirement is ongoing. We are consulting with stakeholders and connecting with the faculties/departments offering courses on our draft list to determine if they are appropriate and have sufficient enrolment capacity. We intend to put forward a program change to add the Indigenous course requirement to the degree requirements as soon as there is sufficient enrolment capacity. BSc Renewal facilitates the addition of this Indigenous course requirement. The Faculty of Science recognizes that it should play a role in increasing collective enrolment capacity on campus in courses for general audiences, but the nature of the role is unclear at this time. Possibilities include developing its own Indigenous course(s), with the understanding that this initiative would need to be Indigenous led, and collaborating with other units to jointly develop new Indigenous courses.

As well, within the course level, we are working to include materials on Indigenous principles in AI in CMPUT 200, including data sovereignty, data ownership, and Indigenous protocol. We plan to work with scholars within the university and across

	Canada to build course materials and incorporate guest lectures. For example, through AI4Society, particularly the Salon series on Ethics of Data and AI, we are in communication with Professor Kisha Supernant and her PhD student Liam Wadsworth to build on their work in gathering and using data on residential school graves and following Indigenous protocol. Such collaborations would enrich the CMPUT 200 ethics course with meaningful content offering Indigenous perspectives. See this Letter of Support from the Dean of Science, Chair of the Teaching and Learning Committee, and Chairs of the Indigenization of the Bachelor of Science Curriculum Working Group.

Resource Implications
 Identify financial impacts and internal resource requirements, particularly staff and classroom and lab space. Also identify any external resource requirements such as practicum or internship placements, etc.
	The Department of Computing Science is already a world leader in artificial intelligence research. As well, the Department is an innovator in computing science education, including hybrid/remote delivery and MOOCs, and has recently developed a variety of new courses, including ones on AI topics.
	
	 The proposed AI Option does not include the creation of any further courses. Total registrations in Computing Science degree programs are also not expected to increase, as a result of the AI Option, beyond the projected growth rates in Computing Science.
	
	 Listed below are key courses of the AI Option, and the study terms in which they are typically and regularly offered:
	
	 Required:
	     CMPUT 200 - Ethics of Data Science and Artificial Intelligence (winter)
	     CMPUT 261 - Introduction to Artificial Intelligence (fall/winter)
	     CMPUT 267 - Basics of Machine Learning (fall/winter)
	     CMPUT 365 - Introduction to Reinforcement Learning (fall/winter)
	     CMPUT 366 - Search and Planning in Artificial Intelligence (fall/winter)
	     CMPUT 367 - Intermediate Machine Learning (fall) or CMPUT 466 - Machine Learning (fall/winter)
	
	 Optional:
	     CMPUT 312 - Introduction to Robotics and Mechatronics (fall)
	     CMPUT 328 - Visual Recognition (fall)
	     CMPUT 340 - Introduction to Numerical Methods (fall/winter)
	     CMPUT 350 - Advanced Games Programming (fall)
	     CMPUT 412 - Experimental Mobile Robotics (winter)
	     CMPUT 455 - Search, Knowledge, and Simulation (fall or winter)
	     CMPUT 461 - Introduction to Natural Language Processing (fall)
	     CMPUT 463 - Probabilistic Graphical Models (fall)
	     CMPUT 469 - Artificial Intelligence Capstone (winter)
	
	 Given the current departmental teaching capacity, this should be possible to sustain. CMPUT 200 (Ethics for AI) is a new course introduced by Nidhi Hegde, piloted in Winter 2022 and offered again in Winter 2023. Matthew Taylor could also teach this course.
	
	 The modified version of CMPUT 261 is being taught in the Fall 2022 and Winter 2023 by James Wright, and is an adaptation of the previous CMPUT 366. It can be taught by anyone who previously taught 366, including Vadim Bulitko and Levi Lelis.

Each of CMPUT 267 and 365 has at least three different instructors with prior experience teaching it.

The modified version of CMPUT 366 is being taught in the Fall 2022, designed and taught by Levi Lelis, with at least 5 other instructors that are experts in the content and could easily teach it, including Martin Mueller, Jonathan Schaeffer, Vadim Bulitko, Michael Buro, Nathan Sturtevant.

Finally, the students are required to take one of CMPUT 367 or CMPUT 466. CMPUT 367 (the follow-up course to CMPUT 267) was piloted in Fall 2021 and is being taught again in Fall 2022. It can be taught by the same set of instructors as CMPUT 267. CMPUT 466 is offered every semester, and has been taught by Lili Mou, Alona Fyshe, Russ Griener, and Martha White. CMPUT 466 is an alternative follow-up to CMPUT 267, which is a broader introduction to intermediate machine learning concepts than CMPUT 367. Either course will provide students with a more in-depth understanding of machine learning; they can choose between the more in-depth and mathematical approach of CMPUT 367 or the broader overview given in CMPUT 466.

The courses on the approved list—CMPUT 312, 328, 340, 350, 412, 455, 461, and 463—have historically been offered once per year (unless the corresponding faculty member goes on sabbatical and there is no suitable sessional instructor). At present, some of these courses have typically small enrollments (e.g., due to specialized equipment, limited qualified TAs, and/or more prerequisites), so there could be a bottleneck for students if the CS AI Option becomes popular. Following is the enrollment as of the add-drop date for the most recent offering of these courses.

CMPUT 312	CMPUT 328	CMPUT 340	CMPUT 350	CMPUT 412	CMPUT 455	CMPUT 461	CMPUT 463
12	82	46	43	25	191	33	9

CMPUT 469, the capstone course, was piloted in Winter 2022 and will be taught again in Winter 2023. Any instructors teaching the set of core courses for this AI Option should be able to teach this capstone course. It should be possible to offer this course at least once per year, but there is capacity to start offering it more frequently if demand increases.

The department also plans to hire five new faculty related to AI. As well, AI postdocs may also help to teach the AI courses.

Approval Process Indicate the internal governance path, including meeting dates	Department of Computing Science Council; meeting took place October 26, 2022; approval obtained October 31, 2022 Associate Chairs (Undergraduate) as proxies for the Science Faculty Council; meeting took place November 4, 2022; approval obtained November 30, 2022 GFC Program Support Team; December 15, 2022 GFC Programs Committee; January 12, 2023

APPENDIX A - Structure of the Artificial Intelligence Option

The table below presents the structure of the Artificial Intelligence Option when added to (and in comparison to) the Major in Computing Science program. Yellow highlighted courses are those that are specifically required for the Artificial Intelligence Option. Grey cells present electives and common program requirements that must be taken in addition to the Major requirements to reach 120 units for the BSc degree. The Software Practice Option is also included for comparison purposes.

Major in Computing Science	Major in Computing Science with Artificial Intelligence Option	Major in Computing Science with Software Practice Option
CMPUT 174	CMPUT 174	CMPUT 174
CMPUT 175	CMPUT 175	CMPUT 175
CMPUT 200 or CMPUT 300	CMPUT 200	CMPUT 200 or CMPUT 300
6 units from CMPUT 201, CMPUT 204, CMPUT 229, CMPUT 272, CMPUT 291	CMPUT 201 or CMPUT 291	15 units from CMPUT 201, CMPUT 204, CMPUT 229, CMPUT 272, CMPUT 291
	CMPUT 204	
	CMPUT 272	
N/A	CMPUT 261	N/A
	CMPUT 267	
18 units in CMPUT at the 300 level or higher	CMPUT 365	CMPUT 301
	CMPUT 366	CMPUT 325
	CMPUT 367 or CMPUT 466	CMPUT 379
	3 units from CMPUT 312, CMPUT 328, CMPUT 340, CMPUT 350	3 units from CMPUT 304, CMPUT 340 or CMPUT 474
	12 units in CMPUT at the 300 level or higher	6 units in CMPUT at the 300 level or higher
6 units in CMPUT at the 400 level	3 units from CMPUT 412, CMPUT 455, CMPUT 461, CMPUT 463, CMPUT 469	CMPUT 401
		CMPUT 402
	6 units in CMPUT at the 400 level	3 units in CMPUT at the 400 level
N/A	N/A	12 units in Business Courses
MATH 125	MATH 125	MATH 125
3 units from MATH 134, MATH 144, MATH 154	3 units from MATH 134, MATH 144, MATH 154	3 units from MATH 134, MATH 144, MATH 154
3 units from MATH 136, MATH 146, MATH 156	3 units from MATH 136, MATH 146, MATH 156	3 units from MATH 136, MATH 146, MATH 156
3 units from STAT 151, STAT 235, STAT 265	3 units from STAT 151, STAT 235, STAT 265	3 units from STAT 151, STAT 235, STAT 265
3 units from STAT 252, STAT 266	3 units from STAT 252, STAT 266	3 units from STAT 252, STAT 266
48 units in Electives (with at least 9-12 units at the 300 level or higher)	30 units in Electives (with at least 3 units at the 300 level or higher)	27 units in Electives (with at least 6-9 units at the 300 level or higher)
6 units in ENGL or WRS	6 units in ENGL or WRS	6 units in ENGL or WRS
6 units in breadth from outside the FoS	6 units in breadth from outside the FoS	3 units in breadth from outside the FoS
6 units in breadth from within the FoS	6 units in breadth from within the FoS	6 units in breadth from within the FoS

The table below presents the structure of the Artificial Intelligence Option when added to (and in comparison to) the Honors in Computing Science program. Yellow highlighted courses are those that are specifically required for the Artificial Intelligence Option. Grey cells present electives and common program requirements that must be taken in addition to the Honors requirements to reach 120 units for the BSc with Honors degree. The Software Practice Option is also included for comparison purposes.

Honors in Computing Science	Honors in Computing Science with Artificial Intelligence Option	Honors in Computing Science with Software Practice Option
CMPUT 174	CMPUT 174	CMPUT 174
CMPUT 175	CMPUT 175	CMPUT 175
CMPUT 200 or CMPUT 300	CMPUT 200	CMPUT 200 or CMPUT 300
CMPUT 201	CMPUT 201	CMPUT 201
CMPUT 204	CMPUT 204	CMPUT 204
CMPUT 229	CMPUT 229	CMPUT 229
CMPUT 272	CMPUT 272	CMPUT 272
CMPUT 291	CMPUT 291	CMPUT 291
N/A	CMPUT 261	N/A
	CMPUT 267	
18 units in CMPUT at the 300 level or higher	CMPUT 365	CMPUT 301
	CMPUT 366	CMPUT 325
	CMPUT 367 or CMPUT 466	CMPUT 379
	3 units from CMPUT 312, CMPUT 328, CMPUT 340, CMPUT 350	3 units from CMPUT 304, CMPUT 340 or CMPUT 474
	15 units in CMPUT at the 300 level or higher	12 units in CMPUT at the 300 level or higher
3 units from CMPUT 399, CMPUT 401, CMPUT 403, CMPUT 469, CMPUT 499	CMPUT 469	3 units from CMPUT 399, CMPUT 403, CMPUT 469, CMPUT 499
12 units in CMPUT at the 400 level	6 units from CMPUT 412, CMPUT 455, CMPUT 461, CMPUT 463	CMPUT 401
		CMPUT 402
	9 units in CMPUT at the 400 level	9 units in CMPUT at the 400 level
N/A	N/A	12 units in Business Courses
MATH 125 or 127	MATH 125 or 127	MATH 125 or 127
3 units from MATH 117, MATH 134, MATH 144, MATH 154	3 units from MATH 117, MATH 134, MATH 144, MATH 154	3 units from MATH 117, MATH 134, MATH 144, MATH 154
3 units from MATH 118, MATH 136, MATH 146, MATH 156	3 units from MATH 118, MATH 136, MATH 146, MATH 156	3 units from MATH 118, MATH 136, MATH 146, MATH 156
3 units from STAT 151, STAT 235, STAT 265	3 units from STAT 151, STAT 235, STAT 265	3 units from STAT 151, STAT 235, STAT 265
3 units from STAT 252, STAT 266	3 units from STAT 252, STAT 266	3 units from STAT 252, STAT 266
30 units in Electives (with at least 6-9 units at the 300 level or higher)	12 units in Electives	12 units in Electives
6 units in ENGL or WRS	6 units in ENGL or WRS	6 units in ENGL or WRS
6 units in breadth from outside the FoS	6 units in breadth from outside the FoS	3 units in breadth from outside the FoS
6 units in breadth from within the FoS	6 units in breadth from within the FoS	6 units in breadth from within the FoS

APPENDIX B - Student Survey Comments

General comments

adding the AI option
- I wonder if I can change the title of my major after graduating
- Support for later years wishing to switch into program without having to waste time on 200 level classes they don't need
- If I graduate in 2024/25 can I switch into this program if I fulfill all the requirements prior to this
- My main concern: how can I make sure I take the proper courses for the degree, especially if it only becomes available for my last/second to last year in my current degree? I am very interested in this new degree, but I am afraid I won't be able to have to proper requirements fulfilled, especially if they are constantly changing. It would be very useful that have the requirements posted before the degree becomes available, so that we can plan ahead and hopefully still be able to take all the required courses to graduate through this new degree.
- I'm graduating this coming winter and only have 3 courses left to do. I would really appreciate if I can be given the opportunity to get the AI option for my Honors degree. I've already done most of the courses and also currently interning in machine learning at one of the biggest oil and gas companies of the world (Chevron). I always wondered and waited if the department would offer an option like this as I'm a huge AI enthusiast (my grades reflect this as well). So even if I have to take courses extra to my degree, I'd certainly consider doing so. If anyone comes accross this comment, please let me know if this is possible!
- I would like to switch to this new program but there are too many lower level courses that I am not interested in that may require me to extend my degree. If there was a way to get rid of some of the lower level requirements or make an exception depending on the courses you have already taken, I would consider switching.
- Can this option be available for students graduating in 2024 with a bit flexible requirement. I wanted to be a part of this option since the beginning but it didn't exist. It will be great if I can switch to it now. Also for honors AI option, having 5 400 level required courses seems excessive. 4 seems better as it would also align with normal honors CS requirements
- is it fine for someone who will graduate in 2025 to catch this chance?
- As I have a lot of general credits, I don't have enough time to get all of the 200 level course requirements completed within my 4 years. I'm not sure why cmput 291 and 261 are requirements when they aren't prereqs to higher level cs courses. It would be very helpful if you offer more spring/summer cmput courses.
- Will there be a specialization option for this? I don't want to take a lot of random classes outside of comp sci, and since I'm a little slower at learning, honours requirements are a little too harsh for me. This is what I originally wanted to get into though, so its very exciting that there are discussions about making this happen! I would love to be updated progress wise for this!

excitement
- This program sounds really interesting and I am very excited to join if you guys make it. Please consider!
- I would definitely go for AI major option.
- I'd be very interested in this program if it becomes available
- As a student who has been struggling to find a path, even getting this email got me excited like nothing has in a long time. I think that creating a degree option of this nature would fulfill a great desire in much of the student population and do wonders for keeping the Computing Science faculty at the U of A up to date with where science is headed and what students want to explore.
- I'm really looking forward in enrolling this program and learning these courses
- I'm looking forward to this!
- I would love to enroll for this program.
- I am quite interested in the AI option as I have always intended to take AI electives for major requirements

not interested

- I would really appreciate the option since it is a useful and growing field but i would not choose it because that is not what i want to do and not because i have a problem with it.

AI certificate instead
- Making the AI certificate works ASAP will be a better choice
- I planned to take the certificate in AI about 2 years ago now. I was in the last stretch of courses to complete it. Given the current requirements that have popped up, I simply won't be able to complete the certificate despite all the courses I've already taken. I learnt a lot of interesting things but I'm quite upset at the change.
- When I heard there's maybe certificate for AI several months ago, I really tried to plan my course to let it follow that version of requirement. But it seems that I have no chance to experience this reform now. Envy on the new undergrads students :)

CMPUT 200 prerequisites
- I am really concerned on the 191 -> 200 course requirements. They don't count as arts courses, so they don't fulfill that requirement, 191 covers similar material to any other statistics course, so it seems kind of wasteful. That said, I appreciate that there is an ethics requirement in general. I just think its bizarre to have a requirement so general for it.
- It is a great initiative, but I am concerned about students like me. I mean, those who have taken CMPUT 296, 366 earlier. Do they need to take CMPUT 200? As for me, I have reached the limit of my 100-level courses because it has a co-requisite of 191. Besides, what will be the scenario for those who have taken CMPUT 366's earlier version? Are they going to get two courses waived, CMPUT 261 and 366?
- The only thing I would add is that I hope there will be some accommodations for students who might be unable to fulfill the current 100-200 level requirements so that they (I) can make the switch to the new program without having to take redundant classes. Otherwise, it looks great!

course overlapping/redundancy, prioritize senior courses
- There are too many 200-300 level courses that cover overlapping concepts. This makes it difficult to justify taking many of them, especially since 300+ level courses need to be prioritized for graduation. In particular, CMPUT 191 and 261 suffer from this issue.

states a preference that is already addressed or moot
- As a Computing Science major I would like to have options available to me which are focused on artificial intelligence, but I would also like options that briefly cover other areas like robotics and machine learning
- Would prefer if there was an AI option for a B.Sc. Specialization

math requirements
- to not have calculus II mandatory, or stats II

honors core CMPUT 2xx requirements
- This is a fascinating degree option and I am looking forward to if and when this is available if I end up having an option to transfer into this program. I don't recall seeing a specific slide for it, so I'll mention it here I am a little confused by the requirement of 229 for this degree - I don't think it specifically aligns with the idea of the degree and would make much more sense as an option.

misc
- No
- My target is to make the AI housekeeper like Jarvis in the future
- I will use this form to opt for courses accordingly.

Feedback about CMPUT 200

(It should be noted that a number of students expressed concern over CMPUT 191 being a corequisite for CMPUT 200. This concern has already been addressed. We have created an additional pathway to take CMPUT 200 that only requires courses taken by all CS students. Namely, a student can now take CMPUT 200 if they have already taken CMPUT 174 and a statistics or probability course: STAT 141, STAT 151, STAT 235, STAT 265, SCI 151, MATH 181.)

not interested
- I would rather not take this course as it just covers the ethics side of AI, something that I am already familiar with, and would not like to waste 3 credits on.
- When I think of an Ethics class, I think of one of those art class and I don't want to waste my money on it. I would prefer if we include bits of it in different CS courses that are an requirement. It could also be a recommended book that a class that assigned for optional reading.
- I can see why this is important but it feels like it's a waste of time for me, I wouldn't consider taking it unless it was a requirement or if it is "easy"
- if we could do a class in its place instead of doing 200, maybe 201 which I have done

co- or prerequisites
- The co-requisite is cmput 191. We can only take 42 credits of 1-level courses. I would like to take cmput 200 but I can not take more 1-level course any more.
- The corequisite of CMPUT 191 seems restrictive, if a third year student were to switch programs
- In my opinion, having a course that has 191 as a co-requisite when 191 or 291 are not requisites for the degree (the CMPUT major one, not the Honor's), does seem a little silly, and possibly a waste of one of the science options, especially if the student would not have taken 191 or 291 otherwise. It seems even sillier if you consider that you do not need CMPUT 191 to take CMPUT 291, so even if you plan on taking CMPUT 291, CMPUT 191 still seems like a bit of a waste of an option, especially given the amount of required courses in the degree. On top of this, personally, I think that giving a CMPUT course through a historical perspective would make it much less attractive, and it isn't something I'd like to be required to take for a Computing Science degree. I understand that ethics is an important topic in AI, but I don't think this is the way to introduce it to CS students, given the interest of most students in the field.
- Requiring 191 for student who would want to transfer to the program seems like uneeded fluff if a cpsc student already has an applied statistics course taken.
- CMPUT 191 (100-leve) as a co-requisite isn't that reasonable, especially for students like me who are already in the 3rd year, since we can't have more than 42 credits of the 100-level courses. It'd be awesome if it can be replaced by some common math course.
- Requiring cmput191 is a problem for non-first year cs students, who can't take cmput191 at all. Maybe offer alternative equivalents, like cmput 291, which can be used instead for older students
- 191 isn't in the honors program, so it doesn't make sense for it to be required as a coreq. Course sounds boring but if it is required then so be it.
- I would be unable to take CMPUT 191, so I'm inclined to say it should not be a co-requisite if other AI courses have been taken.
- The Co-requisite is CMPUT 191 when many students are not allowed to take that course.

course content
- Since this is a cmput course, the code part should be weighted heavier than the discussion part. People in AI and DS love this topic and would like to learn and talk about it, but few would take the risk lowering their gpa.
- I took this course last semester and don't believe the description accurately described the course content. It's a shame as I'm very passionate about the area (and am currently working in a related research position). I really wish the UofA had more courses in this area; it's something I had to really push to learn on my own. I am really happy to see the CS department integrating ethics in other classes. It's also nice to see the department taking on more faculty with expertise in the area!

misc

- No

Feedback about CMPUT 261

excitement
- Very interested in taking

not interested
- I've completed 267, and am taking 365 & 366. This class is of no use to me
- Interesting course but it seems like a waste of time because I would rather take higher level courses with a more specific focus instead of a survey course that will likely just be a review.
- From what I read, I can't see this having anything unique that sets it apart from higher level courses.
- I have taken many of the other more advanced AI related courses, so this content would likely be redundant to me. However, in general, I think it fulfills its purpose.

unclear description versus other AI/ML courses
- The course seems interesting, but I think it might be a good idea to have a more descriptive description of the course, since it's a bit hard to differentiate it from the material covered in other AI/ML courses as is.

misc
- N/A

Feedback about CMPUT 267

course content or prerequisites
- I really enjoyed the course. I would have liked to see a bit more of an equilibrium between the assignments (which were very difficult, and testing in the software gave lots of false positives), and the quizzes/midterm/final which were very very easy in comparison. I also thought that a calculus 2 course should be required to take the course (math 136/146/156) since we deal with a lot of gradients/multivariable derivatives. I would like to see broader subjects with broader examples covered, instead of the having a hyper-focused view on a few concepts. It would make it much easier to understand what the course is trying to teach and how to apply the material afterwards, especially for a ML *introduction* course.
- Honestly, the co requisites for the course should be prerequisites. The course is way too difficult for someone who hasn't taken a semester of stats and linear algebera
- I'm taking this class right now. I feel that there is a HUGE jump in pace, breadth, and difficulty from the prerequisite classes. Every day I hear students in my class talking about how much they're struggling, and how they'll never take another ML class again. I find this so disheartening. I'm in my 4th-year now, so am comfortable with the content. But as a first-generation Indigenous student, if I had taken this class in my first or second year, I think it would have scared me away from machine learning entirely, and made me feel like I was too "dumb" to succeed. PLEASE consider providing an easier onboarding experience for younger undergraduates. Personally, I feel like there's a large gap in the curriculum in the earlier years; I feel like there should be a CS-focused 100-level calc class, with more focus on proofs.

taking it now
- I'm taking this class now

misc
- N/A

Feedback for CMPUT 365

excitement
- The course seems very interesting, and I am registered in it for the next term.

not interested
- pls don't make me do this course

class organization
- In class lecture is used for discussion/practice problems and can be very disorganized. Would be helpful if in class slides were updated completely instead of being updating every class.

MOOC concerns
- Planning on taking this course but I don't like how it's a MOOC
- I am not sure if it has changed since, but when I took the class the class times themselves weren't used incredibly well - it felt like I was taking a MOOC with exams and 3 unused hours per week on the side. I think there is room for either integrating the content into class times more or just dropping class times and going all-in on the MOOC.

misc
- N/A

Feedback for CMPUT 366

excitement
- The course seems very interesting.

not interested
- Seems a bit redundant for a student who has taken the previous 366 as well as the reinforcement learning course.

enrollment capacity
- I would like to say if department could open more seats on cmput 272 since it is the prerequisite of many cmput courses.

instructor
- very good course with a very good professor, please don't change it at all

confusion with old CMPUT 366
- I am a little confused by the purpose of this course; it seems like it covers almost all of the topics were covered in the old version of 366 (now 261). Is this ideally an antirequisite of 261?

misc
- N/A

Feedback for CMPUT 367 and CMPUT 466

prerequisites
- Calculus 3, 4 should be a pre requisite for 367 and further machine learning courses. Also Math 225 is needed in order to understand the material of 367

excitement
- I'm registered for CMPUT 466. I really wish CMPUT 367 had been around earlier in my degree! I like the fact that the UofA now has a sequence of ML classes (267/367/466), and feel like it would provide a strong foundation for the degree.

difficulty & distinction between courses
- 367 is ironically harder and requires a more advanced linear algebra background. It's odd that 367 is a 300 level, while 466 is 400 level. Consider swapping the two levels
- Both courses seem quite interesting, although, it seem a little weird that 466 has the same requirements as 367 (267 needs math 125, so 367 also requires you to take 125), and that it could be taken by a second year (I could have taken it this year if I wanted to). I feel like a better distinction between the two courses and better progression line should be in order.
- The names of the courses are a bit confusing. Machine Learning (466) seems to be inferior to Intermediate Machine Learning (367), but it's a 4th year course. It's also difficult to know which to pick. 466 doesn't state 267 as a requirement, but 367 does, which means 367 is a continuation of 267. That makes it seem more logical to pick 367 over 466, hence the confusion.
- The difference between CMPUT 367 & 466 is still quite unclear and the differences of each path: 267 --> 367, 267 --> 466, or 267 --> 367 --> 466
- I think the naming of the courses is a little confusing - from my experience 367 takes a much more mathematical approach to ML while 466 seems to cover the same ML methods, but from a more practical sense. Possibly naming the courses something along the lines of: CMPUT 176: Beginner Machine Learning Mathematics CMPUT 376: Intermediate Machine Learning Mathematics CMPUT 466: Practical Machine Learning could help better define the goals of the courses.

antirequisite
- It's a little unclear whether we can take credits if we take both. It seems there're a lot of overlapping.

misc
- N/A

Feedback for CMPUT 312, CMPUT 328, CMPUT 340, and CMPUT 350

excitement
- fun!

not interested
- Would rather not take 312,340,350, as they I am not that interested in them
- Would prefer if these were an option rather than mandatory classes to take.
- None of these courses jump out to be as courses that I would take, but if it were required I wouldn't mind choosing one. But I likely won't take 312 due to the prerequisites.

course concern
- I'm very interested in CMPUT 340's content, but didn't take it after hearing about many, many people's bad experiences with past offerings of the class.

corequisite/antirequisite comments
- It does seem a little silly to have CMPUT 312 as an option for this "choose one" selection, since CMPUT 340 is a co-requisite for it, and it is also in the very same selection. Otherwise, these all seem quite interesting.
- cmput340 is an anti-requisite with math381 and they cover the same topics. It'd be nice to list math381 as an equivalent
- CMPUT 340: Can MATH 381, Numerical Methods l, be considered an equivalent for this course and all the other courses that need CMPUT 340 as a pre-requisite?

misc
- N/A

Feedback for CMPUT 412, CMPUT 455, CMPUT 461, and CMPUT 463

excitement
- These seem quite interesting.

not interested
- Not interested in 455 since it does not seem very advanced due to the prerequisites.
- Would rather not take any of these courses as they do not seem interesting to me

prerequisite comment (already addressed with proposed course calendar change)
- CMPUT 461 is missing prerequisites.

misc
- N/A

Feedback for CMPUT 469

excitement
- Looks very interesting.
- Comment: A friend in their fourth year of Honours CS showed me their capstone, so I have a very general idea of the kinds of things student would be asked to accomplish i.e. solving a real problem using the techniques studied
- I had hoped to take this class for the final year of my degree, but unfortunately it conflicts with CMPUT 466 this winter! I think it's GREAT to see that younger students can plan towards finishing with a capstone project!

misc
- N/A

UNIVERSITY OF ALBERTA

Interdepartmental Correspondence

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Date: November 16, 2022

From: Dr. Frederick G. West
          Acting Dean, Faculty of Science

Re: Letter of Support for New Artificial Intelligence Option

To Whom It May Concern:

The new Artificial Intelligence Option proposed by the Department of Computing Science is an exciting new initiative. It complements our programs in computing science very nicely and mirrors the existing Software Practice Option very effectively.

Artificial intelligence approaches, such as machine learning and data science, are important in many areas of modern society and our economy. Employers are looking for computing scientists and computer programmers with expertise in artificial intelligence. Therefore, giving students an opportunity to complete an undergraduate computing science degree that includes an artificial intelligence credential will help them pursue career paths in areas such as business applications, health informatics, personal and home devices, scientific experiments, environmental monitoring, energy systems, transportation networks, and many more.

The Department of Computing Science already offers several high-quality, artificial intelligence-themed courses and is readily positioned to offer this new Option. When added to the Computing Science Major or Honors program under the new BSc Renewal degree framework, I predict that it will effectively serve our student's needs and quickly become a very high-demand experience. To this end, I am in full support of the newly proposed Artificial Intelligence Option and am excited to see it come into fruition as soon as possible.

Sincerely,

Frederick G. West
Acting Dean, Faculty of Science

FGW/GdV

Calendar Change Request Form for Program and Regulation Changes

See the Calendar Guide for tips on how to complete this form.

Faculty (& Department or Academic Unit):	Faculty of Science, Department of Computing Science	
Contact Person:	Dr. Kenny Wong, Associate Chair (Undergraduate)	
Level of change (choose one only)	☑	Undergraduate
	☐	Graduate
Type of change request (check all that apply)	☑	Program
	☐	Regulation
For which term is this intended to take effect?	Fall 2023	
Does this proposal have corresponding course changes? (Should be submitted at the same time)	Yes	

Rationale

The Department of Computing Science is proposing the addition of an Artificial Intelligence Option, a new second-level specialization that is available to students enrolled in the BSc Major in Computing Science or BSc with Honors in Computing Science. This option will be the second one available to students in Computing Science. The Software Practice Option, available since 2000-2001, has been an overwhelming success and continues to be in high demand. We predict the Artificial Intelligence Option will experience similar success and demand. Please add the following changes to the 2023-2024 calendar so that prospective students may preview the requirements for the new Artificial Intelligence Option in conjunction with the new degree framework proposed under the umbrella of the BSc Renewal Project. The Artificial Intelligence Option will become available to Computing Science students starting Fall 2024, along with all the new BSc degree framework.

Calendar Copy

URL in current Calendar (or leave blank if it is a new page):
https://docs.google.com/document/d/1lYrvo4NlR5vy5e0ok8cUWtAFeZYBH72l/edit?usp=sharing&ouid=109767962539418046604&rtpof=true&sd=true

Current	Proposed
Bachelor of Science (Major and Honors) - Effective Fall 2024	**Bachelor of Science (Major and Honors) - Effective Fall 2024**
← Return to: Faculty of Science	← Return to: Faculty of Science
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Program Requirements

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Subject Areas

Subject Areas Offered by the Faculty of Science:

	Honors	Major	Minor	Eligible for Double Major	Minor & Double Major Exceptions
Applied Mathematics	X	X		X	May not be combined with Mathematics (Major or Minor)
Astrophysics	X	X	X	X	May not be combined with Geophysics (Minor), Physics (Honors, Major or Minor)
Biochemistry	X	X	X	X	
Bioinformatics - Biological Sciences Focus			X		May not be combined with Biological Sciences (Honors or Major), Cell Biology (Honors or Major), EE&E Biology (Honors or Major), Immunology and Infection (Honors or Major), Integrative Physiology (Honors or Major), MC&D Biology (Honors or Major), Pharmacology (Honors or Major),

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Program Requirements

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Subject Areas

Subject Areas Offered by the Faculty of Science:

	Honors	Major	Minor	Eligible for Double Major	Minor & Double Major Exceptions
Applied Mathematics	X	X		X	May not be combined with Mathematics (Major or Minor)
Astrophysics	X	X	X	X	May not be combined with Geophysics (Minor), Physics (Honors, Major or Minor)
Biochemistry	X	X	X	X	
Bioinformatics - Biological Sciences Focus			X		May not be combined with Biological Sciences (Honors or Major), Cell Biology (Honors or Major), EE&E Biology (Honors or Major), Immunology and Infection (Honors or Major), Integrative Physiology (Honors or Major), MC&D Biology (Honors or Major), Pharmacology (Honors or Major),

Program					Notes
					Physiology (Honors or Major)
Bioinformatics - Computing Science Focus			X		May not be combined with Computing Science (Honors or Major), Computing Science - Software Practice (Honors or Major)
Biological Sciences	X	X	X	X	May not be combined with Bioinformatics - Biological Sciences Focus (Minor), EE&E Biology (Honors or Major), Integrative Physiology (Honors or Major), MC&D Biology (Honors or Major)
Cell Biology	X	X	X	X	May not be combined with Bioinformatics - Biological Sciences Focus (Minor)
Chemistry	X	X	X	X	
Climate Dynamics			X		
Computing Science	X	X	X	X	May not be combined with Bioinformatics - Computing Science Focus (Minor)
Computing Science -	X	X			May not be combined with Bioinformatics - Computing

Program					Notes
					Physiology (Honors or Major)
Bioinformatics - Computing Science Focus			X		May not be combined with Computing Science (Honors or Major), Computing Science - Artificial Intelligence Option (Honors or Major), Computing Science - Software Practice (Honors or Major)
Biological Sciences	X	X	X	X	May not be combined with Bioinformatics - Biological Sciences Focus (Minor), EE&E Biology (Honors or Major), Integrative Physiology (Honors or Major), MC&D Biology (Honors or Major)
Cell Biology	X	X	X	X	May not be combined with Bioinformatics - Biological Sciences Focus (Minor)
Chemistry	X	X	X	X	
Climate Dynamics			X		
Computing Science	X	X	X	X	May not be combined with Bioinformatics - Computing Science Focus (Minor)
Computing Science - Artificial Intelligence Option	X	X			May not be combined with Bioinformatics - Computing Science Focus (Minor), Computing Science (Minor)
Computing Science -	X	X			May not be combined with Bioinformatics - Computing

Software Practice Option					Science Focus (Minor), Computing Science (Minor)	Software Practice Option					Science Focus (Minor), Computing Science (Minor)
Earth Sciences	X	X	X	X	May not be combined with Environmental Earth Sciences (Honors or Major), Geology (Honors or Major)	Earth Sciences	X	X	X	X	May not be combined with Environmental Earth Sciences (Honors or Major), Geology (Honors or Major)
Ecology, Evolution and Environmental Biology (EE&E Biology)	X	X		X	May not be combined with Bioinformatics - Biological Sciences Focus (Minor), Biological Sciences (Major or Minor), Integrative Physiology (Major), MC&D Biology (Major)	Ecology, Evolution and Environmental Biology (EE&E Biology)	X	X		X	May not be combined with Bioinformatics - Biological Sciences Focus (Minor), Biological Sciences (Major or Minor), Integrative Physiology (Major), MC&D Biology (Major)
Environmental Earth Sciences	X	X			May not be combined with Earth Sciences (Minor)	Environmental Earth Sciences	X	X			May not be combined with Earth Sciences (Minor)
Geology	X	X			May not be combined with Earth Sciences (Minor)	Geology	X	X			May not be combined with Earth Sciences (Minor)
Geophysics	X	X	X		May not be combined with Astrophysics (Honors, Major or Minor), Physics (Honors, Major or Minor)	Geophysics	X	X	X		May not be combined with Astrophysics (Honors, Major or Minor), Physics (Honors, Major or Minor)
Immunology and Infection	X	X			May not be combined with Bioinformatics - Biological Sciences Focus (Minor), Biological Sciences (Minor)	Immunology and Infection	X	X			May not be combined with Bioinformatics - Biological Sciences Focus (Minor), Biological Sciences (Minor)
Integrative Physiology	X	X		X	May not be combined with Bioinformatics - Biological Sciences Focus (Minor), Biological Sciences (Major or Minor), EE&E Biology (Major), MC&D Biology (Major)	Integrative Physiology	X	X		X	May not be combined with Bioinformatics - Biological Sciences Focus (Minor), Biological Sciences (Major or Minor), EE&E Biology (Major), MC&D Biology (Major)

Mathematical Physics	X	X			May not be combined with Astrophysics (Minor), Geophysics (Minor), Mathematics (Minor), Physics (Minor)
Mathematics	X	X	X	X	May not be combined with Applied Mathematics (Honors or Major)
Mathematics and Economics	X	X			May not be combined with Economics (Minor), Mathematics (Minor)
Mathematics and Finance	X	X			May not be combined with Business (Minor), Mathematics (Minor)
Molecular, Cellular and Developmental Biology (MC&D Biology)	X	X		X	May not be combined with Bioinformatics - Biological Sciences Focus (Minor), Biological Sciences (Major or Minor), EE&E Biology (Major), Integrative Physiology (Major)
Neuroscience	X	X			
Paleontology	X	X			May not be combined with Biological Sciences (Minor), Earth Sciences (Minor)
Pharmacology	X	X	X	X	May not be combined with Bioinformatics – Biological Sciences Focus (Minor)
Physics	X	X	X	X	May not be combined with Astrophysics (Honors, Major or Minor), Geophysics (Honors, Major or Minor)

Physiology	X	X			May not be combined with Bioinformatics – Biological Sciences Focus (Minor)
Planning	X	X			May not be combined with Human Geography (Minor)
Psychology	X	X	X	X	
Statistics	X	X	X	X	

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Bachelor of Science Computing Science Subject Area

General Information

The subject area requirements listed on this page are part of the Bachelor of Science.

To find a description about this area of study, please visit Our Degrees of the Faculty of Science webpage.

Requirements

- Honors in Computing Science (72 units)

- Honors in Computing Science - Software Practice Option (93 units)
- Major in Computing Science (54 units)

- Major in Computing Science - Software Practice Option (78 units)
- Minor in Computing Science (24 units)

Physiology	X	X			May not be combined with Bioinformatics – Biological Sciences Focus (Minor)
Planning	X	X			May not be combined with Human Geography (Minor)
Psychology	X	X	X	X	
Statistics	X	X	X	X	

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Bachelor of Science Computing Science Subject Area

General Information

The subject area requirements listed on this page are part of the Bachelor of Science.

To find a description about this area of study, please visit Our Degrees of the Faculty of Science webpage.

Requirements

- Honors in Computing Science (72 units)
- ==Honors in Computing Science - Artificial Intelligence Option== (90 units)
- Honors in Computing Science - Software Practice Option (93 units)
- Major in Computing Science (54 units)
- ==Major in Computing Science - Artificial Intelligence Option (72 units)==
- Major in Computing Science - Software Practice Option (78 units)
- Minor in Computing Science (24 units)

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Honors in Computing Science Requirements

Foundation Courses

- CMPUT 174 - Introduction to the Foundations of Computation I
- CMPUT 175 - Introduction to the Foundations of Computation II

3 units from

- MATH 117 - Honors Calculus I
- MATH 134 - Calculus for the Life Sciences I
- MATH 144 - Calculus for the Mathematical and Physical Sciences I
- MATH 154 - Calculus for Business and Economics I

3 units from

- MATH 118 - Honors Calculus II
- MATH 136 - Calculus for the Life Sciences II
- MATH 146 - Calculus for the Mathematical and Physical Sciences II
- MATH 156 - Calculus for Business and Economics II

3 units from

- MATH 125 - Linear Algebra I
- MATH 127 - Honors Linear Algebra I

3 units from

- STAT 151 - Introduction to Applied Statistics I
- STAT 235 - Introductory Statistics for Engineering
- STAT 265 - Introduction to Probability

Senior Courses

- CMPUT 201 - Practical Programming Methodology
- CMPUT 204 - Algorithms I
- CMPUT 229 - Computer Organization and Architecture I

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- CMPUT 272 - Formal Systems and Logic in Computing Science
- CMPUT 291 - Introduction to File and Database Management

3 units from

- CMPUT 200 - Ethics of Data Science and Artificial Intelligence
- CMPUT 300 - Computers and Society

3 units from

- CMPUT 399 - Topics in Computing Science (See Note 2)
- CMPUT 401 - Software Process and Product Management
- CMPUT 403 - ~~Practical Algorithms~~
- CMPUT 469 - Artificial Intelligence Capstone
- CMPUT 499 - Topics in Computing Science

3 units from

- STAT 252 - Introduction to Applied Statistics II
- STAT 266 - Introduction to Statistics

18 units from

- any 300- and 400-level CMPUT course

12 units from

- any 400-level CMPUT course

Notes

1. CMPUT 274 can serve as a substitute for CMPUT 174. CMPUT 275 can serve as a substitute for CMPUT 175 and 201.
2. If CMPUT 399 is taken, at least 3 units of the 18 units from any 300- and 400-level CMPUT course requirement must be at the 400 level.
3. Upper level CMPUT courses may require specific CMPUT, MATH or STAT courses as prerequisites. These prerequisites must be considered when choosing Science options.

- CMPUT 272 - Formal Systems and Logic in Computing Science
- CMPUT 291 - Introduction to File and Database Management

3 units from

- CMPUT 200 - Ethics of Data Science and Artificial Intelligence
- CMPUT 300 - Computers and Society

3 units from

- CMPUT 399 - Topics in Computing Science (See Note 2)
- CMPUT 401 - Software Process and Product Management
- CMPUT 403 - Algorithmics in Competitive Programming
- CMPUT 469 - Artificial Intelligence Capstone
- CMPUT 499 - Topics in Computing Science

3 units from

- STAT 252 - Introduction to Applied Statistics II
- STAT 266 - Introduction to Statistics

18 units from

- any 300- and 400-level CMPUT course

12 units from

- any 400-level CMPUT course

Notes

1. CMPUT 274 can serve as a substitute for CMPUT 174. CMPUT 275 can serve as a substitute for CMPUT 175 and 201.
2. If CMPUT 399 is taken, at least 3 units of the 18 units from any 300- and 400-level CMPUT course requirement must be at the 400 level.
3. Upper level CMPUT courses may require specific CMPUT, MATH or STAT courses as prerequisites. These prerequisites must be considered when choosing Science options.

Honors in Computing Science - Artificial Intelligence Option Requirements

Foundation Courses

- CMPUT 174 - Introduction to the Foundations of Computation I
- CMPUT 175 - Introduction to the Foundations of Computation II

3 units from

- MATH 117 - Honors Calculus I
- MATH 134 - Calculus for the Life Sciences I
- MATH 144 - Calculus for the Mathematical and Physical Sciences I
- MATH 154 - Calculus for Business and Economics I

3 units from

- MATH 118 - Honors Calculus II
- MATH 136 - Calculus for the Life Sciences II
- MATH 146 - Calculus for the Mathematical and Physical Sciences II
- MATH 156 - Calculus for Business and Economics II

3 units from

- MATH 125 - Linear Algebra I
- MATH 127 - Honors Linear Algebra I

3 units from

- STAT 151 - Introduction to Applied Statistics I
- STAT 235 - Introductory Statistics for Engineering
- STAT 265 - Introduction to Probability

Senior Courses

- CMPUT 200 - Ethics of Data Science and Artificial Intelligence
- CMPUT 201 - Practical Programming Methodology

- CMPUT 204 - Algorithms I
- CMPUT 229 - Computer Organization and Architecture I
- CMPUT 261 - Introduction to Artificial Intelligence
- CMPUT 267 - Basics of Machine Learning
- CMPUT 272 - Formal Systems and Logic in Computing Science
- CMPUT 291 - Introduction to File and Database Management
- CMPUT 365 - Introduction to Reinforcement Learning
- CMPUT 366 - Search and Planning in Artificial Intelligence
- CMPUT 469 - Artificial Intelligence Capstone

3 units from

- STAT 252 - Introduction to Applied Statistics II
- STAT 266 - Introduction to Statistics

3 units from

- CMPUT 367 - Intermediate Machine Learning (see Note 3)
- CMPUT 466 - Machine Learning (see Note 3)

3 units from

- CMPUT 312 - Introduction to Robotics and Mechatronics
- CMPUT 328 - Visual Recognition
- CMPUT 340 - Introduction to Numerical Methods
- CMPUT 350 - Advanced Games Programming

6 units from

- CMPUT 412 - Experimental Mobile Robotics
- CMPUT 455 - Search, Knowledge and Simulation
- CMPUT 461 - Natural Language Processing
- CMPUT 463 - Probabilistic Graphical Models

15 units from

- any 300- and 400-level CMPUT course

9 units from

- any 400-level CMPUT course

Notes

1. CMPUT 274 can serve as a substitute for CMPUT 174. CMPUT 275 can serve as a substitute for CMPUT 175 and 201.
2. Upper level CMPUT courses may require specific CMPUT, MATH or STAT courses as prerequisites. These prerequisites must be considered when choosing Science options.
3. Credit may not be obtained for both CMPUT 367 and CMPUT 466.

Honors in Computing Science - Software Practice Option Requirements

Foundation Courses

- CMPUT 174 - Introduction to the Foundations of Computation I
- CMPUT 175 - Introduction to the Foundations of Computation II

3 units from

- MATH 117 - Honors Calculus I
- MATH 134 - Calculus for the Life Sciences I
- MATH 144 - Calculus for the Mathematical and Physical Sciences I
- MATH 154 - Calculus for Business and Economics I

3 units from

- MATH 118 - Honors Calculus II
- MATH 136 - Calculus for the Life Sciences II
- MATH 146 - Calculus for the Mathematical and Physical Sciences II
- MATH 156 - Calculus for Business and Economics I

Honors in Computing Science - Software Practice Option Requirements

Foundation Courses

- CMPUT 174 - Introduction to the Foundations of Computation I
- CMPUT 175 - Introduction to the Foundations of Computation II

3 units from

- MATH 117 - Honors Calculus I
- MATH 134 - Calculus for the Life Sciences I
- MATH 144 - Calculus for the Mathematical and Physical Sciences I
- MATH 154 - Calculus for Business and Economics I

3 units from

- MATH 118 - Honors Calculus II
- MATH 136 - Calculus for the Life Sciences II
- MATH 146 - Calculus for the Mathematical and Physical Sciences II
- MATH 156 - Calculus for Business and Economics I

3 units from

- MATH 125 - Linear Algebra I
- MATH 127 - Honors Linear Algebra I

3 units from

- STAT 151 - Introduction to Applied Statistics I
- STAT 235 - Introductory Statistics for Engineering
- STAT 265 - Introduction to Probability

Senior Courses

- CMPUT 201 - Practical Programming Methodology
- CMPUT 204 - Algorithms I
- CMPUT 229 - Computer Organization and Architecture I
- CMPUT 272 - Formal Systems and Logic in Computing Science
- CMPUT 291 - Introduction to File and Database Management
- CMPUT 301 - Introduction to Software Engineering
- CMPUT 325 - Non-Procedural Programming Languages
- CMPUT 379 - Operating System Concepts
- CMPUT 401 - Software Process and Product Management
- CMPUT 402 - Software Quality

3 units from

- STAT 252 - Introduction to Applied Statistics II
- STAT 266 - Introduction to Statistics

3 units from

- CMPUT 200 - Ethics of Data Science and Artificial Intelligence
- CMPUT 300 - Computers and Society

3 units from

- CMPUT 304 - Algorithms II
- CMPUT 340 - Introduction to Numerical Methods

- CMPUT 474 - Formal Languages, Automata, and Computability

3 units from

- CMPUT 399 - Topics in Computing Science
- CMPUT 401 - Software Process and Product Management
- CMPUT 403 - ~~Practical Algorithms~~
- CMPUT 469 - Artificial Intelligence Capstone
- CMPUT 499 - Topics in Computing Science

12 units from

- any 300- and 400-level CMPUT course

9 units from

- any 400-level CMPUT course (up to 3 units can be at the 300-level if CMPUT 474 taken above)

12 units from

- any course offered by the Faculty of Business (with the exception of BTM 311, BTM 415, BTM 419, and MGTSC 312); must include 6 units in courses with the following course designators:
  - BTM
  - MGTSC
  - OM

8-, 12-, or 16-month Science Internship (SIP)

- Students who fail to complete a placement in the SIP must withdraw from the program and reapply to continue in the Honors in Computing Science or Major in Computing Science programs.
- See Science Internship Program for more information.

Notes

- CMPUT 474 - Formal Languages, Automata, and Computability

3 units from

- CMPUT 399 - Topics in Computing Science
- CMPUT 401 - Software Process and Product Management
- CMPUT 403 - Algorithmics in Competitive Programming
- CMPUT 469 - Artificial Intelligence Capstone
- CMPUT 499 - Topics in Computing Science

12 units from

- any 300- and 400-level CMPUT course

9 units from

- any 400-level CMPUT course (up to 3 units can be at the 300-level if CMPUT 474 taken above)

12 units from

- any course offered by the Faculty of Business (with the exception of BTM 311, BTM 415, BTM 419, and MGTSC 312); must include 6 units in courses with the following course designators:
  - BTM
  - MGTSC
  - OM

8-, 12-, or 16-month Science Internship (SIP)

- Students who fail to complete a placement in the SIP must withdraw from the program and reapply to continue in the Honors in Computing Science or Major in Computing Science programs.
- See Science Internship Program for more information.

Notes

1. CMPUT 274 can serve as a substitute for CMPUT 174. CMPUT 275 can serve as a substitute for CMPUT 175 and 201.
2. Upper level CMPUT courses may require specific CMPUT, MATH or STAT courses as prerequisites. These prerequisites must be considered when choosing Science options.

Major in Computing Science Requirements

Foundation Courses

- CMPUT 174 - Introduction to the Foundations of Computation I
- CMPUT 175 - Introduction to the Foundations of Computation II
- MATH 125 - Linear Algebra I

3 units from

- MATH 134 - Calculus for the Life Sciences I
- MATH 144 - Calculus for the Mathematical and Physical Sciences I
- MATH 154 - Calculus for Business and Economics I

3 units from

- MATH 136 - Calculus for the Life Sciences II
- MATH 146 - Calculus for the Mathematical and Physical Sciences II
- MATH 156 - Calculus for Business and Economics I

3 units from

- STAT 151 - Introduction to Applied Statistics I
- STAT 235 - Introductory Statistics for Engineering
- STAT 265 - Introduction to Probability

Senior Courses

6 units from

- CMPUT 201 - Practical Programming Methodology
- CMPUT 204 - Algorithms I
- CMPUT 229 - Computer Organization and Architecture I
- CMPUT 272 - Formal Systems and Logic in Computing Science
- CMPUT 291 - Introduction to File and Database Management

3 units from

- CMPUT 200 - Ethics of Data Science and Artificial Intelligence
- CMPUT 300 - Computers and Society

3 units from

- STAT 252 - Introduction to Applied Statistics II
- STAT 266 - Introduction to Statistics

18 units from

- any 300- and 400-level CMPUT course

6 units from

- any 400-level CMPUT course

Notes

1. CMPUT 274 can serve as a substitute for CMPUT 174. CMPUT 275 can serve as a substitute for CMPUT 175 and 201.
2. Upper level CMPUT courses may require specific CMPUT, MATH or STAT courses as prerequisites. These prerequisites must be considered when choosing Science options.

6 units from

- CMPUT 201 - Practical Programming Methodology
- CMPUT 204 - Algorithms I
- CMPUT 229 - Computer Organization and Architecture I
- CMPUT 272 - Formal Systems and Logic in Computing Science
- CMPUT 291 - Introduction to File and Database Management

3 units from

- CMPUT 200 - Ethics of Data Science and Artificial Intelligence
- CMPUT 300 - Computers and Society

3 units from

- STAT 252 - Introduction to Applied Statistics II
- STAT 266 - Introduction to Statistics

18 units from

- any 300- and 400-level CMPUT course

6 units from

- any 400-level CMPUT course

Notes

1. CMPUT 274 can serve as a substitute for CMPUT 174. CMPUT 275 can serve as a substitute for CMPUT 175 and 201.
2. Upper level CMPUT courses may require specific CMPUT, MATH or STAT courses as prerequisites. These prerequisites must be considered when choosing Science options.

Major in Computing Science - Artificial Intelligence Option Requirements

Foundation Courses

- CMPUT 174 - Introduction to the Foundations of Computation I
- CMPUT 175 - Introduction to the Foundations of Computation II
- MATH 125 - Linear Algebra I

3 units from

- MATH 134 - Calculus for the Life Sciences I
- MATH 144 - Calculus for the Mathematical and Physical Sciences I
- MATH 154 - Calculus for Business and Economics I

3 units from

- MATH 136 - Calculus for the Life Sciences II
- MATH 146 - Calculus for the Mathematical and Physical Sciences II
- MATH 156 - Calculus for Business and Economics II

3 units from

- STAT 151 - Introduction to Applied Statistics I
- STAT 235 - Introductory Statistics for Engineering
- STAT 265 - Introduction to Probability

Senior Courses

- CMPUT 200 - Ethics of Data Science and Artificial Intelligence
- CMPUT 204 - Algorithms I
- CMPUT 261 - Introduction to Artificial Intelligence
- CMPUT 267 - Basics of Machine Learning
- CMPUT 272 - Formal Systems and Logic in Computing Science
- CMPUT 365 - Introduction to Reinforcement Learning
- CMPUT 366 - Search and Planning in Artificial Intelligence

3 units from

- CMPUT 201 - Practical Programming Methodology
- CMPUT 291 - Introduction to File and Database Management

3 units from

- STAT 252 - Introduction to Applied Statistics II
- STAT 266 - Introduction to Statistics

3 units from

- CMPUT 367 - Intermediate Machine Learning (see Note 3)
- CMPUT 466 - Machine Learning (see Note 3)

3 units from

- CMPUT 312 - Introduction to Robotics and Mechatronics
- CMPUT 328 - Visual Recognition
- CMPUT 340 - Introduction to Numerical Methods
- CMPUT 350 - Advanced Games Programming

3 units from

- CMPUT 412 - Experimental Mobile Robotics
- CMPUT 455 - Search, Knowledge and Simulation
- CMPUT 461 - Natural Language Processing
- CMPUT 463 - Probabilistic Graphical Models

12 units from

- any 300- and 400-level CMPUT course

6 units from

- any 400-level CMPUT course

Notes

1. CMPUT 274 can serve as a substitute for CMPUT 174. CMPUT 275 can serve as a substitute for CMPUT 175 and 201.
2. Upper level CMPUT courses may require specific CMPUT, MATH or STAT courses as prerequisites.

These prerequisites must be considered when choosing Science options.

3.   Credit may not be obtained for both CMPUT 367 and CMPUT 466.

Major in Computing Science - Software Practice Option Requirements

Foundation Courses

- CMPUT 174 - Introduction to the Foundations of Computation I
- CMPUT 175 - Introduction to the Foundations of Computation II
- MATH 125 - Linear Algebra I

3 units from

- MATH 134 - Calculus for the Life Sciences I
- MATH 144 - Calculus for the Mathematical and Physical Sciences I
- MATH 154 - Calculus for Business and Economics I

3 units from

- MATH 136 - Calculus for the Life Sciences II
- MATH 146 - Calculus for the Mathematical and Physical Sciences II
- MATH 156 - Calculus for Business and Economics I

3 units from

- STAT 151 - Introduction to Applied Statistics I
- STAT 235 - Introductory Statistics for Engineering
- STAT 265 - Introduction to Probability

Senior Courses

- CMPUT 201 - Practical Programming Methodology
- CMPUT 204 - Algorithms I
- CMPUT 229 - Computer Organization and Architecture I

Major in Computing Science - Software Practice Option Requirements

Foundation Courses

- CMPUT 174 - Introduction to the Foundations of Computation I
- CMPUT 175 - Introduction to the Foundations of Computation II
- MATH 125 - Linear Algebra I

3 units from

- MATH 134 - Calculus for the Life Sciences I
- MATH 144 - Calculus for the Mathematical and Physical Sciences I
- MATH 154 - Calculus for Business and Economics I

3 units from

- MATH 136 - Calculus for the Life Sciences II
- MATH 146 - Calculus for the Mathematical and Physical Sciences II
- MATH 156 - Calculus for Business and Economics I

3 units from

- STAT 151 - Introduction to Applied Statistics I
- STAT 235 - Introductory Statistics for Engineering
- STAT 265 - Introduction to Probability

Senior Courses

- CMPUT 201 - Practical Programming Methodology
- CMPUT 204 - Algorithms I
- CMPUT 229 - Computer Organization and Architecture I
- CMPUT 272 - Formal Systems and Logic in Computing Science

- CMPUT 272 - Formal Systems and Logic in Computing Science
- CMPUT 291 - Introduction to File and Database Management
-
- CMPUT 301 - Introduction to Software Engineering
- CMPUT 325 - Non-Procedural Programming Languages
- CMPUT 379 - Operating System Concepts
- CMPUT 401 - Software Process and Product Management
- CMPUT 402 - Software Quality

3 units from

- STAT 252 - Introduction to Applied Statistics II
- STAT 266 - Introduction to Statistics

3 units from

- CMPUT 200 - Ethics of Data Science and Artificial Intelligence
- CMPUT 300 - Computers and Society

3 units from

- CMPUT 304 - Algorithms II
- CMPUT 340 - Introduction to Numerical Methods
- CMPUT 474 - Formal Languages, Automata, and Computability

6 units from

- any 300- and 400-level CMPUT course

3 units from

- any 400-level CMPUT course (can be at the 300-level if CMPUT 474 taken above)

12 units from

- any course offered by the Faculty of Business (with the exception of BTM 311, BTM 415, BTM 419, and MGTSC 312); must include 6

- CMPUT 291 - Introduction to File and Database Management
-
- CMPUT 301 - Introduction to Software Engineering
- CMPUT 325 - Non-Procedural Programming Languages
- CMPUT 379 - Operating System Concepts
- CMPUT 401 - Software Process and Product Management
- CMPUT 402 - Software Quality

3 units from

- STAT 252 - Introduction to Applied Statistics II
- STAT 266 - Introduction to Statistics

3 units from

- CMPUT 200 - Ethics of Data Science and Artificial Intelligence
- CMPUT 300 - Computers and Society

3 units from

- CMPUT 304 - Algorithms II
- CMPUT 340 - Introduction to Numerical Methods
- CMPUT 474 - Formal Languages, Automata, and Computability

6 units from

- any 300- and 400-level CMPUT course

3 units from

- any 400-level CMPUT course (can be at the 300-level if CMPUT 474 taken above)

12 units from

- any course offered by the Faculty of Business (with the exception of BTM 311, BTM 415, BTM 419, and MGTSC 312); must include 6 units in courses with the following course designators:
  - BTM

units in courses with the following course designators:
- BTM
- MGTSC
- OM

8-, 12-, or 16-month Science Internship (SIP)

- Students who fail to complete a placement in the SIP must withdraw from the program and reapply to continue in the Major in Computing Science program.
- See Science Internship Program for more information.

Notes

1. CMPUT 274 can serve as a substitute for CMPUT 174. CMPUT 275 can serve as a substitute for CMPUT 175 and 201.
2. Upper level CMPUT courses may require specific CMPUT, MATH or STAT courses as prerequisites. These prerequisites must be considered when choosing Science options.

Minor in Computing Science Requirements

Foundation Courses

- CMPUT 174 - Introduction to the Foundations of Computation I
- CMPUT 175 - Introduction to the Foundations of Computation II

Senior Courses

6 units from

- CMPUT 201 - Practical Programming Methodology
- CMPUT 204 - Algorithms I
- CMPUT 229 - Computer Organization and Architecture I

- MGTSC
- OM

8-, 12-, or 16-month Science Internship (SIP)

- Students who fail to complete a placement in the SIP must withdraw from the program and reapply to continue in the Major in Computing Science program.
- See Science Internship Program for more information.

Notes

1. CMPUT 274 can serve as a substitute for CMPUT 174. CMPUT 275 can serve as a substitute for CMPUT 175 and 201.
2. Upper level CMPUT courses may require specific CMPUT, MATH or STAT courses as prerequisites. These prerequisites must be considered when choosing Science options.

Minor in Computing Science Requirements

Foundation Courses

- CMPUT 174 - Introduction to the Foundations of Computation I
- CMPUT 175 - Introduction to the Foundations of Computation II

Senior Courses

6 units from

- CMPUT 201 - Practical Programming Methodology
- CMPUT 204 - Algorithms I
- CMPUT 229 - Computer Organization and Architecture I
- CMPUT 272 - Formal Systems and Logic in Computing Science

- CMPUT 272 - Formal Systems and Logic in Computing Science
- CMPUT 291 - Introduction to File and Database Management

6 units from

- any 200-, 300-, and 400-level CMPUT course

6 units from

- any 300- and 400-level CMPUT course

Notes

1. Higher level CMPUT courses may require specific CMPUT, MATH or STAT courses as prerequisites. Therefore, prerequisites for higher level CMPUT courses must be considered when choosing options.

-
-
-

- CMPUT 291 - Introduction to File and Database Management

6 units from

- any 200-, 300-, and 400-level CMPUT course

6 units from

- any 300- and 400-level CMPUT course

Notes

1. Higher level CMPUT courses may require specific CMPUT, MATH or STAT courses as prerequisites. Therefore, prerequisites for higher level CMPUT courses must be considered when choosing options.

-
-
-

Reviewed/Approved by:

REQUIRED: Faculty Council (or delegate) and approval date, including any partner faculties for combined programs.
Associate Chairs (Undergraduate) on the delegated authority of the Science Faculty Council: November 30, 2022

Other consultation groups, departments, or internal faculty approving bodies and approval dates.
Department of Computing Science Council: October 31, 2022

Governance Executive Summary
Action Item

Agenda Title	New Embedded Certificate in Applied Data Science, Faculty of Science

Motion

THAT the GFC Programs Committee approves, under delegated authority from the General Faculties Council, the new embedded Certificate in Applied Data Science, effective July 1, 2023.

Item

Action Requested	**X** Approval ☐Recommendation
Proposed by	Frederick West, Acting Dean, Faculty of Science
Presenter(s)	Gerda de Vries, Associate Dean (Undergraduate), Faculty of Science Eleni Stroulia, Vice-Dean, Faculty of Science and Professor, Department of Computing Science Ken Wong, Professor and Associate Chair (Undergraduate), Department of Computing Science

Details

Office of Administrative Responsibility	Provost and Vice-President (Academic)
The Purpose of the Proposal is (*please be specific*)	Data literacy, the ability to derive meaningful information from data, is increasingly being recognized as a vital skill set for everyone in today's data-rich world. Data analysis has always been the cornerstone of empirical science; today, data analysis has become critical for many aspects of scholarly work. Data pours continuously in from the growing number of new devices that we are all using, from social media, weather stations, environmental sensors, government agencies, credit card purchases, and browser logs. Most artifacts of our cultural activities today, including television, books, visual art, movies and music, are born digital. Our ability to make sense of all this data, to decide on its authenticity and provenance, and to extract evidence that can drive decisions is a key skill for future professionals in most fields. Many academic institutions, recognizing this phenomenon, are establishing academic credentials and programs for data science, both at the graduate and undergraduate levels. In Western Canada, U Calgary has launched a graduate program and SFU has an undergraduate program. The U of A's strength in Machine Learning and Artificial Intelligence is well established, as evidenced by international rankings, the support of the Pan-Canadian Strategy for AI to Amii, and the University's support through the establishment of the AI4Society signature area. This makes the development of a data-science program perfectly timed, even long overdue. The proposed certificate is motivated by the intuition that we must tap into this expertise, to give our students today the capacity to extract insights and knowledge from the data they will undoubtedly deal with in their profession in the future.

Executive Summary (*outline the specific item – and remember your audience*)	The Certificate in Applied Data Science offers a set of required courses to ensure that students completing it have a good understanding of key areas of modern data science. One of the required courses is a capstone course, which provides the students with the opportunity of applying in practical scenarios the knowledge gained in the other courses. The certificate also offers a set of elective courses that allow the students to apply data science in a particular domain.
	
	The Certificate in Applied Data Science is open to all undergraduate students but will be most easily accessed by those in Science, ALES and Business who have completed the associated prerequisites. There are no admission requirements.
	
	At its core lies:
	  i) an introductory course in data science (CMPUT 191 or CMPUT 195);
	  ii) a data science ethics requirement, which can be satisfied by CMPUT 200, PHIL 385, or NS 115; and
	  iii) a capstone project course (INT D 491).
	
	The applied nature of this certificate is further realized by having students take options courses within Science, ALES, and/or Business that involve aspects of data science. All undergraduate students who have completed the associated prerequisites will be able to enrol in the required courses for this certificate.
	
	Prerequisites for the core requirements are mild. CMPUT 191 only requires Math 30-1 and CMPUT 195 requires only CMPUT 174. The ethics requirement can be satisfied without any other prerequisites by taking PHIL 385 or NS 115. The prerequisites for CMPUT 200 can be satisfied by taking either CMPUT 191 or CMPUT 195.
	
	Between the required courses and the capstone course are a choice of three options that students can take, typically from their home department. These will come with their own prerequisites, but the idea is that the options work seamlessly into a student's own studies (i.e. most students interested in this certificate will have completed the prerequisite courses as part of their program of study; and therefore, they should be able to complete the requirements for this certificate as part of their program of study or as their options/electives).
	
	CMPUT 191 introduces the student to fundamental concepts in data science: namely data acquisition, basic manipulation, analysis, inference, and statistical learning techniques. It also discusses methods to visualize data and to accurately communicate information obtained from data.

Item No. 10

	The INT D 491 (Capstone Project Course) course is new and is planned to be piloted in Winter 2024. With prerequisites of one of CMPUT 191 or 195 and one of CMPUT 200, PHIL 185, or NS 115, this capstone course involves a team project, where small groups of students from diverse backgrounds work on projects involving real-world data sets. At a high level, the learning outcomes involve skills in computing, math, ethics, and teamwork, and their application in some domain. Students will study techniques to obtain informative data, learn about and use tools for analyzing and inferring information from data sets, and develop communication skills for presenting data in both a visual and informative manner. Just as important, students will also learn about what cannot be inferred from certain data and about challenges faced by society in the collection, analysis, and/or fair and accurate use of data. This includes a study of how biases are present in various facets of data science. Students will additionally learn to utilize techniques of data science in their own field of study. There are also professional skills. In particular, students will know the correct terminology used in Data Science, to communicate concisely and precisely in collaborations with other practitioners. As well, the students will need to critically assess the limits of their own knowledge, to identify areas of personal growth, and mitigate unsafe or unfair uses of data science.
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](#)>	*Those who are actively **participating**:* ● Departmental curriculum committees, Faculty of Science; various meetings between 2020 and 2022 ● Associate Chairs (Undergraduate), Faculty of Science; various meetings between 2020 and 2022 ● Academic advisors, Faculty of Science; various meetings between 2020 and 2022
	*Those who have been **consulted**:* ● Faculty of Native Studies (on the inclusion of NS 115); 2020 - 2022 ● Faculties of ALES and Business (on the inclusion of their courses); 2020 - 2022 ● Undergraduate students that have taken any CMPUT course (feedback received via online survey); Fall 2022 ● Provost's Office (Vice-Provost, Programs); various meetings between 2020 and 2022 ● Provost's Office (Vice-Provost, Indigenous Programming and Research); various meetings between 2020 and 2022

	*Those who have been **informed**:* ● University of Alberta Library (for impact statement); Winter 2020
Approval Route (Governance) (including meeting dates)	Department of Computing Science Council (approval obtained October 31, 2022) Associate Chairs (Undergraduate) on the delegated authority of the Science Faculty Council (approval obtained November 29, 2022) Programs Support Team (December 15, 2022) GFC Programs Committee (January 12, 2023)

Strategic Alignment

Alignment with *For the Public Good*	**Build** To help "build a diverse and inclusive community of exceptional students, faculty, and staff from Alberta, Canada, and the world". **Experience** To help "experience diverse and rewarding learning opportunities that inspire us, nurture our talents, expand our knowledge and skills, and enable our success". **Excel** To help "excel as individuals, and together, sustain a culture that fosters and champions distinction and distinctiveness in teaching, learning, research, and service". **Engage** To help "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". **Sustain** To help "sustain our people, our work, and the environment by attracting and stewarding the resources we need to deliver excellence to the benefit of all".
Alignment with Core Risk Area	Please note below the specific institutional risk(s) this proposal is addressing.

☐Enrolment Management ☐Faculty and Staff ☐Funding and Resource Management ☐IT Services, Software and Hardware ☐Leadership and Change ☐Physical Infrastructure	**X** Relationship with Stakeholders **X** Reputation ☐Research Enterprise ☐Safety **X** Student Success

Legislative Compliance and jurisdiction	Post-Secondary Learning Act GFC Committees Terms of Reference

Attachments

1. Applied Data Science - Embedded Certificate Template (pages 1 - 32)
   This template includes Appendices A1-A4 and B1 as follows:
      a. Appendix A1 - Certificate Requirements
      b. Appendix A2 - List of Courses
      c. Appendix A3 - Calendar Content - Certificate Requirements
      d. Appendix A4 - Calendar Content - Course Changes
      e. Appendix B1 - Student Survey
2. Appendix B2 - Library Impact Statement (pages 1 - 3)
3. Appendix B3 - ALES Letter of Support (page 1)
4. Appendix B4 - Science Letter of Support (page 1)
5. Appendix B5 - Business Letter of Support (page 1)

Prepared by: Gerda de Vries, Associate Dean (Undergraduate), Faculty of Science, sciadu@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	Certificate in Applied Data Science	
Sponsoring Faculty/Faculties/Academic Unit	Faculty of Science, Department of Computing Science	
Contact information	Name and Title	Dr. Eleni Stroulia, Professor and Vice-Dean
	Phone	
	Email	stroulia@ualberta.ca
Institution(s) If multiple institutions are involved, specify the nature of the collaboration. Identify which institution(s) will award the credential.	University of Alberta	
Units of Course Weight	The Certificate in Applied Data Science comprises 18 units that span the Faculties of Science, Native Studies, Business, and Agriculture, Life and Environmental Sciences (ALES). **1) Required data science courses (6 units total)** ● One of CMPUT 191 - Introduction to Data Science or CMPUT 195 - Introduction to Principles and Techniques of Data Science ● INT D 491 - Data Science Capstone **2) One of the following ethics courses (3 units)** ● CMPUT 200 - Ethics of Data Science and Artificial Intelligence ● PHIL 385 - Ethics and Artificial Intelligence ● NS 115 - Indigenous People and Technoscience	

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3) Three options courses (9 units total)

We anticipate that students will choose to take options within their home departments; students not in Computing Science are unlikely to take CMPUT courses other than 191/195 and 200.

Faculty of Science Options

Computing Science
- CMPUT 267 - Basics of Machine Learning
- CMPUT 291 - Introduction to File and Database Management
- CMPUT 328 - Visual Recognition
- CMPUT 361 - Introduction to Information Retrieval
- CMPUT 367 - Intermediate Machine Learning
- CMPUT 461 - Intro to NLP
- CMPUT 466 - Machine Learning

Note: Credit cannot be obtained for both CMPUT 367 and CMPUT 466.

Biological Sciences
- BIOIN 301 - Bioinformatics I
- BIOIN 401 - Bioinformatics II
- BIOL 330 - Introduction to Biological Data
- BIOL 331 - Population Ecology
- BIOL 332 - Community Ecology
- BIOL 380 - Genetic Analysis of Populations
- BIOL 430 - Statistical Design and Analysis in Biology
- BIOL 471 - Landscape Ecology
- IMIN 410 - Bioinformatics for Molecular Biologists
- MA SC 475 - Applied Data Analysis in Marine Science

Earth and Atmospheric Sciences
- EAS 221 - Introduction to Geographical Information Systems and Remote Sensing
- EAS 351 - Environmental Applications of Geographical Information Systems
- EAS 364 - Basin Resources and Subsurface Methods
- EAS 372 - Weather Analysis and Forecasting

Physics
- PHYS 234 - Introductory Computational Physics
- PHYS 295 - Experimental Physics I
- PHYS 420 - Computational Physics
- GEOPH 426 - Signal Processing in Geophysics
- GEOPH 431 - Geophysical Inverse Theory
- GEOPH 438 - Seismic Data Processing

Statistics
- STAT 441 - Statistical Methods for Learning and Data Mining
- STAT 471 - Probability I
- STAT 479 - Time Series Analysis

	Faculty of Agricultural, Life and Environmental Sciences Options ● AREC 313 - Statistical Analysis ● REN R 201 - Introduction to Geomatic Techniques in Natural Resource Management ● REN R 426 - Geographical Information Systems Applications in Renewable Resources ● REN R 480 - Applied Statistics for Environmental Sciences **Alberta School of Business Options** ● FIN 440 - Commodities Analytics and Trading ● MARK 312 - Marketing Analytics ● OM 420 - Predictive Business Analytics ● SEM 330 - Exploring Innovation and Entrepreneurship Originally, this list was formed in consultation with other faculty or departmental undergraduate chairs. This list of options will be reviewed regularly and, if needed, revised by a certificate steering committee. For example, Business offers a number of data science related courses, currently under topics course numbers (e.g., MGTSC 488, BUEC 488, SEM 488). If these courses on business analytics, business economics, and management analytics become permanent and regular offerings, then they could be considered for inclusion in the list of options. As notions of data science pervade into other disciplines, further relevant sets of options courses could be considered by the steering committee. Such options present a bridge for students in those disciplines to span the gap between the introductory data science and ethics courses to the capstone course of the certificate. Considering and offering more bridges in the future would allow a broader audience of students to be able to take the proposed certificate in their program.
Program Synopsis Describe the program. Include curriculum content, target student group, target employment, further education options, etc.	**Curriculum Content** The Certificate in Applied Data Science offers a set of required courses to ensure that students completing it have a good understanding of key areas of modern data science. One of the required courses is a capstone course, which provides the students with the opportunity of applying in practical scenarios the knowledge gained in the other courses. The certificate also offers a set of elective courses that allow the students to apply data science in a particular domain. **Target Audience** The Certificate in Applied Data Science is open to all undergraduate students but will be most easily accessed by those in Science, ALES and Business who have completed the associated prerequisites. There are no admission requirements.

At its core lies:
  i. an introductory course in data science (CMPUT 191 or CMPUT 195);
  ii. a data science ethics requirement, which can be satisfied by CMPUT 200, PHIL 385, or NS 115; and
  iii. a capstone project course (INT D 491).

The applied nature of this certificate is further realized by having students take options courses within Science, ALES, and/or Business that involve aspects of data science. All undergraduate students who have completed the associated prerequisites will be able to enrol in the required courses for this certificate.

Prerequisites for the core requirements are mild. CMPUT 191 only requires Math 30-1 and CMPUT 195 requires only CMPUT 174. The ethics requirement can be satisfied without any other prerequisites by taking PHIL 385 or NS 115. The prerequisites for CMPUT 200 can be satisfied by taking either CMPUT 191 or CMPUT 195.

Between the required courses and the capstone course are a choice of three options that students can take, typically from their home department. These will come with their own prerequisites, but the idea is that the options work seamlessly into a student's own studies (i.e. most students interested in this certificate will have completed the prerequisite courses as part of their program of study; and therefore, they should be able to complete the requirements for this certificate as part of their program of study or as their options/electives).

CMPUT 191 introduces the student to fundamental concepts in data science: namely data acquisition, basic manipulation, analysis, inference, and statistical learning techniques. It also discusses methods to visualize data and to accurately communicate information obtained from data.

The INT D 491 (Capstone Project Course) course is new and is planned to be piloted in Winter 2024. With prerequisites of one of CMPUT 191 or 195 and one of CMPUT 200, PHIL 185, or NS 115, this capstone course involves a team project, where small groups of students from diverse backgrounds work on projects involving real-world data sets.

Learning Outcomes

At a high level, the learning outcomes involve skills in computing, math, ethics, and teamwork, and their application in some domain. Students will study techniques to obtain informative data, learn about and use tools for analyzing and inferring information from data sets, and develop communication skills for presenting data in both a visual and informative manner. Just as important, students will also learn about what cannot be inferred from certain data and about challenges faced by society in the collection, analysis, and/or fair and accurate use of data. This includes a study of how biases are present in various facets of data science. Students

| | will additionally learn to utilize techniques of data science in their own field of study.

There are also professional skills. In particular, students will know the correct terminology used in Data Science, to communicate concisely and precisely in collaborations with other practitioners. As well, the students will need to critically assess the limits of their own knowledge, to identify areas of personal growth, and mitigate unsafe or unfair uses of data science.

Further Education Options

If Science students wish work experience, possibly building upon the data science expertise they would gain within the certificate, there is also the Science Internship Program. Through the work-integrated learning initiative, such opportunities are likely available to students in other Faculties as well. Also, orthogonal to the certificate courses, there could be independent studies courses that further investigate and apply data science techniques in collaboration with a researcher.

A possibility after graduating, other than employment, could be graduate school. Beyond the capstone course, having a certificate with selected options that focus on more depth would be a good starting point for more advanced studies. For example, a foundation in data science leads naturally into graduate studies in artificial intelligence, one of the University of Alberta's premier fields of research expertise, or into graduate studies in data science (eg. the Data Science M.Sc. program offered at the University of Calgary). Data scientists are in high demand, and the proposed certificate is a stepping stone toward building up the needed supply. |
|---|---|

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.	Data literacy, the ability to derive meaningful information from data, is increasingly being recognized as a vital skill set for everyone in today's data-rich world. Data analysis has always been the cornerstone of empirical science; today, data analysis has become critical for many aspects of scholarly work. Data pours continuously in from the growing number of new devices that we are all using, from social media, weather stations, environmental sensors, government agencies, credit card purchases, and browser logs. Most artifacts of our cultural activities today, including television, books, visual art, movies and music, are born digital. Our ability to make sense of all this data, to decide on its authenticity and provenance, and to extract evidence that can drive decisions is a key skill for future professionals in most fields.

Many academic institutions, recognizing this phenomenon, are establishing academic credentials and programs for data science, both at the graduate and undergraduate levels. In Western Canada, U Calgary has launched a graduate program - https://science.ucalgary.ca/data-science, and SFU has |

	an undergraduate program - http://www.sfu.ca/students/calendar/2022/fall/programs/data-science/major/bachelor-of-science.html
	The U of A's strength in Machine Learning and Artificial Intelligence is well established, as evidenced by international rankings, the support of the Pan-Canadian Strategy for AI to Amii, and the University's support through the establishment of the AI4Society signature area. This makes the development of a data-science program perfectly timed, even long overdue. The proposed certificate is motivated by the intuition that we must tap into this expertise, to give our students today the capacity to extract insights and knowledge from the data they will undoubtedly deal with in their profession in the future.
Vision and Academic Plan How does the proposed program align with the strategic goals described in *For the Public Good* and *the University of Alberta's Strategic Plan for Equity, Diversity, and Inclusion?* How does the program further the objectives or align with the other institutional, Faculty, and College strategies?	The proposed certificate addresses all five strategic goals described in the Institutional Strategic Plan "For the Public Good". **Build** To help "build a diverse and inclusive community of exceptional students, faculty, and staff from Alberta, Canada, and the world", the certificate will highlight and leverage the world-class strength and reputation of the University of Alberta in data science fields. In particular, a large component of Data Science is closely related to Artificial Intelligence which is one of the University of Alberta's strongest research fields. This will attract local, domestic, and international undergraduate students interested in data science. **Experience** To help "experience diverse and rewarding learning opportunities that inspire us, nurture our talents, expand our knowledge and skills, and enable our success", the certificate capstone course creates experiential learning opportunities for students to collaborate and connect with a broader community of domain experts and industrial partners. **Excel** To help "excel as individuals, and together, sustain a culture that fosters and champions distinction and distinctiveness in teaching, learning, research, and service, the certificate is designed to reach a very broad range of students in Science, ALES, and Business. The interdisciplinary nature of both the certificate and of the particular data science capstone course will foster cross-disciplinary work and promote different ways of thinking to each student who completes the certificate. **Engage** To help "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", the certificate capstone course is one way in which the wider community

outside the University of Alberta can gain access to students interested in exploring and applying data science techniques to their problems. Such an engagement benefits both the students and the community.

Sustain

To help "sustain our people, our work, and the environment by attracting and stewarding the resources we need to deliver excellence to the benefit of all", the certificate in Applied Data Science is part of an ongoing effort in the Department of Computing Science to continuously improve our course offerings, exploit alternative funding avenues, and hire the needed instructors to deliver courses to growing enrollments.

The proposed certificate addresses the issues described in the Institutional Strategic Plan for Equity, Diversity, and Inclusivity. Given the potential impact of data science (and its misuse) on society, with the use of massive amounts of data, there are significant issues of privacy, bias, and fairness. The required ethics course will cover these and other ethical issues, so that the created analyses are safe, and respect the principles underlying equity, diversity, and inclusion.

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.	CMPUT 191 was piloted in Winter 2022 and Fall 2022. CMPUT 195 is planned to be offered in Fall 2023. Essentially any computing science instructor with Python and statistical background could teach those courses. CMPUT 200 was piloted in Winter 2022 by Nidhi Hegde, and will be offered in Winter 2023. Matt Taylor is another instructor who can teach this course. Since all CS students in the future will need to satisfy a computing ethics requirement, it will be important to scale CMPUT 200 as one choice of course to meet that requirement.

	CMPUT 191	CMPUT 200
Winter 2022	39	34
Fall 2022	42	N/A
Winter 2023	N/A	20

All other ethics courses already exist and all options courses either already exist or are being developed independent of this new certificate proposal.

Of the CMPUT courses on the approved list, CMPUT 267, 291, and 466 are offered in both the fall and winter terms, while CMPUT 328, 361, 367, and 461 have historically been offered once per year (unless the key instructor goes on sabbatical and there is no suitable sessional instructor). Following is the enrollment as of the add-drop date for the most recent offering of these courses.

CMPUT 267	CMPUT 291	CMPUT 328	CMPUT 361	CMPUT 367	CMPUT 461	CMPUT 466
150	334	82	80	46	33	63

The only required course that will be created for this certificate is INT D 491, the Data Science Capstone project course, which is fashioned after existing capstone courses (CMPUT 401, Software Process and Product Management, and CMPUT 469, Artificial Intelligence Capstone). We expect resources will be shared among these courses. The Department of Computing Science would be responsible for the administration of INT D 491.

To help control capacity, we could carefully limit the number of students in 191 and 195. To determine potential enrollment for the capstone course, we would poll 191 and 195 students about their intention to do the data science certificate.

To scale the capstone course, we would have the projects mentored and evaluated by domain experts (rather than only a CS instructor). Also, projects and datasets could be recycled, and need not all be completely fresh.

For consistent learning and assessment across project teams, appropriate rubrics are needed for the domain experts to evaluate the capstone project reports. Beyond meeting the aims of the domain expert, it is important to meet the aims of the course, e.g., data science, ethics, teamwork, and technical writing.

The capstone prerequisites ensure that the course is taken in a senior year, to better stage the potential demand.

Enrolment
Outline the expected enrolment for the embedded credit certificate and any potential impacts on course offerings.

We expect that this certificate will be very popular among Computing Science students, as well as students in Mathematics and Statistics programs, but it will also appeal to many students across Science, as well as Business and ALES. We envision that the certificate may be expanded to be offered to other disciplines in the future. Our current (we believe conservative) estimate is that the first year we will have, at least, the following enrollment to the certificate:

- 40 Computing Science students
- 40 students from Science departments other than Computing Science
- 10 students from Business
- 10 students from ALES

We expect these numbers to increase proportionally with the total number of students enrolled in the programs offering courses that can fulfil the data science options requirements.

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.?	A new degree program in data science is being developed jointly by the Department of Computing Science and the Department of Mathematical and Statistical Sciences. The required common core of that proposed program (with sixteen first and second year computing, math, and statistics courses) includes CMPUT 191. In the followup computing pathway for third and fourth year, there are options to be chosen from a pool of courses, which includes CMPUT 200. In the pool is a proposed data science capstone, INT D 491. The Department of Mathematical and Statistical Sciences had a graduate embedded certificate in data science. The proposed certificate has no overlap with that graduate-level offering.
Consultation Describe any consultation and/or potential impacts on service units of the University, including the RO, Academic Information and Communication Technologies (AICT), Libraries, Facilities and Operations, Student Services, etc.	The inclusion of NS 115 in this certificate is the result of a consultation with SKIPP. Maggie Spivey-Faulkner and Jessica Kolopenuk advised on the inclusion of this course in the certificate. The inclusion of an ethics course requirement was recommended by Florence Glanfield (Vice-Provost, Indigenous Programming & Research). The inclusion of PHIL 385 was recommended by Geoffrey Rockwell, a faculty member in the Department of Philosophy and teacher of PHIL 385. Consultations have also been undertaken with the Deans of ALES, Science, and Business. Their letters of support, as well as the library impact statement, can be found in Appendix B. The results of a survey with students who had taken any CMPUT courses can also be found in Appendix B.

Appendices	
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.	Appendix A1 - Certificate Requirements Appendix A2 - List of Courses Appendix A3 - Calendar Content - Certificate Requirements Appendix A4 - Calendar Content - Course Changes
Appendix B – other Include any additional information in support of the proposal including the Library Impact Statement and letters of support.	Appendix B1 - Student Survey Appendix B2 - Library Impact Statement Appendix B3 - ALES Letter of Support Appendix B4 - Science Letter of Support Appendix B5 - Business Letter of Support

Appendix A1 - Certificate Requirements

Appendix A1 provides details for the certificate requirements and courses that will be included as part of the certificate.

Required Foundation Course	3 units from: ● CMPUT 191 - Introduction to Data Science ● CMPUT 195 - Introduction to Principles and Techniques of Data Science
Required Ethics Course	3 units from: ● CMPUT 200 - Ethics of Data Science and Artificial Intelligence ● NS 115 - Indigenous People and Technoscience ● PHIL 385 - Ethics and Artificial Intelligence

Option Courses	9 units from any of the following subject areas:
	
	Faculty of Science
	  Computing Science
	    ● CMPUT 267 - Basics of Machine Learning
	    ● CMPUT 291 - Introduction to File and Database Management
	    ● CMPUT 328 - Visual Recognition
	    ● CMPUT 361 - Introduction to Information Retrieval
	    ● CMPUT 367 - Intermediate Machine Learning
	    ● CMPUT 461 - Intro to NLP
	    ● CMPUT 466 - Machine Learning
	  Note: Credit cannot be obtained for both CMPUT 367 and CMPUT 466.
	
	  Biological Sciences
	    ● BIOIN 301 - Bioinformatics I
	    ● BIOIN 401 - Bioinformatics II
	    ● BIOL 330 - Introduction to Biological Data
	    ● BIOL 331 - Population Ecology
	    ● BIOL 332 - Community Ecology
	    ● BIOL 380 - Genetic Analysis of Populations
	    ● BIOL 430 - Statistical Design and Analysis in Biology
	    ● BIOL 471 - Landscape Ecology
	    ● IMIN 410 - Bioinformatics for Molecular Biologists
	    ● MA SC 475 - Applied Data Analysis in Marine Science
	
	  Earth and Atmospheric Sciences
	    ● EAS 221 - Introduction to Geographical Information Systems and Remote Sensing
	    ● EAS 351 - Environmental Applications of Geographical Information Systems
	    ● EAS 364 - Basin Resources and Subsurface Methods

	● EAS 372 - Weather Analysis and Forecasting **Physics** ● PHYS 234 - Introductory Computational Physics ● PHYS 295 - Experimental Physics I ● PHYS 420 - Computational Physics ● GEOPH 426 - Signal Processing in Geophysics ● GEOPH 431 - Geophysical Inverse Theory ● GEOPH 438 - Seismic Data Processing **Statistics** ● STAT 441 - Statistical Methods for Learning and Data Mining ● STAT 471 - Probability 1 ● STAT 479 - Time Series Analysis **Faculty of Agricultural, Life and Environmental Sciences** ● AREC 313 - Statistical Analysis ● REN R 201 - Introduction to Geomatic Techniques in Natural Resource Management ● REN R 426 - Geographical Information Systems Applications in Renewable Resources ● REN R 480 - Applied Statistics for Environmental Sciences **Alberta School of Business** ● FIN 440 - Commodities Analytics and Trading ● MARK 312 - Marketing Analytics ● OM 420 - Predictive Business Analytics ● SEM 330 - Exploring Innovation and Entrepreneurship Note: Where possible, options are normally taken from the student's Major/Honors subject area or their home Department/Faculty.
Required Capstone Course	INT D 491 - Data Science Capstone

Appendix A2 - List of Courses

Appendix A2 includes course descriptions and prerequisites for each applicable course. There is one new course associated with this certificate (highlighted in yellow).

Arts
PHIL 385 – Ethics and Artificial Intelligence
★ 3 (fi 6) (either term, 3-0-0)
A study of ethical issues raised by artificial intelligence systems.

Computing Science
CMPUT 191 - Introduction to Data Science
★ 3 (fi 6)(either term, 3-0-3)

Introduction to data acquisition, basic data manipulation (cleaning, outlier detection), analysis (regression, clustering, classification), basic statistics and machine learning tools, information visualization to communicate information from data. Prerequisite: Math 30-1. This course cannot be taken for credit if credit has been obtained in CMPUT 174, 195, or 274.

CMPUT 195 - Introduction to Principles and Techniques of Data Science
★ 3 (fi 6)(either term, 3-0-3)

This course introduces data science to students with prior computing experience. It covers the basics of data acquisition, manipulation, transformation, and cleaning, as well as data analysis (e.g., regression, clustering, classification) and visualization. Students learn principles and techniques of efficient data-driven communication and decision-making in various domains using industry-standard tools. Credit cannot be obtained for both CMPUT 191 and CMPUT 195. Prerequisite: Math 30-1 and CMPUT 174 or 274, or consent of the instructor.

CMPUT 200 – Ethics of Data Science and Artificial Intelligence
★ 3 (fi 6) (either term, 3-0-3)
This course focuses on ethics issues in Artificial Intelligence (AI) and Data Science (DS). The main themes are privacy, fairness/bias, and explainability in DS. The objectives are to learn how to identify and measure these aspects in outputs of algorithms, and how to build algorithms that correct for these issues. The course will follow a case-studies based approach, where we will examine these aspects by considering real-world case studies for each of these ethics issues. The concepts will be introduced through a humanities perspective by using case studies with an emphasis on a technical treatment including implementation work. Prerequisite: one of CMPUT 191 or CMPUT 195, or one of CMPUT 174 or CMPUT 274 and one of STAT 141, STAT 151, STAT 235, STAT 265, SCI 151, MATH 181, or CMPUT 267, or consent of the instructor.

CMPUT 267 – Basics of Machine Learning
★ 3 (fi 6) (either term, 3-0-0)
This course introduces the fundamental statistical, mathematical, and computational concepts in analyzing data. The goal for this introductory course is to provide a solid foundation in the mathematics of machine learning, in preparation for more advanced machine learning concepts. The course focuses

on univariate models, to simplify some of the mathematics and emphasize some of the underlying concepts in machine learning, including: how should one think about data, how can data be summarized, how models can be estimated from data, what sound estimation principles look like, how generalization is achieved, and how to evaluate the performance of learned models. Prerequisites: CMPUT 174 or 274; one of MATH 100, 114, 117, 134, 144, or 154. Corequisites: CMPUT 175 or 275; CMPUT 272; MATH 125 or 127; one of STAT 141, 151, 235, or 265, or SCI 151.

CMPUT 291 – Introduction to File and Database Management
★ 3 (fi 6) (either term, 3-0-1.5)
Basic concepts in computer data organization and information processing; entity-relationship model; relational model; SQL and other relational query languages; storage architecture; physical organization of data; access methods for relational data. Programming experience (e.g., Python) is required for the course project. Prerequisites: CMPUT 175 or 274, and 272. Corequisite: one of CMPUT 201 or 275.

CMPUT 328 – Visual Recognition
★ 3 (fi 6) (either term, 3-0-3)
Introduction to visual recognition to recognize objects and classify scenes or images automatically by a computer. Supervised and unsupervised machine learning principles and deep learning techniques will be utilized for visual recognition. Successful commercial systems based on visual recognition range from entertainment to serious scientific research: face detection and recognition on personal devices, social media. Prerequisites: CMPUT 115 or 175; one of MATH 100, 113, 114, 117, 134, 144, 154; MATH 125; STAT 141, 151 or 235.

CMPUT 361 – Introduction to Information Retrieval
★ 3 (fi 6) (either term, 3-0-0)
Most of the knowledge we acquire, use, and share is expressed in natural language, and preserved as primarily textual documents. This course introduces the fundamental algorithms and data structures for organizing and searching through large collections of documents, and the techniques for evaluating the quality of search results. The course also covers practical machine-learning algorithms for text and foundational technologies used by Web search engines. Prerequisites: CMPUT 201 and CMPUT 204 or 275; MATH 125 or equivalent is strongly recommended.

CMPUT 367 – Intermediate Machine Learning
★ 3 (fi 6) (either term, 3-0-0)
This course in machine learning focuses on higher-dimensional data and a broader class of nonlinear function approximation approaches. Topics include: optimization approaches (constrained optimization, hessians, matrix solutions), kernel machines, neural networks, dimensionality reduction, latent variables, feature selection, more advanced methods for assessing generalization (cross-validation, bootstrapping), introduction to non-iid data and missing data. Credit cannot be obtained for both CMPUT 367 and CMPUT 466. Prerequisites: CMPUT 204 and 267; one of MATH 115, 118, 136, 146, or 156.

CMPUT 461 – Intro to NLP
★ 3 (fi 6) (3-0-3)
Natural language processing (NLP) is a subfield of artificial intelligence concerned with the interactions between computers and human languages. This course is an introduction to NLP, with the emphasis on writing programs to process and analyze texts, covering both foundational aspects and applications of NLP. The course aims at a balance between classical and statistical methods for NLP, including methods based on machine learning. Prerequisites: 201 or 275, and any 300-level Computing Science course.

CMPUT 466 – Machine Learning

★3 (fi 6) (either term, 3-0-3)

Learning is essential for many real-world tasks, including recognition, diagnosis, forecasting and data-mining. This course covers a variety of learning scenarios (supervised, unsupervised and partially supervised), as well as foundational methods for regression, classification, dimensionality reduction and modeling. Techniques such as kernels, optimization and probabilistic graphical models will typically be introduced. It will also provide the formal foundations for understanding when learning is possible and practical. Credit cannot be obtained for both CMPUT 367 and CMPUT 466. Prerequisites: CMPUT 204 or 275; MATH 125; CMPUT 267 or MATH 214; or consent of the instructor.

INT D 491 – Data Science Capstone   *(NEW COURSE)*

★3 (fi 6) (either term, 3-0-3)

Students will experience the challenges of working in a team to collect, prepare, and analyze real-world data sets in a particular application domain. Students will work with a domain expert to help discover meaningful insights in the data. Students will also apply best practices in teamwork, effective communication, and technical writing. Project experiences will be shared among the teams, to provide an interdisciplinary perspective on the uses of data science in different domains. Prerequisites: one of CMPUT 191 or 195, one of CMPUT 200, NS 115, or PHIL 385, and three of CMPUT 267, CMPUT 291, CMPUT 328, CMPUT 361, CMPUT 367, CMPUT 461, CMPUT 466, BIOIN 301, BIOIN 401, BIOL 330, BIOL 331, BIOL 332, BIOL 380, BIOL 430, BIOL 471, BIOL 495, IMIN 410, MA SC 475, EAS 221, EAS 351, EAS 364, EAS 372, GEOPH 426, GEOPH 431, GEOPH 438, PHYS 234, PHYS 295, PHYS 420, STAT 441, STAT 471, STAT 479, AREC 313, REN R 201, REN R 426, REN R 480, FIN 440, MARK 312, OM 420, or SEM 330.

Biological Sciences

BIOIN 301 – Bioinformatics I

★ 3 (fi 6) (first term, 3-0-0)

Introduction to computational tools and databases used in the collection and analysis of sequence data and other analytical data from high-throughput molecular biology studies. Students will use existing tools, and learn the underlying algorithms and their limitations. Prerequisite: any 200-level Biological Sciences course or consent of instructor. Credit cannot be obtained for both BIOIN 301 and BIOL 501.

BIOIN 401 – Bioinformatics II

★ 3 (fi 6) (second term, 3-0-3)

Advanced topics in bioinformatics will be covered. A major part of the course will be devoted to team-based projects involving writing novel bioinformatics tools to deal with current problems in bioinformatics. Prerequisites: BIOIN 301, a 300-level CMPUT course and a 300-level GENET course. (Offered jointly by the Departments of Computing Science and Biological Sciences). [Biological Sciences].

BIOL 330 – Introduction to Biological Data

★ 3 (fi 6) (second term, 3-0-3)

Expands on prior introductions to the scientific method and examines the steps involved in the planning, collection, organization, analysis and presentation of biological data. Classes will explore the types of data used to answer a variety of biological questions and will review several different sampling designs, assess the benefits and limitations of various data types for scientific inference, and integrate the statistical methods that are common to other introductory courses. Labs will teach students how spreadsheets and relational databases can be used to manipulate, analyze, and present the results of scientific research. Prerequisites: BIOL 208 and STAT 151 or SCI 151.

BIOL 331 – Population Ecology

★ 3 (fi 6) (second term, 3-0-3)

Principles of population ecology as they apply to plants and animals; population consequences of variation among individuals; habitat structure and population structure; habitat selection and foraging theory; life tables, demography, and the evolution of life history patterns; population dynamics; interactions among organisms (predation, competition, mutualism); and population regulation. Prerequisites: BIOL 208; any one of MATH 113, 114, 115, 120, 125 or SCI 100; STAT 151 or SCI 151.

BIOL 332 – Community Ecology

★ 3 (fi 6) (either term, 3-3S-0)

Principles of community ecology, applied to plants and animals. The nature of communities, functional groups and rarity; niche theory and competition; disturbance and other alternatives to competition; food webs (predation, herbivory and disease); diversity (determinants, functional consequences and gradients); island communities. Prerequisites: BIOL 208; STAT 151 or SCI 151; and any one of MATH 113, 114, 115, 120, 125 or SCI 100. May not be taken for credit if credit already obtained in ZOOL 332.

BIOL 380 – Genetic Analysis of Populations

★ 3 (fi 6) (second, 3-1S-0)

Application of molecular biology to the study of systematics, structure of natural populations, mating systems, and forensics. Among the topics discussed are molecular techniques used to detect genetic variation in natural populations, methods to construct phylogenies using molecular data, mathematical models of population structure, paternity analysis, and DNA fingerprinting. Prerequisite: BIOL 207. BIOL 221 recommended.

BIOL 430 – Statistical Design and Analysis in Biology

★ 3 (fi 6) (either term, 3-0-3)

Emphasis is on the design of experiments and analysis of data collected from field and laboratory studies in Biology. Prerequisites: STAT 141 or 151 or SCI 151 and a 300-level Biological Sciences course. Credit cannot be obtained for BIOL 430, 530 and REN R 480.

BIOL 471 – Landscape Ecology

★ 3 (fi 6) (second term, 3-0-3)

Landscapes are holistic entities whose patterns influence ecological processes. Topics highlighted in this course include landscape components, morphology and dynamics; detecting spatial/temporal change in landscapes; issues of scales; movements of organisms, disturbances, and nutrients across landscape mosaics; and restoration, planning and management in a landscape context. Labs emphasize GIS applications to characterizing landscape patterns and heterogeneity in space and time, distributing and moving organisms across landscapes, and restoring or planning landscapes for conservation objectives. Prerequisites: MATH 115 or SCI 100; STAT 151 or SCI 151; one of BIOL 331, 332 or BOT 332. Previous GIS course is useful. Credit cannot be obtained for both BIOL 471 and 571.

IMIN 410 – Bioinformatics for Molecular Biologists

★ 3 (fi 6) (second term, 3-0-1)

This course will introduce the student to common and advanced methods in bioinformatics. In a mix of lectures and hands-on computer sessions, the student will solve realistic biological questions in the areas of sequence analysis, distant homology detection, phylogeny, correlating sequence to structure, protein structure analysis, and genomics. The student will obtain a thorough understanding of bioinformatics methods, but the focus is on application of methods in the context of molecular biology research rather

than studying details of the algorithms or computer programming. Prerequisite: consent of instructor. BIOCH 320 or 330 highly recommended. Priority given to senior students in the IMIN program. (Offered jointly by the Departments of Biological Sciences and Medical Microbiology and Immunology). [Biological Sciences].

MA SC 475 - Applied Data Analysis in Marine Science
★ 3 (fi 6) (first term, 13 weeks)
Principles of study design and data analysis illustrated by lecture material, current research and research seminars. Students will acquire experience using the data analysing language R. Prerequisites: STAT 151 or SCI 151, minimum *60 credit.

Earth and Atmospheric Science
EAS 221 - Introduction to Geographical Information Systems and Remote Sensing
★ 3 (fi 6) (either term, 3-0-3)
Background to the principles of Geographic Information Systems and Remote Sensing. Lectures emphasize the theoretical and methodological underpinnings, labs impart the technical aspects through hands-on experience with appropriate software. Prerequisite: Any 100-level Science course. [Faculty of Science]

EAS 351 - Environmental Applications of Geographical Information Systems
★ 3 (fi 6) (either term, 3-0-3)
This course emphasizes the applications of Geographic Information Systems (GIS) to the environmental sciences. Examples from resource management and the earth and biological sciences are discussed. Labs impart technical experience with ARCINFO. Prerequisites: EAS 221 and one of MATH 113, 114, STAT 141, 151, SCI 151, or permission of the instructor. [Faculty of Science]

EAS 364 - Basin Resources and Subsurface Methods
★ 3 (fi 6) (either term, 3-0-3)
Source rocks and origin of petroleum; principles of fluid migration; reservoir rocks and traps. Exploration and development of hydrocarbon plays using subsurface techniques. Introduction to reservoir evaluation and hydrocarbon production. Prerequisite: EAS 336 or consent of instructor. Not available to students with credit in EAS 424 or 430.

EAS 372 - Weather Analysis and Forecasting
★ 3 (fi 6) (either term, 3-0-0)
An introduction to synoptic analysis. Meteorological codes. Analysis of surface charts. Air-masses and fronts. Upper air constant pressure charts. Structure and evolution of weather systems. Analysis of current and predicted weather data. Synoptic weather forecasting. Prerequisite: EAS 371.

Physics
PHYS 234 - Introductory Computational Physics
★ 3 (fi 6) (either term, 3-0-3)
Algorithms for scientific data analysis: sorting methods, polynomial fitting, regression, interpolation, and Fourier analysis: techniques for solving physics and geophysics problems with selected topics from mechanics, waves, geometrical optics and ray tracing, electricity and magnetism, statistical physics, decay processes, quantum physics, signal processing. Prerequisites: one of PHYS 124, PHYS 144, or EN PH 131, and one of PHYS 126, PHYS 146, or PHYS 130; and MATH 100 or 113 or 114 or 117 or 144, and

MATH 102 or 125 or 127. CMPUT 174 is recommended for students without prior programming experience.

PHYS 295 - Experimental Physics I
★ 3 (fi 6) (either term, 0-0-6)
Contemporary methods of experimental physics with measurements from classical and modern physics. Analysis and graphing of experimental data using programming techniques. Estimation and statistical treatment of experimental uncertainties consistent with standard practice in physics. Planning and record keeping for experimental work, written presentation of laboratory results. Prerequisites: MATH 101 or 115 or 118 or 146, one of PHYS 124, PHYS 144, or EN PH 131; and one of PHYS 126, PHYS 146, or PHYS 130. Note: To proceed to PHYS 295 after taking PHYS 126 a minimum grade of B+ in PHYS 126 and some experience of computer programming are strongly recommended.

PHYS 420 - Computational Physics
★ 3 (fi 6) (either term, 3-0-3)
Basic principles; computational methods selected from finite-differences, matrix manipulation, variational techniques, discrete transforms, stochastic methods, lattice techniques; as applied to topics selected from nonlinear mechanics, chaotic systems; electrodynamics; wave propagation; statistical physics; quantum mechanics; condensed matter. Prerequisites: PHYS 234, 244, PHYS 381, MATH 337 or ECE 341 or equivalent. Recommended pre- or corequisites: MA PH 343, PHYS 311, PHYS 372, PHYS 472, and PHYS 481. Familiarity with a programming language strongly recommended.

GEOPH 426 - Signal Processing in Geophysics
★ 3 (fi 6) (either term, 3-0-0)
Application of time series analyses and image processing techniques to large geophysical data sets; sampling of data and problems of aliasing; one and two dimensional Fourier transforms; the Z transformation; spectral analysis, filtering, and deconvolution; application of 1D and 2D filtering to seismic and gravity/magnetic data analysis. Prerequisites: MATH 311, GEOPH 326, PHYS 234 or equivalent.

GEOPH 431 Geophysical Inverse Theory
★ 3 (fi 6) (either term, 3-0-0)
Quantitative methods to determine the physical properties of the Earth from indirect geophysical observations; formal treatment of geophysical inverse theory; topics include linear and nonlinear inverse problems, regularization techniques, model norms and misfit, tomography, and case histories of interpretation and analysis. Prerequisites: PHYS 234, 381, MATH 311, 337, GEOPH 325, 326 or permission of Instructor.

GEOPH 438 - Seismic Data Processing
★ 3 (fi 6) (either term, 0-0-6)
A variety of seismic and ground penetrating radar data sets are obtained by the student during field school; these data are corrected, enhanced, and imaged in a computer workstation laboratory, leading to a final geologic interpretation. Results obtained by the student will be presented in the format of a series of professional technical reports. Prerequisites: MATH 209, 214, or equivalent, GEOPH 326, PHYS 234 or equivalent. Pre- or corequisite: GEOPH 426 and 436 (field school).

Statistics

STAT 441 - Statistical Methods for Learning and Data Mining

★ 3 (fi 6) (either term, 3-0-0)

Review of linear and nonlinear regression and brief introduction to generalized linear models, the course covers selected methods of dimension reduction (principal components, factor analysis, canonical correlations), of unsupervised (clustering, multidimensional scaling ordination) and supervised classification (discriminant analysis, logistic regression, nearest neighbours - including, among others, the machine learning methods like classification trees, neural networks, and support vector machines). Prerequisite: STAT 378.

STAT 471 - Probability I

★ 3 (fi 6)(EITHER, 3-0-0)

Probability spaces, algebra of events. Elements of combinatorial analysis. Conditional probability, stochastic independence. Special discrete and continuous distributions. Random variables, moments, transformations. Basic limit theorems. Prerequisite: STAT 371.

STAT 479 - Time Series Analysis

★ 3 (fi 6)(EITHER, 3-0-0)

Stationary series, spectral analysis, models in time series: autoregressive, moving average, ARMA and ARIMA. Smoothing series, computational techniques and computer packages for time series. Prerequisites: STAT 372 and 378. Note: This course may only be offered in alternate years.

Agricultural, Life and Environmental Sciences

AREC 313 - Statistical Analysis

★ 3 (fi 6) (first term, 3-0-2)

Analysis of economic data relating to renewable resource sectors including agriculture, food, forestry, and the environment; collection of data, sampling methods, tests of hypotheses, index numbers, analysis of variance, regression, and correlation; time series analysis. Prerequisite: Introductory statistics course.

REN R 201 - Introduction to Geomatic Techniques in Natural Resource Management

★ 3 (fi 6) (first term, 3-0-3)

Methods and applications of geographic information systems (GIS), including global positioning systems (GPS), photogrammetry, air photo interpretation and LIDAR, as they relate to natural resource management.

REN R 426 - Geographical Information Systems Applications in Renewable Resources

★ 3 (fi 6) (first term, 0-0-3)

This course is a combination of lecture/lab and directed studies to develop advanced GIS skills. A focus of the course is an individual spatial analysis project. Prerequisite: EAS 221, FOREN 201, or REN R 201.

REN R 480 - Applied Statistics for Environmental Sciences

★ 3 (fi 6) (first term, 3-0-1.5)

Focuses on problem formulation, method selection, and interpretation of statistical analysis. Covers data management and data visualization, statistical tests for parametric, non-parametric and binomial data, linear and non-linear regression approaches. Participants will gain general statistical literacy and learn how to visualize and analyze data with open-source software packages. Prerequisite: *60. *3 introductory statistics recommended.

Business

FIN 440 - Commodities Analytics and Trading

★ 3 (fi 6)(EITHER, 3-0-0)

This course reflects the aspects of a trader development program in industry with a strong trading analytics base consistent with today's marketplace requirements. You are expected to learn analytical concepts using the R language and become proficient in your ability to implement them with real world data. The skills set is transferable to any analytically based job, such as risk management, trading analytics, and/or quantitative trading including fundamentals. Prerequisites: FIN 412 and FIN 413.

MARK 312 - Marketing Analytics

★ 3 (fi 6) (either term, 3-0-0)

Students are introduced to the scientific process of transforming data into insight for making better marketing decisions. Topics include: data-driven problem solving; design of surveys, focus groups, and experiments; analytical techniques for primary, secondary, and qualitative data; and machine learning basics. The course is taught as an end-to-end process, starting from problem framing, data collection, method selection, model building, and deployment. Applies Excel and open-source data analysis software. Advanced students can build on this course to prepare for taking the INFORMS CAP (Certified Analytics Professional) Exam. Prerequisite: MARK 301.

OM 420 - Predictive Business Analytics

★ 3 (fi 6) (either term, 3-0-0)

Application of predictive statistical models in areas such as insurance risk management, credit risk evaluation, targeted advertising, appointment scheduling, hotel and airline overbooking, and fraud detection. Students will learn how to extract data from relational databases, prepare the data for analysis, and build basic predictive models using data mining software. Emphasizes the practical use of analytical tools to improve decisions rather than algorithm details. Prerequisite: MGTSC 352 or OM 352.

SEM 330 - Exploring Innovation and Entrepreneurship

★ 3 (fi 6) (either term, 3-0-0)

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.

Native Studies

NS 115 - Indigenous Peoples and Technoscience

★ 3 (fi 6) (either term, 3-0-0)

This course introduces students to the long and complicated relationships between science and technology fields, broader dynamics of colonialism, and increasing demands for Indigenous governance of the sciences and technologies that affect them.

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Appendix A3 - Calendar Content - Certificate Requirements

Calendar Change Request Form for Program and Regulation Changes
See the Calendar Guide for tips on how to complete this form.

Faculty (& Department or Academic Unit):	Faculty of Science, Department of Computing Science	
Contact Person:	Dr. Eleni Stroulia, Professor and Vice-Dean	
Level of change (choose one only)	☑	Undergraduate
	☐	Graduate
Type of change request (check all that apply)	☑	Program
	☑	Regulation
For which term is this intended to take effect?	Fall 2023	
Does this proposal have corresponding course changes? (Should be submitted at the same time)	Yes	

Rationale

The Department of Computing Science is proposing a new embedded Certificate in Applied Data Science. Although it is open to any undergraduate student that has completed the prerequisite courses, it will be of particular interest to students in the Faculties of Science, ALES and Business. Data literacy, the ability to derive meaningful information from data, is increasingly being recognized as a vital skill set for everyone in today's data-rich world. The UoA's strength in Machine Learning and Artificial Intelligence is well established, as evidenced by international rankings, the support of the Pan-Canadian Strategy for AI to Amii, and the University's support through the establishment of the AI4Society signature area. This makes the development of a data-science program perfectly timed, even long overdue. The proposed certificate is motivated by the intuition that we must tap into this expertise, to give our students today the capacity to extract insights and knowledge from the data they will undoubtedly deal with in their profession in the future. Please add the following as a new certificate page under the Faculty of Science in the 2023-2024 University Calendar.

Calendar Copy

URL in current Calendar (or leave blank if it is a new page):

Proposed

Certificate in Applied Data Science

The Certificate in Applied Data Science is open to any undergraduate student at the University of Alberta. The certificate offers a set of required courses to ensure that students completing it have a good understanding of key areas of modern data science. One of the required courses is a capstone course, which provides the students with the opportunity of applying in practical scenarios the knowledge gained in the other courses. The certificate also offers a set of elective courses that allow the students to apply data science in a particular domain.

To be awarded the certificate students must apply through Bear Tracks with their application to graduate by the application deadline for convocation (see Academic Schedule).

Students may pursue the Certificate in Applied Data Science by fulfilling existing requirements for majors, minors, or honors in their respective disciplines, and by completing 18 units as follows:

Certificate Requirements

- INT D 491 - Data Science Capstone (see Note 1)

3 units from

- CMPUT 191 - Introduction to Data Science
- CMPUT 195 - Introduction to Principles and Techniques of Data Science

3 units from

- CMPUT 200 - Ethics of Data Science and Artificial Intelligence
- NS 115 - Indigenous People and Technoscience
- PHIL 385 - Ethics and Artificial Intelligence

9 units from any of the following subject areas (see Note 2)

Computing Science
- CMPUT 267 - Basics of Machine Learning
- CMPUT 291 - Introduction to File and Database Management
- CMPUT 328 - Visual Recognition
- CMPUT 361 - Introduction to Information Retrieval
- CMPUT 367 - Intermediate Machine Learning (see Note 3)
- CMPUT 461 - Intro to NLP
- CMPUT 466 - Machine Learning (see Note 3)

Biological Sciences
- BIOIN 301 - Bioinformatics I

- BIOIN 401 - Bioinformatics II
- BIOL 330 - Introduction to Biological Data
- BIOL 331 - Population Ecology
- BIOL 332 - Community Ecology
- BIOL 380 - Genetic Analysis of Populations
- BIOL 430 - Statistical Design and Analysis in Biology
- BIOL 471 - Landscape Ecology
- IMIN 410 - Bioinformatics for Molecular Biologists
- MA SC 475 - Applied Data Analysis in Marine Science

Earth and Atmospheric Sciences
- EAS 221 - Introduction to Geographical Information Systems and Remote Sensing
- EAS 351 - Environmental Applications of Geographical Information Systems
- EAS 364 - Basin Resources and Subsurface Methods
- EAS 372 - Weather Analysis and Forecasting

Physics
- PHYS 234 - Introductory Computational Physics
- PHYS 295 - Experimental Physics I
- PHYS 420 - Computational Physics
- GEOPH 426 - Signal Processing in Geophysics
- GEOPH 431 - Geophysical Inverse Theory
- GEOPH 438 - Seismic Data Processing

Statistics
- STAT 441 - Statistical Methods for Learning and Data Mining
- STAT 471 - Probability I
- STAT 479 - Time Series Analysis

Agricultural, Life and Environmental Sciences
- AREC 313 - Statistical Analysis
- REN R 201 - Introduction to Geomatic Techniques in Natural Resource Management
- REN R 426 - Geographical Information Systems Applications in Renewable Resources
- REN R 480 - Applied Statistics for Environmental Sciences

Business
- FIN 440 - Commodities Analytics and Trading
- MARK 312 - Marketing Analytics
- OM 420 - Predictive Business Analytics
- SEM 330 - Exploring Innovation and Entrepreneurship

Notes

1. INT D 491 is normally taken once all other certificate requirements have been completed.
2. Where possible, these 9 units are normally taken from the student's Major/Honors subject area or their home Department/Faculty.
3. Credit cannot be obtained for both CMPUT 367 and CMPUT 466.

Reviewed/Approved by:

REQUIRED: Faculty Council (or delegate) and approval date, including any partner faculties for combined programs.   Associate Chairs (Undergraduate) on the delegated authority of the Science Faculty Council: November 29, 2022
Other consultation groups, departments, or internal faculty approving bodies and approval dates.   Department of Computing Science Council: October 31, 2022

University of Alberta

Appendix A4 - Calendar Content - Course Changes

Calendar Change Request Form for Course Changes
See the Calendar Guide for tips on how to complete this form.

Faculty (& Department or Academic Unit):		Faculty of Science, Department of Computing Science
Contact Person:		Dr. Eleni Stroulia, Professor and Vice-Dean
Level of change (choose one only) [?]	☑	Undergraduate
	☐	Graduate
For which term will this change take effect?		Fall 2023

Rationale

Please add the following as a new course in the 2023-2024 University Calendar. It is being proposed in conjunction with the new embedded Certificate in Applied Data Science.

Course Template

Current	Proposed
	INT D 491 - Data Science Capstone **Course Career** Undergraduate **Units** 3 **Approved Hours** 3-0-3 **Fee index** 6 **Faculty** Science **Department** Computing Science **Typically Offered** either term **Description** Students will experience the challenges of working in a team to collect, prepare, and analyze real-world data sets in a particular application domain. Students will work with a domain expert to help discover meaningful insights in the data. Students will also apply best practices in teamwork, effective communication, and technical writing. Project experiences will be shared among the teams, to provide an interdisciplinary perspective on the uses of data science in different domains. Prerequisites: one of CMPUT 191 or 195, one of CMPUT 200, NS 115, or PHIL 385, and three of CMPUT 267, CMPUT 291, CMPUT 328, CMPUT 361, CMPUT 367, CMPUT 461, CMPUT 466, BIOIN 301,

	BIOIN 401, BIOL 330, BIOL 331, BIOL 332, BIOL 380, BIOL 430, BIOL 471, IMIN 410, MA SC 475, EAS 221, EAS 351, EAS 364, EAS 372, GEOPH 426, GEOPH 431, GEOPH 438, PHYS 234, PHYS 295, PHYS 420, STAT 441, STAT 471, STAT 479, AREC 313, REN R 201, REN R 426, REN R 480, FIN 440, MARK 312, OM 420, or SEM 330.

Reviewed/Approved by:

REQUIRED: Faculty Council (or delegate) and approval date, including any partner faculties for combined programs.
Associate Chairs (Undergraduate) on the delegated authority of the Science Faculty Council: November 29, 2022

Other consultation groups, departments, or internal faculty approving bodies and approval dates.
Department of Computing Science Council: October 31, 2022

Appendix B1 - Student Survey

To gauge student interest in data science and gather feedback about the Embedded Certificate in Applied Data Science, we also conducted a survey over a one week period in late October 2022. We received 79 responses. There could be some bias since mostly interested students would respond. We were also interested in their feedback and concerns about the Applied Data Science Certificate itself.

Here is the breakdown of the respondents by Bachelor's degree.

B.Sc. in the Faculty of Science	87.3%
B.Sc. or B.A. within ALES	1.3%
B.Comm	3.8%
B.Ed.	1.3%
B.Sc. in Engineering	1.3%

Students declared the following majors. Some of the declared majors are not the exact title of a major we offer at the University of Alberta, but we did not change the name of the major in the following list the student declared if there was not an obvious correct title.

Computing Science	10
Computing Science - Specialization	7
Computing Science - Honors	3
Mathematics	3
Computing Science - Specialization in Software Practice	2
Computer Science and Psychology	2
Psychology	2
Statistics	2
Civil Engineering	2
Economics	1
Applied Mathematics	1
Marketing	1
Finance	1
Business Technology Management	1
Media Studies	1
Physical Science	1
Biopsych	1
Math & CS	1
Physics	1

Students also declared the following minors.

Mathematics	7
Computing Science	7
Business	4
Statistics	2
Psychology	1
Physics	1
Operations Management	1
Finance	1
Economics	1
Earth and Atmospheric Sciences	1
Bioinformatics	1

By academic year, 25.3% were year one, 24.1% were year two, and 31.6% were in year three, and 19.0% were in year 4 or higher. There were somewhat fewer responses from year four students, who are nearly about to graduate in their current program.

We asked if students would consider completing this certificate if it was offered starting in 2023/2024.

I definitely would try to complete this certificate.	54.4%
I would consider it, but may not or cannot complete this certificate.	41.8%
I am not interested in this certificate.	3.8%

Ignoring the 3 respondents (3.8% of all respondents) not interested in the certificate, we asked the remaining 76 students whether they agreed with certain statements about the required courses in the Applied Data Science Certificate.

	This course covers material that is relevant and interesting to me.	If I had the opportunity, I would consider taking this course.	I have taken this course.
CMPUT 191	40 (52.6%)	46 (60.5%)	7 (9.2%)
CMPUT 200	38 (50.0%)	46 (60.5%)	0 (0.0%)
PHIL 385	28 (36.8%)	36 (47.4%)	0 (0.0%)
NS 115	14 (18.4%)	20 (26.3%)	0 (0.0%)

Due to an oversight when creating the survey, we did not ask the above questions about INT D 491. We did mention it was among the list of required courses when describing the Embedded Certificate in Applied Data Science to the students at the start of the survey and did ask for written comments about this course (but no comments were received).

We asked which course students would likely take to satisfy the ethics requirements. Students were required to select at least one option, but were permitted to select more. 90.8% of students indicated they would take CMPUT 200, 28.9% of students indicated they would take PHIL 385, and 6.6% of students indicated they would take NS 115.

Students were also asked which courses they would take to satisfy the options requirements. They were required to select at least three, but were permitted to select more.

The list of courses we asked about include a few from Business that were topics courses related to data science.

CMPUT 267	69.7%
CMPUT 291	75.0%
CMPUT 328	30.3%
CMPUT 361	32.9%
CMPUT 367	43.4%
CMPUT 461	30.3%
CMPUT 466	43.4%
BIOIN 301	13.2%
BION 401	6.6%
BIOL 330	5.3%
BIOL 331	1.3%
BIOL 332	1.1%
BIOL 380	5.3%
BIOL 430/530	0.0%
BIOL 471/571	0.0%
BIOL 570	0.0%
EAS 221	9.2%
EAS 351	3.9%
EAS 364	2.6%
EAS 372	1.3%
PHYS 234	10.5%
PHYS 295	3.9%
PHYS 420/580	1.8%
GEOPH 426/526	0.0%

GEOPH 431	0.0%
GEOPH 438	0.0%
IMIN 410	0.0%
MA SC	1.3%
STAT 441	23.7%
STAT 471	10.5%
STAT 479	9.2%
AREC 313	3.9%
REN R 201	2.6%
REN R 426	0.0%
REN R 480	2.6%
BUEC 488	23.7%
MARK 312	10.5%
MGTSC 488/645	13.2%
MGTSC 501	21.1%
OM 420/620	18.4%
SEM 330	9.2%
SEM 488	10.5%

Student Survey Comments

Comments about the courses and the Applied Data Science Certificate in general were gathered from the interested students and are summarized below.

General comments

excitement
- I hope this certificate is available soon.
- If this had been an option when I began my degree I would definitely have enrolled in it! Actually I will have completed all the requirements by the end of my degree except the ethics course and the capstone. I hope you are able to successfully implement this :)
- It's a cool certificate
- I almost switched schools to take data science so this is very exciting!
- I have already done 3 courses out of the 6 mentioned. In my upcoming winter semester, I can definitely take CMPUT 191 and CMPUT 200 to satisfy those requirements and also can take the data science capstone course if offered right away. I'm a keen AI and Data Science enthusiast and would put in my best efforts to complete the requirements for this certificate
- Will probably complete this certificate alongside the AI-option certificate.

concerns about transitioning into the course
- Please make this more accessible for those who will go into their 3rd/4th year
- I really want to get this certificate, but I am almost done and none of the courses given, especially the business courses, which I am most interested in, apply to my major/minor requirements. So what would be recommended that I do?

course requirement concerns
- I guess you should also give an option for STAT 265 as that would be a great start towards probability and data science
- It is difficult to justify taking courses such as CMPUT 191, 200 as a computing science major because there are required courses that cover similar material and courses at the 300+ level need to be prioritized to graduate.
- I would love to be able to work towards it, but 191 being mandatory (even though i have taken 291) makes this hard for me. the options i have listed should also be added to the list because they deal almost directly with data mathematics in comparison to something like BUEC.
- if you have taken cmput 174, can you still take cmput 191

misc
- N/A

Are there any other courses you believe should be added to the list of options?

- STAT 265
- STAT 265, STAT 266
- CHEM 281, CHEM 493 (Computational Chemistry), possibly senior (300 and 400) level MATH courses relevant to data science such as MATH, 281, MATH 373, MATH 408.
- CMPUT 191
- It would be great if there was a course specifically offered for psychology majors, since many are pursuing a career related to research and many grad schools consider a certificate in computer science an asset
- Maybe FIN440 Commodities Analytics and Trading (R), FIN450 Applied Data Science in Finance I (R), OM488 Data Visualisation (Tableau/R), OM488 Prescriptive Analytics (Python)?
- N/A
- All the EAS AND PHYS courses
- CMPUT 340 seems like a relevant course that can give students the ability to learn some modern numerical methods to handle and manipulate data
- 301 - it teaches group work and tools necessary for data science like Github.
- STAT 378
- STAT 252/STAT 266, CMPUT 366,
- Stat 252 should be included if students do not want to take a course related to biological statistics.
- Several BTM courses
- CMPUT 300 seems like it might be relevant
- A few more STAT courses but primarily STAT 413.

Feedback for CMPUT 191

- This course should be not be available for credit if the student has attained credit in both CMPUT 174 and STAT 151/161. The course description looks extremely similar to the content learned in

both classes, and will be a barrier to attaining certificate (also giving students who have taken the above courses an unfair advantage compared to those which have not).
- Can't take it after doing CMPUT 174 (The first CS course for CS majors) so making it required for a certificate targeting CS majors is not a very good move
- One concern, when I tried to take this course this year I couldn't since I already had completed CMPUT 174. Would this requirement be waived for those who have already taken 174/175?
- Very interested in this course
- CMPUT191--which I'm in right now--seems to be a good course, but it should use the Python packages that are used in industry (pandas, matplotlib/seaborn, sklearn, etc.), not the Data 8 package, to be more applicable when students graduate
- As I am in third year and nearly to end of using up my 100 level courses , it's really hard for to incorporate cmput 191 as it's a new course as well which I wasn't able to take in my early years. So if there was like cmput 174 and 175 as substitutes or any other subject , that would be great .
- N/A
- Nope
- It should cover a lot of projects in Data Science and the main Technologies of R, Tableau with A/B testing and Exploratory Data Analysis should be introduced.
- Allow another Stats course to replace this stats course for people who have already take all their first year courses
- The content overlaps with many other courses, which causes a large amount of repeated material between courses. This includes CMPUT 174, CMPUT 267, CMPUT 291, STAT 151, etc. Since many of these courses are required for computing science students, there is little incentive to enroll in 191 as well.
- It seems similar to intro Statistics, i would take ot but i am out of 100 level credits
- Is it possible to waive this course if one take CMPUT 291 or 391?
- I suggest that since some senior students (3/4th years) have taken their maximum junior level course that they might me inclined to not do this certificate because this course is a 100 level. This is the issue with me.

Feedback for CMPUT 200

- Interested, but hope it doesn't need the 191 Co-requisite if someone already has relevant knowledge.
- Making the pre-requisite CMPUT174 isn't an issue for computer science students, but it might prevent business/arts/science etc. students from taking this course, especially if they are fulfilling the 9 elective credits with 400-level OM/MGTSC/STAT courses
- N/A

Feedback for PHIL 385

- N/A
- Provide more description please.
- Too many essays for a computer science major
- Make it more clear what the difference is between this course and CMPUT 200
- Similar topics covered in cmput 300

Feedback for NS 115

- N/A
- This does not seem like a necessary course required for this certification.

Feedback for INT D 491

None provided

UNIVERSITY OF ALBERTA LIBRARIES

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 (s) to solicit feedback on your program proposal and request a Library Impact Statement.

Library Contact:

Name: Katherine Koch	Date: December 11, 2020
Library Unit: Faculty Engagement- Sciences/ Engineering and Business	Email: katherine.koch@ualberta.ca

Program Proposal Contact:

Name: Eleni Stroulia	Dept./School: Director, AI4Society Signature Area, VPRI Signature Research Areas
	Professor, Faculty of Science - Computing Science
Faculty: Science, ALES, Business, Arts	E-mail: stroulia@ualberta.ca ai4s@ualberta.ca

Proposed Program Changes:

Insert specific program proposal name here; The **Data-Science Certificate** is proposed to begin in September 2021. This is an embedded certificate consisting of six undergraduate courses. Three of these courses already exist. Three of the courses towards this certificate are new: CMPUT 191- Introduction to Data Science, CMPUT 200- Ethics of Data Science and Artificial Intelligence CMPUT 491- Capstone project course

Library Service or Resource	Description of Library Impact
Instruction (e.g., classes with a librarian, tours, online resource guides, online tutorials, etc.)	Instruction and consultations related to searching for research information would be useful for this certificate. CMPUT 200 and 491 have relevant content to make it useful for students to have focused and relevant library instruction. The Library also offers a range of workshops throughout the academic year to assist students with their research needs. In addition, online instructional guides and tutorials are accessible via the Libraries' web site to support the research process. Course/assignment specific instruction may also be useful and may be booked. Please contact the appropriate subject librarian to discuss. **Virginia**

	Pow is the subject librarian for Computing Science and has the capacity to support this Certificate.
Reference assistance (e.g., ongoing one-on-one help)	The subject librarian will be able to accommodate requests for assistance via email, phone, or online. General reference assistance is available at all University of Alberta Libraries via chat, texting and email. In addition, subject librarians are available for one-to-one consultations for specialized assistance. Once the pandemic is over, students may also get assistance at library service desks.
Collections – reserves, print, electronic [note any impacts on simultaneous users, licensing considerations etc.]	The Libraries' current databases and subscriptions for electronic journals and books will adequately support this certificate program. Any items that are not available and/or accessible through the Libraries can be requested through Interlibrary Loan. University of Alberta Library Facts and Figures There are numerous journals and electronic resources with particular relevance to this program. Some of the **key databases** include: ACM Digital Library Arts & Humanities Database Compendex Global Ethics Observatory (UNESCO) IEEE Xplore: IEEE/IEE Electronic Library (IEL) Online Philosopher's Index PhilPapers: Philosophical Research Online Scopus Web of Science - Core Collection (includes Conference Papers Citation Index) **Full-text collections (journals, books, conference proceedings):** AAAS (American Association for the Advancement of Science) ACM Digital Library (Association for Computing Machinery) IEEE XPlore ScienceDirect (Elsevier) SpringerLink (Springer Nature) Taylor & Francis Online Wiley Digital Library **Complete collections of ebooks:** IET Digital Library Safari/O'Reilly Synthesis Series (Morgan & Claypool) The University Library's Data Services and Collections will also support this certificate. Data Management Tool: DMP Assistant
Collaboration with other UAL library units, if interdisciplinary program (consult with the other	There are three new undergraduate courses for this program. The program has negligible implications for arts and business library resources; given the strength of the arts and business collections and the growing interdisciplinary

UAL units affected and include their comments with yours)	focus of library resources. No impact will be experienced by this unit (science/engineering and business) or any others (Arts).
Physical facilities (e.g., sufficient room for group work; in-library work, etc.)	This program is not likely to require physical facilities for enrolled students. For those students who prefer to work on site, 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.
Other (specify)	

X 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: *Katherine Koch*   Date: December 8, 2020

Associate University Librarian Signature: *Sharon Murphy*   Date: December 8, 2020

December 1, 2020

Dr. Eleni Stroulia
Department of Computing Science
Faculty of Science
University of Alberta

Dear Dr. Stroulia:

Thank you for contacting the Faculty of Agricultural, Life & Environmental Sciences (ALES) about the proposed embedded certificate program in Data-Science. ALES is supportive of this initiative and we are interested in being a participating Faculty. This type of certificate represents an opportunity for our students to enhance their knowledge and skills related to data "management", which encompasses collection, processing and analysis. This is an increasingly important area of study and having the ability to provide ALES students with the opportunity to graduate with relevant learning outcomes in Data-Science would be advantageous for their career development.

At the present time I cannot provide specifics regarding the likely demand for this certificate from ALES students. I would expect the uptake to be relatively low, given the structure of many ALES undergraduate degree programs and the likely need to fit at least some of the required courses for this certificate into a limited number of elective options. Moving forward we will engage with ALES undergraduate students to try and generate an estimate of potential interest and demand.

Similarly, I am not able to provide a complete list of ALES courses that may be suitable for the "bridging" course component in the certificate. However, an initial survey of ALES courses resulted in the following candidates being identified:

- AREC 313   Statistical Analysis
- REN R 201   Introduction to Geomatic Techniques in Natural Resource Management
- REN R 426   Geographical Information Systems Applications in Renewable Resources
- REN R 480   Applied Statistics for Environmental Sciences

I am confident that there are other suitable courses, and we will endeavour to provide a more comprehensive list for inclusion in the proposal document.

I hope that this letter is sufficient for the purposes of moving the certificate proposal forward within the Faculty of Science. Please do not hesitate to contact our Faculty office if there are any questions.

Sincerely,

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

Faculty of Science, College of Natural + Applied Sciences
Office of the Dean
6-189 Centennial Centre for Interdisciplinary Science (CCIS)
Edmonton, AB, Canada T6G 2E1

T 780.492.4757
F 780.492.9434
dean.science@ualberta.ca
ualberta.ca/science

Date: November 16, 2022

From: Dr. Frederick G. West
          Acting Dean, Faculty of Science

Re: Letter of Support for New Certificate in Applied Data Science

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To Whom It May Concern:

The new embedded Certificate in Applied Data Science, championed by the Department of Computing Science but embraced by all Science departments, is an exciting new initiative. I believe that many undergraduate students from across the University, but especially Science, Business and ALES, will be interested in adding this certificate to their degree program.

Data, and the ability to understand, analyse and apply the information derived from it, permeates modern society. Employers are looking for people that have the ability to make sense of all this data, to decide on its authenticity and provenance, and to extract evidence that can drive decisions. Therefore, giving students an opportunity to complete an undergraduate degree that includes an applied data science credential will give them a leg-up in pursuing a wide variety of career paths.

Data analysis has been the cornerstone of empirical scientific work conducted by many faculty members across all Science departments. Therefore, the Faculty of Science is well-positioned to develop and offer an embedded Certificate in Applied Data Science, with the Department of Computing Science taking the lead on its administration. I believe the development of this certificate is perfectly timed, even long overdue. The proposed certificate is motivated by the intuition that we must tap into this expertise, to give our students the capacity to extract insights and knowledge from the data they will undoubtedly deal with in their profession in the future.

Sincerely,

Frederick G. West
Acting Dean, Faculty of Science

FGW/GdV

UNIVERSITY
OF ALBERTA

November 23, 2022

RE: Letter of Support for New Certificate in Applied Data Science

To Whom It May Concern:

The introduction of the new Embedded Certificate in Applied Data Science is fully supported by the Alberta School of Business. Important business decisions are frequently made on the basis of data. Thus, properly collecting, analysing, interpreting, and accurately presenting data is of fundamental importance in many facets of business.

We are pleased to see explicit support for our degree programs in this proposal. By allowing students in the School of Business to take courses involving various aspects of data science, this certificate can equip our graduates with high-demand skills that contribute to a strong foundation for the development of their careers.

We suggest the incorporation of the following courses into the list of approved options. Additionally, we are also willing to re-evaluate this list from time to time as the Department of Computing Science curates the list of options courses for students completing this certificate.

BUEC 488 - Data Science for Business Economics
FIN 440 - Commodities Analytics and Trading
MARK 312 - Marketing Research
MGTSC 488 - Introduction to Business Analytics
MGTSC 501 - Data Analysis and Decision Making
OM 420 - Predictive Business Analytics
SEM 330 - Introduction to Entrepreneurship
SEM 488 - Management Analytics

Sincerely,

Dr. Leo Wong
Associate Dean, Education

Alberta School of Business
College of Social Sciences and Humanities
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UNIVERSITY OF ALBERTA

FINAL Item No. 12

Governance Executive Summary
Action Item

Agenda Title	Duolingo English Test: Extension of Short-term Use, Office of the Registrar

Motion

THAT the GFC Programs Committee recommend that General Faculties Council approve the proposed extension to accept of the Duolingo English Test (DET) for all applicants to undergraduate and graduate programs as an additional option to demonstrate ELP through to the 2028-29 admission cycle.

Item

Action Requested	☐ Approval ☒ Recommendation
Proposed by	Norma Rodenburg, Acting Vice-Provost and University Registrar Dr. Roger Epp, Interim Vice-Provost and Dean, Faculty of Graduate Studies & Research
Presenter(s)	Jane Lee, Acting Associate Registrar Judith Odhuno-Were, Acting Assistant Registrar & Director Admissions

Details

Office of Administrative Responsibility	Provost and Vice-President (Academic)
The Purpose of the Proposal is (*please be specific*)	The proposal is to request an extension to accept the Duolingo English Test (DET) for all applicants to undergraduate and graduate programs as an additional option to demonstrate ELP for five additional years, i.e., students applying to the 2028-29 admission cycle. DET was initially approved as a response to COVID disruptions to international testing centres and was approved for use until the Winter 2024 admission cycle.
Executive Summary (*outline the specific item – and remember your audience*)	The Duolingo English Test (DET) is currently being accepted for all applicants to undergraduate and graduate programs as an additional option to demonstrate English Language Proficiency (ELP) until Winter 2024. The DET has been adopted by many U15 institutions, including U of T, UBC, McGill, and the University of Calgary, and by thousands of post-secondary institutions around the world. DET was the first English language proficiency assessment offered in an online format and during the pandemic, was the only option available for applicants in countries where English language testing centres were not able to operate. In addition to accessibility, DET also continues to be a more affordable option for applicants. The Office of the Registrar recently conducted an analysis that compared the performance of international students at the University of Alberta who met the ELP requirement with a DET score vs IELTS/TOEFL. Based on the results, we do not have any evidence to suggest that the DET is inferior to the TOEFL and IELTS tests.

	The extension of the use of DET for the next five admissions cycles will allow us to retain this option and to evaluate student performance outside of the periods where there were substantial pandemic related factors (such as online delivery and pandemic restrictions).
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](#)>	*Those who are actively **participating**:* • Office of the Registrar • FGSR
	*Those who have been **consulted**:* • Administrative Committee on Enrolment Management [ACEM], November 25, 2022 and October 28, 2022 • Graduate Program Support Team, November 28, 2022 • Undergraduate Program Support Team, December 15, 2022 • GFC Programs Committee, January 12, 2023 • GFC Executive, January 15, 2023 • General Faculties Council, January 30, 2023
Approval Route (Governance) (including meeting dates)	GFC Programs Committee – January 12, 2023 General Faculties Council – January 30, 2023

Strategic Alignment

Alignment with *For the Public Good*	Alignment with the Institutional Strategic Plan – For the Public Good OBJECTIVE - Build a diverse, inclusive community of exceptional undergraduate and graduate students from Edmonton, Alberta, Canada, and the world. Strategy: Optimize our international recruiting strategies to attract well qualified international students from regions of strategic importance, and enhance services and programs to ensure their academic success and integration into the activities of the university.	
Alignment with Core Risk Area	Please note below the specific institutional risk(s) this proposal is addressing.	
	☒ Enrolment Management ☐ Faculty and Staff ☐ Funding and Resource Management	☐ Relationship with Stakeholders ☐ Reputation ☐ Research Enterprise

Item No. 12

	☐ IT Services, Software and Hardware ☐ Leadership and Change ☐ Physical Infrastructure	☐ Safety ☐ Student Success
Legislative Compliance and jurisdiction	*Post-Secondary Learning Act* GFC Programs Committee	

Attachments (each to be numbered 1 - <>)

1. Attachment 1: Duolingo English Test Extension Background (page(s) 1 - <>)
2. Attachment 2: Undergraduate and Bridging Program Performance Analysis (page(s) 1 - <>)

Prepared by: <Jane Lee, Acting Associate Registrar, jane.lee@ualberta.ca

Attachment 1
Duolingo English Test (DET) Extension Background

Overview

In response to Covid-19 disruptions to international English language testing centres, the Duolingo English Test (DET) was approved as a temporary option for University of Alberta applicants to meet their English language proficiency requirements through the 2023-24 admissions cycle.

An initial analysis of the performance of undergraduate students admitted in Fall 2020 and Fall 2021 show no significant differences in the 1st year GPA of students admitted using DET vs IELTS/TOEFL. (Data will be shared at GPST, it is undergoing final review.)

There have been some questions raised regarding the DET's construct and performance of students admitting using the DET using other measures, such as required to withdraw rates. The vast majority of applicants (80%+) using English language tests to meet the English Language Proficiency requirements continue to submit scores from IELTS/TOEFL.

At this time, we are recommending a five-year extension of the use of the DET in admissions for undergraduate and graduate students, through to the 2028-29 admission cycle. This will allow us to further study the impacts of DET while preserving this option for our applicants. This will also allow us to study one full cohort of students outside of the period with the most disruptions due to the pandemic.

An ad hoc committee will be formed, including language learning and language assessment experts, to evaluate DET over this period.

Accessibility Compared to Other English Language Proficiency Tests

As of summer 2022, all other major English language testing companies now offer an online version of their tests. The Duolingo English Test continues to be an accessible and affordable option for testing.

IELTS online exam $300
TOEFL online exam $245
DET online exam $49

Duolingo English Test has also supported access through provision of vouchers, most recently to support Ukrainian applicants.

Environmental Scan

- The Duolingo English Test is being accepted for English Language Proficiency at thousands of post-secondary institutions around the world, including many of our comparator universities in Canada:
    - University of British Columbia
    - University of Calgary
    - Dalhousie
    - McGill
    - McMaster
    - University of Ottawa
    - Queen's University
    - University of Saskatchewan
    - University of Toronto
    - University of Waterloo
    - Western University

Governance pathway

- GPST - Nov 28
- PST - Dec 15
- PC - Jan 12
- GFC Exec - Jan 16
- GFC - Jan 30

Calendar Content

- No Calendar change required as this is a short-term exception and is only listed on the undergraduate and graduate English Language Proficiency sites.

Attachment 2

Undergraduate Performance Analysis
Conducted by Enrolment Research Analytics & Insights, November 2022
Fall 2020 & Fall 2021, new direct admit undergraduates

	Number of Students (Fall 2020 & Fall 2021)	Mean Admission Averages	1st Year (Fall & Winter) Unit Taken	1st Year (Fall & Winter) GPA	Students with GPA<=1.6
Duolingo_Met	80	88.6	25.3	2.5	11 (13.8%)
IELTS/TOEFL_Met	587	90.8	27.6	2.6	108 (18.4%)
p-value of ANOVA test	-	0.0003	0.0056	0.8359	
Conclusion: Although statistical evidence shows that HS students with Duolingo presented lower admission averages and 1st year course loads than those with IELTS/TOEFL, there is no statistical evidence that the 1st year GPA (Fall and Winter) were different between these two groups.					
Note: - This study only included direct-entry students (i.e., Admit Type of HS). - The Bridging Program students were excluded in this study.					

Bridging Program Performance Analysis
Conducted by Enrolment Research Analytics & Insights, November 2022
Fall 2020 & Fall 2021, new direct admit undergraduates

The Bridging Program is available to applicants to some programs who meet the academic criteria but need to improve their English skills in order to enter a degree program. Students admitted to this route complete Bridging Program Level 1 (BP1) then move to Bridging Program Level 2 (BP2). After successful completion of BP2, students can move into a degree program and complete additional BP level 3 courses in addition to regular academic courses.

	<3 yrs in English	Duolingo & IELTS	IELTS	BP1 Total
Registered in BP1	1	1	6	8
Passed BP1	1	1	5	7

	Duolingo	IELTS & TOEFL	Duolingo & IELTS	IELTS	Duolingo & TOEFL	TOEFL	BP2 Total
Registered in BP2	12	1	15	154	2	20	204
Passed BP2	12	1	13	143	2	19	190

UNIVERSITY OF ALBERTA

FINAL Item No. 13

Governance Executive Summary
Action Item

Agenda Title	SAT/ACT Test Optional Policy, Office of the Registrar

Motion

THAT the GFC Programs Committee recommend that General Faculties Council approve an SAT/ACT optional policy for undergraduate applicants from US-patterned students from accredited institutions, effective for the 2024-25 admissions cycle.

Item

Action Requested	☐ Approval ☒ Recommendation
Proposed by	Norma Rodenburg, Acting Vice-Provost & University Registrar
Presenter(s)	Judith Odhuno-Were, Acting Assistant Registrar & Director Admissions Jane Lee, Acting Associate Registrar

Details

Office of Administrative Responsibility	Provost and Vice-President (Academic)
The Purpose of the Proposal is (*please be specific*)	The proposal is before the committee to recommend a permanent adoption of the SAT/ACT Optional Policy that was put into place in the 2020 admissions cycle as a temporary pandemic measure.
Executive Summary (*outline the specific item – and remember your audience*)	This item is to seek permanent policy changes for US curriculum applicants in the University Calendar. Currently, per the University Calendar, applicants from the US and other countries/schools that offer an American-based curriculum present a high school course mark for admissions consideration, the applicant must also meet the minimum SAT or ACT requirement. With this proposed change, applicants from accredited US-patterned institutions would be assessed only on their high school course mark. Students who have written SAT/ACT tests previously, and wish to have these considered in their assessment, can submit their scores. Students from unaccredited US-patterned institutions will be required to submit an SAT/ACT score. The University of Alberta adopted the test optional policy for this group of applicants for the Fall 2020 cycle due to the widespread closure of SAT/ACT testing centres due to the pandemic. This policy is in effect until the end of the 2023-2024 admissions cycle. While testing centres and online testing is now available, a permanent adoption of a test optional policy will continue to support efforts to remove accessibility barriers in admissions for those students who are unable to take the SAT/ACT due to the various reasons provided or whose performance may be impacted due to other factors. There is a growing number of American and Canadian Universities have adopted the test optional policy or removed the requirement entirely. A comparison of the academic performance of students admitted prior to the Test Optional policy adoption and those admitted during the test-

	optional years was completed by the Registrar's Office Enrollment, Research, Analytics, and Insights (ERAI) team. Their analysis showed there was no significant difference in performance between the two groups. Note: Schools that offer US-patterned curricula (located in the US or outside) are accredited by belonging to a US state public school system or accredited through one of the following US regional accreditors: • Western Association of Schools and Colleges, Accrediting Commission for Schools (WASC) • Middle States Association, Commission on Secondary Schools (MSA) • New England Association of Schools & Colleges (NEASC) • Cognia (formerly AdvancED)
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\>	*Those who are actively **participating**:* • Office of the Registrar
	*Those who have been **consulted**:* • Administrative Committee on Enrolment Management [ACEM], November 25, 2022 and October 28, 2022 • Undergraduate Program Support Team, December 15, 2022 • GFC Programs Committee, January 12, 2023 • GFC Executive, January 15, 2023 General Faculties Council, January 30, 2023
Approval Route (Governance) (including meeting dates)	GFC Programs Committee - January 12, 2023 General Faculties Council - January 30, 2023

Strategic Alignment

Alignment with *For the Public Good*	Please note the Institutional Strategic Plan objective(s)/strategies the proposal supports. Alignment with the Institutional Strategic Plan – For the Public Good OBJECTIVE - Build a diverse, inclusive community of exceptional undergraduate and graduate students from Edmonton, Alberta, Canada, and the world. Strategy: Optimize our international recruiting strategies to attract well qualified international students from regions of strategic importance, and enhance services and programs to ensure their academic success and integration into the activities of the university.

UNIVERSITY OF ALBERTA

Item No. 13

Alignment with Core Risk Area	Please note below the specific institutional risk(s) this proposal is addressing.	
	☒ Enrolment Management ☐ Faculty and Staff ☐ Funding and Resource Management ☐ IT Services, Software and Hardware ☐ Leadership and Change ☐ Physical Infrastructure	☐ Relationship with Stakeholders ☐ Reputation ☐ Research Enterprise ☐ Safety ☐ Student Success
Legislative Compliance and jurisdiction	*Post-Secondary Learning Act* GFC Programs Committee	

Attachment 1: ERAI Comparison Analysis of Undergraduate Students Admitted Pre/Post SAT/ACT Optional Policy Implementation

Attachment 2: Calendar Change Request Form

Prepared by: <Judith Odhuno-Were, Acting Assistant Registrar & Director Admissions, jodhunow@ualberta.ca>

Attachment 1: Comparison Analysis of Undergraduate Students Admitted Pre/Post SAT/ACT Optional Policy Implementation

	Number of Students	Mean Admission Averages	Average of 1st Term Unit Taken	Average of 1st Term GPA
Pre-COVID: SAT/ACT Met Fall 2018 & Fall 2019	92	90.1	14.6	2.8
COVID: SAT/ACT Waived Fall 2020 & Fall 2021	65	90.1	13.9	2.8
p-value of ANOVA test	-	0.9856	0.1905	0.8803
Conclusion: There is no statistical evidence that there are differences between US-curriculum students from the pre-Covid intakes and those from the COVID intakes in terms of admission averages, 1st term unit taken, and 1st term GPA				

Calendar Change Request Form
for Program and Regulation Changes
See the [Calendar Guide](#) for tips on how to complete this form.

UNIVERSITY OF ALBERTA

Faculty (& Department or Academic Unit):	Office of the Registrar
Contact Person:	Judith Odhuno-Were, Acting Assistant Registrar & Director, Admissions
Level of change: (choose one only)	☑ Undergraduate
	☐ Graduate
Type of change request: (check all that apply)	☐ Program
	☑ Regulation
For which term is this intended to take effect?	2023 Calendar for 2024-25 admissions cycle
Does this proposal have corresponding course changes? (Should be submitted at the same time)	No

Rationale
Things to consider (maximum 500 words): Why is this being changed; How will it benefit students/department/unit; How is this comparable to similar programs (internal or external); Historical context; Impacts to administration or program structure; Consultation with stakeholders

This change is related to a proposal to permanently adopt the SAT/ACT optional policy for undergraduate applicants from accredited US-patterned high school institutions.

Calendar Copy

URL in current Calendar (or "New page") https://calendar.ualberta.ca/content.php?catoid=36&navoid=11184

Admission from the United States and other countries and schools that offer American-based curricula Section

Current Copy: Removed language	Proposed Copy: New language
Admission from the United States and other countries and schools that offer American-~~based~~ curricula	Admission from the United States and other countries and schools that offer American-patterned

Admission is based on superior standing in the five specific Faculty and program course requirements (see Admission Requirements by Faculty). Applicants from the United States and other countries that offer American~~-based~~ curricula may be considered for admission to the University if they meet the following requirements:

1. The required English course has been met by presenting High School Grade 12 (or equivalent) course marks~~, or an acceptable score from International Baccalaureate (IB), Advanced Placement (AP), SAT, or SAT Subject Test (SAT ST) results~~, and
2. ~~All required courses from Group C (Mathematics/Sciences) have been met by presenting an accepted score from IB, AP, SAT ST results, or High School (the final three years) course marks. If a high school course mark is to be used, the applicant must also meet the SAT or ACT requirement as follows:~~
   a. ~~SAT: minimum combined score of 1800 with a minimum of 600 on each section (or Redesigned SAT: minimum combined score of 1200 with a minimum of 600 on each section)~~
   b. ~~ACT: minimum composite score~~

curricula

Admission is based on superior standing in the five specific Faculty and program course requirements (see Admission Requirements by Faculty). Applicants from the United States and other countries that offer American-patterned curricula accredited by a recognized accreditor may be considered for admission to the University if they meet the following requirements:

1. The required English course has been met by presenting High School Grade 12 (or equivalent) course marks, and

2. All required courses from Group A (Humanities/Social Sciences), Group B (Fine Arts), and Group C (Mathematics/Sciences) have been met by presenting High School (the final three years) course marks.

An acceptable score from International Baccalaureate (IB), Advanced Placement (AP), or SAT exams may be used to meet a course requirement. Presentation of these exam results is optional.

of 26. and

3. ~~All required courses from Group A (Humanities/Social Sciences) and Group B (Fine Arts) have been met by presenting accepted scores from either IB, AP, SAT ST results, or High School (the final three years) course marks. If a high school course mark is to be used, the applicant must also meet the SAT or ACT requirement as follows:~~
   a. ~~SAT: minimum combined score of 1800 with a minimum of 600 on each section (or Redesigned SAT: minimum combined score of 1200 with a minimum of 600 on each section)~~
   b. ~~ACT: minimum composite score of 26~~

See ~~Admissions Chart 2 for SAT Subject Test equivalencies and~~ Admissions Chart 3 for required courses from Groups A, B and C.

For more details, visit International Course Equivalencies | Undergraduate Admissions & Programs.

~~Admissions Chart 2 SAT Subject Tests Equated to Subject Groups~~

~~Group A (Humanities)~~	~~Group C (Sciences)~~

Applicants from unaccredited US-patterned high schools who wish to apply using a high school course mark must also meet the SAT or ACT requirement as follows:

c. SAT: minimum combined score of 1800 with a minimum of 600 on each section (or Redesigned SAT: minimum combined score of 1200 with a minimum of 600 on each section)
d. ACT: minimum composite score of 26

See Admissions Chart 3 for required courses from Groups A, B, and C.

For more details, visit International Course Equivalencies | Undergraduate Admissions & Programs.

~~Chinese with Listening~~	~~Biology E~~
~~French~~	~~Biology M~~
~~French with Listening~~	~~Chemistry~~
~~German~~	~~Math Level 2~~
~~German with Listening~~	~~Physics~~
~~Italian~~	
~~Japanese with Listening~~	
~~Korean with Listening~~	
~~Latin~~	
~~Literature~~	
~~Modern Hebrew~~	
~~Spanish~~	
~~Spanish with Listening~~	
~~US History~~	
~~World History~~	

Note: ~~There is no SAT Subject Test equivalency for Calculus (Mathematics 31). Students interested in applying for programs which require Calculus as a prerequisite~~

~~(e.g., Engineering) must meet this requirement through the appropriate coursework at either the secondary or postsecondary level.~~	

Note: SAT Subject Tests have been discontinued as of June 2021.

Reviewed/Approved by:

REQUIRED: Faculty Council (or delegate) and approval date.
OPTIONAL: Other internal faculty approving bodies, consultation groups, or departments, and approval dates.