Revised

PDC260513A

NOTICE OF MEETING
There will be a meeting of the
PROGRAM DEVELOPMENT COMMITTEE (PDC)
Wednesday May 13, 2026, 9-00-10:30am
Location: Room 209 Assumption Hall or MS Teams
AGENDA

1 Approval of Agenda

2 Minutes of April 16, 2026 — **Kyle Asquith-**Approval PDC260513M

3 Business Arising from the Minutes

4 Outstanding Business

5 Reports/New Business

5.1 Bachelor of Engineering Technology – Major Program Changes (Form B) — **Darryl Danelon-**Approval PDC260513-5.1

5.2 Bachelor of Applied Science in Civil Engineering Honours with Architecture Option – Major Program Change (Form B) — **Edwin Tam/Jason Grossi**-Approval PDC260513-5.2

***5.2.1 SoCA – Summary of Minor Course and Calendar Changes (Form E)** — PDC260513-5.2.1

5.3 Honours Biology (with Life Sciences Stream, Animal Biology Stream and Aquatic Biology Stream) – Major Program Change (Form B) — **Isabelle Barrette Ng-** Approval PDC260513-5.3

***5.4 Bachelor of Interdisciplinary Arts and Science – Minor Program Changes (Form C)** — **Michelle MacArthur**-Approval PDC260513-5.4

***5.5 Biomedical Sciences – New Course Proposal (Form D)**
BIOM-1000. Biomedical Science Impacts on Society — **Andrew Hubberstey-** Approval PDC260513-5.5

***5.6 Computer Science – New Course Proposal (Form C)**
COMP-2717. Artificial Intelligence — **Ziad Kobti-Approval** PDC260513-5.6

***5.7 Engineering (Graduate) – New Course Proposal (Form D)**
CIVL-8010. Project Planning and Control — **Edwin Tam-Approval** PDC260513-5.7

***5.8 Science - New Course Proposal (Form D)**
SCIE-2700. Perspectives in Science — **Cláudio Verani - Approval** PDC260513-5.8

***5.9 Certificate in Economic Analysis and Policy - Minor Program Change (Form C)** — **Nurlan Turdaliev**-Approval PDC260513-5.9

***5.10 Certificate in Quantitative Economics - Minor Program Change (Form C)** — **Nurlan Turdaliev**-Approval PDC260513-5.10

***5.11 Economics – Minor Program Changes (Form C)** — **Nurlan Turdaliev**-Approval PDC260513-5.11

***5.12**	**English and Creative Writing - Minor Program Changes (Form C)**	**Joanna Luft** – Approval PDC260513-5.12
***5.13**	**Biomedical Sciences - Minor Program Changes (Form C)**	**Andrew Hubberstey** – Approval PDC260513-5.13
***5.14**	**Master of Economics – Minor Program Change (Form C)**	**Nurlan Turdaliev**-Approval PDC260406-5.14
***5.15**	**Master or Applied Economics and Policy (MAEP)– Minor Program Change (Form C)**	**Nurlan Turdaliev**-Approval PDC260513-5.15
***5.16**	**Master of Applied Computing– Minor Program Change (Form C)**	**Ziad Kobti**-Approval PDC260513-5.16
***5.17**	**Master of Applied Science– Minor Program Change (Form C)**	**Bill Van Heyst** -Approval PDC260513-5.17
***5.18**	**Master of Engineering Management (MEM)– Minor Program Change (Form C)**	**Darryl Danelon**-Approval PDC260513-5.18
***5.19**	**Master of Medical Biotechnology– Minor Program Change (Form C)**	**Tranum Kaur**-Approval PDC260513-5.19
***5.20**	**Master and PhD in Physics– Minor Program Change (Form C)**	**Steven Rehse**-Approval PDC260513-5.20
***5.21**	**Political Science - Minor Program Changes (Form C)**	**Lydia Miljan**-Approval PDC260513-5.21
***5.22**	**Political Science (International Relations) - Minor Program Changes (Form C)**	**Lydia Miljan** -Approval PDC260513-5.22
***5.23**	**Science - Minor Program Changes (Form C)**	**Cláudio Verani** -Approval PDC260513-5.23
***5.24**	**Women's and Gender Studies - Minor Program Changes (Form C)**	**Michelle MacArthur**- Approval PDC260513-5.24
***5.25**	**Biomedical – Summary of Minor Course and Calendar Changes (Form E)**	**Andrew Hubberstey-**Information PDC260406-5.25
***5.26**	**Civil Engineering (UG/Graduate) – Summary of Minor Course and Calendar Changes (Form E)**	**Edwin Tam**- Information PDC260513-5.26
***5.27**	**Computer Science (Graduate) – Summary of Minor Course and Calendar Changes (Form E)**	**Luis Rueda-** Information PDC260513-5.27
***5.28**	**Dramatic Art - Summary of Minor Course and Calendar Changes (Form E)**	**David Court** -Approval PDC260513-5.28

***5.29**	**Economics (Graduate) – Summary of Minor Course and Calendar Changes (Form E)**	**Nurlan Turdaliev** -Approval PDC260513-5.29
***5.30**	**English and Creative Writing (UG/Graduate) – Summary of Minor Course and Calendar Changes (Form E)**	**Joanna Luft** -Approval PDC260513-5.30
***5.31**	**FAHSS - Summary of Minor Course and Calendar Changes (Form E)**	**Michelle Macarthur** -Approval PDC260513-5.31
***5.32**	**Political Science - Summary of Minor Course and Calendar Changes (Form E)**	**Lydia Miljan** -Approval PDC260513-5.32
***5.33**	**Science - Summary of Minor Course and Calendar Changes (Form E)**	**Cláudio Verani** -Approval PDC260513-5.33
***5.34**	**Women and Gender Studies - Summary of Minor Course and Calendar Changes (Form E)**	**Frances Cachon**- Information PDC260513-5.34
***5.35**	**Nursing (Graduate) - Minor Program Changes (Form C)**	**Sherry Morrell** -Approval PDC260513-5.35
***5.36**	**Nursing (Graduate) - Summary of Minor Course and Calendar Changes (Form E)**	**Sherry Morrell** - Information PDC260513-5.36
***5.37**	**MSW-JD Suspension of Admissions**	**Tina Pugliese** - Information PDC260513-5.37

6 Other Business

7 Adjournment

Please carefully review the 'starred' (*) agenda items. As per the June 3, 2004 Senate meeting, 'starred' item will not be discussed during a scheduled meeting unless a member specifically requests that a 'starred' agenda item be 'unstarred', and therefore open for discussion/debate. This can be done any time before (by forwarding the request to the secretary) or during the meeting. By the end of the meeting, agenda items which remain 'starred' (*) will be deemed approved or received.

University of Windsor
Program Development Committee

5.1: **Bachelor of Engineering Technology – Major Program Changes (Form B)**

Item for: **Approval**

Forwarded by: **Faculty of Engineering**

MOTION: That the Bachelor of Engineering Technology major program changes, be approved.^

^Subject to approval of the expenditures required

Rationale/Approvals:

- The major program change has been approved by the Departments of Mechanical, Automotive and Materials Engineering, Civil and Environmental Engineering, Electrical and Computer Engineering, the Faculty of Engineering Coordinating Council and the Provost delegate
- Provost Comments: The Provost supports the addition of a four-year degree addition and recognizes the value it brings in increasing flexibility and access for students. This is a positive step toward improving degree completion rates and strengthening opportunities for collaboration with colleges. The Provost encourages engagement with the Dean of Education to explore potential concurrent offerings in Bachelor of Education and Educational Technology.
- The following Bachelor of Engineering Technology Streams exist: General Stream, Biomedical, Civil Stream and Mechanical Stream, Mechatronics and the following are new: Electrical, Industrial and Environmental Stream.
- The Biomedical and Mechatronics streams will not appear in the proposed changes and will remain only as degree completion programs. Admission to the Biomedical stream may be suspended for fall 2026, depending on enrolment numbers. In that case students will stream into the general program.
- The Bachelor of Engineering Technology programs were designed as degree completion programs for three-year advanced diplomas from Ontario College of Applied Arts and Technology (CAAT) or a science/technical bachelor's degrees. The proposed change introduces a four-year bachelor's degree built on a 20-course curriculum across all streams.
- *See attached.*

PROGRAM DEVELOPMENT COMMITTEE
MAJOR PROGRAM CHANGES
FORM B

A. Basic Program Information

Faculty(ies)	Engineering
Department(s)/School(s)	Faculty of Engineering Mechanical, Automotive and Materials Engineering Civil and Environmental Engineering Electrical and Computer Engineering
Name of Program as it Will Appear on the Diploma (*e.g.*, Bachelor of Arts Honours Psychology with thesis)	Bachelor of Engineering Technology – General Stream Bachelor of Engineering Technology – Civil Stream Bachelor of Engineering Technology – Mechanical Stream Bachelor of Engineering Technology – Electrical Stream Bachelor of Engineering Technology – Industrial Stream Bachelor of Engineering Technology – Environmental Stream
Proposed Year of Offering* [Fall, Winter, Spring]: **(subject to timely and clear submission)*	Fall 2026
Mode of Delivery:	In-Person
Planned steady-state Student Enrolment (per section B.4.2)	Total – 25 General - 5 Civil - 4 Mechanical - 4 Electrical - 4 Industrial - 4 Environmental – 4
Normal Duration for Completion:	Degree Completion – 12-16 months 4 Year Degree – 4 years
Will the program run on a cost-recovery basis?	No.

B. Major Program Changes - Overall Plan

B.1 Objectives of the Program/Summary of Proposal (QAF section 2.1.2.1; Ministry section 3)

Please provide a rationale for the proposed change, including a brief statement about the direction, relevance and importance of the revised program. Describe the overall aim and intended impact of the revised program. Describe the consistency of the revised program with the institution's mission, goals and objectives as defined in its strategic plan. (to view the strategic plan go to: www.uwindsor.ca/president)

Under the direction of the Associate Dean, Academic, and with guidance from members of the Faculty of Engineering Curriculum Committee (FECC), the Pathways Success Learning Specialist for the Faculty of Engineering has undertaken a review of the Bachelor of Engineering Technology ("BET") core and individual stream curriculum. There were several reasons for review of the curriculum which are outlined below

Revised Bachelor of Applied Science Engineering Curriculum

The BET curriculum for the General, Civil and Mechanical streams strategically utilizes courses from the existing BASc program and with the changes that were undertaken in 2022 and 2023 to all BASc programs, revisions are now required as courses listed in the BET curriculum are no longer offered. The revisions undertaken ensure alignment between the BASc and BET programs.

Defined Learning Outcomes and Alignment of Streams

A goal, driven by the continuous improvement efforts and feedback from the IQAP review, was to better define the learning outcomes for the program and ensure that the streams consistently aligned with these outcomes by finding a common core curriculum. This was done while maintaining the course levelling definition of the current program with the requirement to take major courses in their engineering stream at the junior, intermediate, and senior levels.

The following outcomes were deemed important for the program as well as the specific courses that aid in achieving them:

- Fundamental basis in post-secondary mathematics, including Differential Calculus (MATH-1720), Linear Calculus (MATH-1730), and Linear Algebra *for major streams* (MATH-1250 or MATH-1270)
- A basic and applied understanding of the Engineering Design process (e.g. GENG-1201-Cornerstone Design, GENG-2201 – Engineering Desing II, GENG-3201- Engineering Design III, or ELEC-3000-Engineering Design)
- A fundamental understanding of programming languages, specifically MATLAB, and digital computing concepts for analyzing engineering problems (GENG-2102- Programming and Algorithms)
- Applied knowledge on analyzing engineering data through fundamental probability, statistics and other analytical methods (GENG-2220-Probability and Statistics for Engineering)
- An introduction to accounting, business and financial concepts and how they relate to the engineering world (GENG-3130-Engineering Economics)

Increased Scheduling Flexibility

The layout of the previous curriculum was developed with the intent to mimic the availability of courses term-by-term in the BASc program; however, as scheduling was revised and program changes were made, it created difficulty in advising students as it was rigid in definition. The revised curriculum respects the previous program definition of course leveling, while providing greater flexibility in selecting options from their major subject area, allowing student to choose from courses that are being delivered and for more flexibility in the pathway they take, full or part time.

Introduction of New Streams

As efforts were made to align the existing General, Civil and Mechanical streams, the opportunity to define new streams that aligned with the current BASc program, without adding any overall delivery costs for the Faculty of Engineering, was considered. The new streams are developed to mimic the revisions to the current streams, aligning core courses and learning outcomes. The proposed streams would add opportunities for transferring students to the Faculty of Engineering.

Establish 4-Year Curriculum

The BET programs were only designed as degree completion programs when initially launched, essentially combining a series of 15-20 courses in addition to a student's previous post-secondary education in the form of a 3-year advanced diploma from an Ontario College of Applied Arts and Technology (CAAT) or a science/technical bachelor's degree program. The goal of the proposed program change is to not only revise, improve and add streams for the existing degree completion program, but to also provide the full 4-year bachelors curriculum. The 4-year curriculum allows for BASc at risk students to leave the program and still achieve a degree in technology. It also provides opportunity for admission from high school. The program is designed to be suitable for pathways into professional degrees such as Education and Law. The proposed curriculum could be used as a suitable basis for a future Concurrent Bachelor of Education and Bachelor of Engineering Technology program.

The 4-year curriculum is formed with a consistent 20-course basis for all streams that provides fundamentals for engineering and natural sciences. Students are able to take up to 8 courses outside of the engineering and sciences; 6 completely open to allow for the student to meet the threshold for a "teachable subject" if seeking a Bachelor of Education and/or pursue a minor or certificate in another field, and 2 are specifically defined within the Faculty of Engineering's standard for compulsory courses, one in the are of Ethics and the other in the are of Equity, Diversity, Inclusion and Decolonization.

Biomedical and Mechatronics Streams

It is important to note that this proposal does not include any changes for these two unique streams. These streams were developed separately from the other streams where they constructed with their own unique curriculum, separate from any alignment to our BASc engineering disciplines. The Biomedical stream was the most recent launch, and it has struggled to achieve enrolment targets, so admissions for this program may pause for the Fall 2026 stream.

The Mechatronics stream was developed to run on evenings and weekends to be uniquely available to working professionals. The more recently developed and launched BASc Mechatronic Systems program was created after the success of this BET stream. As the BASc program is running all years and levels of the program, the BET Mechatronics stream will be reviewed for alignment. As well, a discussion as to whether we maintain professional friendly delivery will be reviewed based on the enrolment data. These two streams will not appear in the proposed changes and will remain only as degree completion programs with this proposal.

B.2 Changes to Program Content (QAF Section 2.1.2.2)

Evidence that the revised curriculum is consistent with the current state of the discipline or area of study.

As the revised programs follow along and share curriculum with our current Bachelor of Applied Science programs, which are reviewed rigorously through the continuous improvement efforts aligned with achieving Canadian Engineering Accreditation Board approvals, it benefits in being current and relevant as the accreditation demands. The alignment of the curriculum also offers opportunity for pathways between the programs, allowing students flexibility to reconsider their choices and either move from these programs to the accredited streams, or vice versa, depending on their long-term career goals.

Also, the full curriculum allows students options outside of their technical fields to explore curriculum and knowledge in different areas. This gives students in a technology field the unique opportunity to balance their knowledge in other areas that help them become better rounded and pair this knowledge with other skills. There is a demand in industry for technically-minded people that have a balance of skills in other areas to help bridge the gap between technology and other areas. The program has sufficient flexibility to allow partnerships with other Faculties, to allow for the integration of certificates or second majors..

B.2.1 Unique or Innovative Curriculum, Program Delivery, or Assessment Practices (QAF Section 2.1.1)

*State the unique or innovative curriculum, program delivery, or assessment practices distinguishing the revised program from existing programs elsewhere**, as appropriate.***

The BET programs were unique in their initial offering as they were constructed as Degree Completion programs, with the primary target being graduates from 3-Year Advanced Diploma programs in technology from Ontario College of Applied Arts and Technologies (CAATs). The program structure is relatively unique in that there were only a few other programs in Ontario that follow a similar format. UWindsor's program structure was unique to the competitors in this area in that our program shares courses and curriculum with our BASc program, which allows students to learn from courses in the accredited BASc program, and for possible transfer and transition later into the BASc if their career goals change to target a professional engineering license, where our competitors utilize unique and separate curriculum from their existing accredited engineering degrees.

The proposed changes allow us to further expand by adding streams for the other BASc programs we offer, providing the same opportunities to students in different fields from various college studies. The other unique benefit that we offering is building out a full 4-year curriculum for this program. There are no other universities in Ontario with a full curriculum for a technology degree. This provides the opportunity for students to gain a solid foundation in engineering and technology but not be forced to pursue the full and higher intensity accredited BASc curriculum. The alignment of curriculum between BET and BASc will also allow students who no longer wish to pursue the BASc, to pursue an alternative degree recognizing their technology knowledge with this credential. This would allow students to transfer from the program and still pursue the completion of a degree in technology that will have pathways to employment or to further education, such as professional degrees (i.e. Education, Business Administration, Law, etc.). Prospects who seek the BET degree are often motivated by a few unique employment opportunities, including the opportunity to work in supervisory and middle management roles that had an expectation of a degree, but not necessarily a fully accredited degree. As well, students who are seeking engineering type roles in the United States are more likely to secure employment and the appropriate working visas with a degree in engineering technology as this field is a common degree offering.

PROGRAM DEVELOPMENT COMMITTEE
MAJOR PROGRAM CHANGES
FORM B

B.2.2 Indigenous (First Nations, Métis, or Inuit) Content, Perspectives, or Material

*The University of Windsor is committed to building and sustaining stronger, more meaningful inclusive partnerships with Indigenous students, scholars, and communities. Indigenization of curriculum takes place in a larger context, including a requirement to respond to the four Calls to Action in education of the Truth and Reconciliation Report (2015) (page 1), the unique legal requirements of the Constitution Act 1982 (Sections 25, 35), the provincial legal requirements of the Ontario Human Rights Code, 1990, and provincial legislation Bill Pr36 (1967). In revising this program, **how** has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*

Please consider these prompt questions and additional Resources including disciplinary examples:

- *What **process** has your department/Faculty used to consider Indigenization?*
- ***How** have you considered the importance or relevance to the course/program?*
- *How has your department or faculty approached raising awareness for Indigenous knowledges in your area?*
- *What do the TRC and University Principles documents suggest relevant to your course?*
- *What have other similar courses/programs done that might be relevant to your course/program?*
- *In what ways could your course/program have flexibility to include new ways of learning, or content for Indigenous approaches or knowledges?*
- *What is your awareness of the history or background to approaches you are considering, such as the land acknowledgement? How have you developed your awareness?*
- *Which literatures, sources, or Indigenous Knowledge Holders have you consulted? (Please confirm you have permission to share any names, it may be helpful to have the person confirm the text if you will be submitting their name)*
- *Are you engaging in critical analysis of Settler Colonialism and/or Decolonization?*
- *Have you included the information in the other relevant areas in the PDC form such as learning outcomes and/or in the syllabus where appropriate?*

The design of the Bachelor of Engineering Technology program focused on adopting core curriculum and key principles from the Bachelor of Applied Science program, including core courses where Indigenous concepts and Decolonization is delivered in presentation in each year of study. This is discussed further below as part of the efforts the Faculty of Engineering has collectively pursued in incorporating Indigenous content and perspectives. Additionally, the Bachelor of Engineering Technology curriculum is adopting the same principle for its electives in requiring two compulsory courses, one in the area of Equity, Diversity, Inclusion and Decolonization, and one in the area of the Humanities and Social Sciences, to be consistent with the expectations of the Canadian Engineering Accreditation Board in purposely achieving these outcomes as part of our graduate attributes. It is understood that not all choices on the list have Indigenous content, but it provides the students with choices to enrich their perspective on uniquely important societal matters. s

The following information describes how the undergraduate engineering programs incorporate Indigenous content, perspectives, and material and what the Faculty of Engineering is doing to learn and grow in this area.

1. What process has your department/Faculty used to consider Indigenization?

The process the Faculty of Engineering has taken has been to create presentations that are provided to students in courses that are common to all BASc programs in each year of study. The proposed curriculum for the Bachelor of Engineering Technology is embedding the same courses to ensure all undergraduate students share in this knowledge. The presentations in these courses discuss residential schools, Truth and Reconciliation, and colonialism. Following these presentations, students are assigned a writing assignment to reflect upon the information and discuss its relevance to them and/or the engineering profession. This approach has been taken to reinforce the fact that these issues are important to the engineering profession, regardless of discipline, as discussed below. This process was undertaken by the Associate Dean, Academic, in communication with the Indigenization Learning Specialist within the Centre for Teaching and Learning. GENG-1101 Engineering 1 is the first-year course that provides a presentation about residential schools, Truth and Reconciliation, and colonialism and assigns a reflection assignment for the first-year

program, which is common to all engineering students. GENG-2101 Engineering 2 is the second-year course that provides a project in which students consider an engineering-focused issue facing an Indigenous community. GENG-3130 Engineering Economics is the third-year course that provides a presentation about Indigenous issues and students complete an assignment. ELEC-4000 Capstone Design is the fourth-year course that incorporates the Seventh Generation Principle into the decision-making process for design teams to consider the impacts of their design choices and materials on the next seven generations. This is a concept that is introduced in the first-year course GENG-1201 Cornerstone Design.

2. How have you considered the importance or relevance to the course/program?

Engineering design is a topic that is part of the curricula throughout students' four years of study. A much-overlooked aspect of engineering design has historically been considering the environmental and social impacts of designs. This has led to the most pressing global issue – climate change. The engineering profession can learn from Indigenous ways of knowing, especially the appreciation that our current activities will impact the next seven generations.

As well, Indigenization is relevant when we discuss ethics and equity issues within the profession and Canadian society. "Ethics and Equity" is one of twelve Graduate Attributes to be demonstrated by students graduating from an accredited engineering program. Within this context, students are made aware of their responsibility to act equitably and ethically in their actions with their community, colleagues, clients, and society. The most important requirement within the Professional Engineers Ontario (PEO) Code of Ethics is to "regard the practitioner's duty to public welfare as paramount" [1]. This duty lends itself to discussing respect for and collaboration with Indigenous communities when developing infrastructure and processes.

3. How has your department or faculty approached raising awareness for Indigenous knowledges in your area?

This is an area of weakness within the Faculty of Engineering. The initial process was created by the Associate Dean, Academic, without much involvement by faculty members. However, changes are being made to raise awareness. Through the Faculty's former Equity, Diversity and Inclusion Advisor, faculty members have been made aware of relevant presentations and workshops, e.g., events that were held on and around Orange Shirt Day as well as slides for instructors to use in their classes to provide information about Orange Shirt Day. The Faculty of Engineering Curriculum Committee has identified Indigenous knowledge as a topic that should be more thoroughly covered within all BASc curricula. Previously, the Associate Dean, Academic, and the Undergraduate Programs Coordinator have enrolled in the short course "Pulling Together: A Guide for Curriculum Developers." All the instructors in the Faculty were also encouraged to attend the workshops to raise awareness. As part of each program's continuous improvement process, communications and discussions suggesting instructors to consider if, and how, their courses can include Indigenous content have occurred.

4. What do the TRC and University Principles documents suggest relevant to your course?

The process that the Faculty of Engineering is taking (described in answer to question 1) affirms the spirit of the TRC Call to Action item 62(i), to create a "curriculum on residential schools, Treaties, and Aboriginal peoples' historical and contemporary contributions to Canada" [2]. As well, the University Principles document states that focus should be placed on learning outcomes. This is an activity that the Faculty has been working to implement for over a decade. Furthermore, the Faculty's current process of presenting information on residential schools, Truth and Reconciliation, and colonialism aligns with the principle "Recognize the importance of providing greater exposure and knowledge for non-Indigenous students on the realities, histories, cultures and beliefs of Indigenous people in Canada" [3]. Finally, the ELEVATE program provides funding and collaborative opportunities for Indigenous students in Engineering, which aligns with the principle of committing to "develop opportunities for Indigenous students" [3].

5. What have other similar courses/programs done that might be relevant to your course/program?

The Faculty of Engineering began by developing and implementing our own approach. We then began to explore what other engineering programs are doing across Canada. A grant was received on February 7, 2023, to fund research into the current practices within engineering programs across Canada. The research produced some recommendations

that were part of two additional phases of work planned for the project. However, this work was being led by the Equity, Diversity, and Inclusion Advisor for the Faculty of Engineering. They left the University at the end of May 2024 and the position has not been filled.

6. **In what ways could your course/program have flexibility to include new ways of learning, or content for Indigenous approaches or knowledges?**

The answers to questions 1 and 2 have identified specific areas of the programs that are most relevant for the inclusion of Indigenous approaches or knowledge, i.e., in considering the environmental and social impacts of product and process designs, and when we discuss "ethics and equity" and respect for others, our community, and "regard the practitioner's duty to public welfare as paramount" [1].

7. **What is your awareness of the history or background to approaches you are considering, such as the land acknowledgement? How have you developed your awareness?**

As a whole, the Faculty's awareness is limited. Some faculty members are better informed than others, but this is another area of weakness. The former Equity, Diversity and Inclusion Advisor in Engineering, who left us recently, had begun providing relevant resources and workshops to faculty members. Indigenous issues are part of these materials. For example, slides were prepared and provided to all instructors to include in our classes to make students aware of Orange Shirt Day, what it is and why it is important, and to advertise events that occurred on Orange Shirt Day.

8. **Which literatures, sources, or Indigenous Knowledge Holders have you consulted? (Please confirm you have permission to share any names, it may be helpful to have the person confirm the text if you will be submitting their name)**

We have met with the Indigenization Learning Specialist, Jaimie Kechego, to review our process and the presentations that are provided to students. This has been an iterative process; we have been learning and improving as the process develops, and we will continue to make changes as we learn. We have met with Mr. Cory Jones, the President of Neegan Burnside, an Indigenous-owned engineering and environmental consulting company. Mr. Jones has provided a lecture to fourth-year students about his experiences in delivering infrastructure to Canadian Indigenous communities. As well, the Faculty of Engineering invited Mr. Randy Herrmann, Director of the Engineering Access Program and the University of Manitoba, to provide a workshop about enabling Indigenous students' success in engineering.

9. **Are you engaging in critical analysis of Settler Colonialism and/or Decolonization?**

No, we have not performed this critical analysis. Much more learning needs to occur for those within the Faculty who are developing the curricula to better understand what decolonization looks like within engineering. This is a project that will begin with educating ourselves; the Associate Dean, Academic, and the Undergraduate Programs Coordinator took the six-week course "Pulling Together: A Guide for Curriculum Developers" offered by the University of Windsor and taught by Jaimie Kechego. Faculty members have been encouraged to also participate in similar workshops and courses.

10. **Have you included the information in the other relevant areas in the PDC form (such as learning outcomes) or in the course syllabus where appropriate?**

As noted above, this is included in the syllabi in the following ways: GENG-1101 Engineering 1 is the first-year course that provides a presentation about residential schools, Truth and Reconciliation, and colonialism and assigns a reflection assignment for the first-year program, which is common to all engineering students. GENG-2101 Engineering 2 is the second-year course that provides a project in which students consider an engineering-focused issue facing an Indigenous community. GENG-3130 Engineering Economics is the third-year course that provides a presentation about Indigenous issues and students complete an assignment. ELEC-4000 Capstone Design is the fourth-year course that incorporates the Seventh Generation Principle into the decision-making process for design teams to consider the impacts of their design choices and materials on the next seven generations. This is a concept that is introduced in the first-year course GENG-1201 Cornerstone Design.

References

1. Government of Ontario. "R.R.O. 1990, Regulation 941: GENERAL under Professional Engineers Act, R.S.O. 1990, c. P28." January 1, 2023. https://www.ontario.ca/laws/regulation/900941
2. Truth and Reconciliation Commission of Canada. "Truth and Reconciliation Commission of Canada: Calls to Action." 2015. https://ehprnh2mwo3.exactdn.com/wp-content/uploads/2021/01/Calls_to_Action_English2.pdf
3. Universities Canada. "Universities Canada principles on Indigenous education." June 29, 2015. https://www.univcan.ca/media-room/media-releases/universities-canada-principles-on-indigenous-education/

B.3 Changes to Program Name and Degree Designation/Nomenclature (QAF Section 2.1.2.1; Ministry section 1)

Explanation of the appropriateness of the proposed new name and degree designation for the program content and current usage in the discipline

No changes are planned for the "Bachelor of Engineering Technology" name. There is an intension to introduce three additional streams:

Bachelor of Engineering Technology – Electrical Stream
Bachelor of Engineering Technology – Environmental Stream
Bachelor of Engineering Technology – Industrial Stream

These three streams align with the existing BASc programs offered by UWindsor, and the goal here is to offer an opportunity for BET degree seekers through a degree completion program in this area if they have previous aligned studies, or to complete the full 4-year curriculum, consistent with that being proposed for the existing streams (i.e. Mechanical and Civil).

B.4 DEMAND FOR THE MODIFIED PROGRAM

B.4.1 Student and Market Demand/Societal Need (Ministry section 1)

Describe the tools and methodology used to conduct the market assessment and/or societal need assessment in support of the proposed program revisions, where appropriate. Provide quantitative evidence of student and market demand for the revisions to the program, both within and outside the local region (e.g., responses/statistics from surveys, etc.), where appropriate.
Provide evidence of societal need for graduates of the revised program, including expert input. Proposers should consider, where appropriate, the:
1) dimensions of the societal need (e.g., socio-cultural, economic, scientific, or technological),
2) the geographic scope of the societal need (e.g., local, regional, provincial, or national), and/or
***3)** the anticipated duration of, and trends in societal need.*
Append any comments or letters solicited from potential employers and/or relevant professional associations regarding the need for graduates of the revised program within their organization and field of endeavour.

The Bachelor of Engineering Technology program, currently in its state as a Degree Completion program, attracts a small niche group of students, primarily from the college sector, seeking to upgrade their studies to a degree. The following data provides insight to the number of students who enrol in our the BET degree stream:

	2024	2023	2022
Total Applications	147	132	146
Total Offers	64	45	57
Confirmations	40	28	30
Registrations	37	23	22

The most popular stream is the Mechatronics stream. The primary reason for its popularity is the unique format of offering during non-traditional hours to support local working professionals. The next popular is the Biomedical

stream, which is a niche stream targeting a unique subset of college graduates from Biomedical Engineering Technology programs, and it shares the majority of its curriculum with the Mechatronics stream, Electrical Engineering, Mechanical Engineering and Human Kinetics. The remaining streams have a small intake of students. The small numbers are okay as the students join the classes with our BASc program and no additional courses or sections are required, so it runs at no cost. The only unique support the students have is the Pathways Success Learning Specialist, who supports all BET and Transfer students with advising from admission through their academic path.

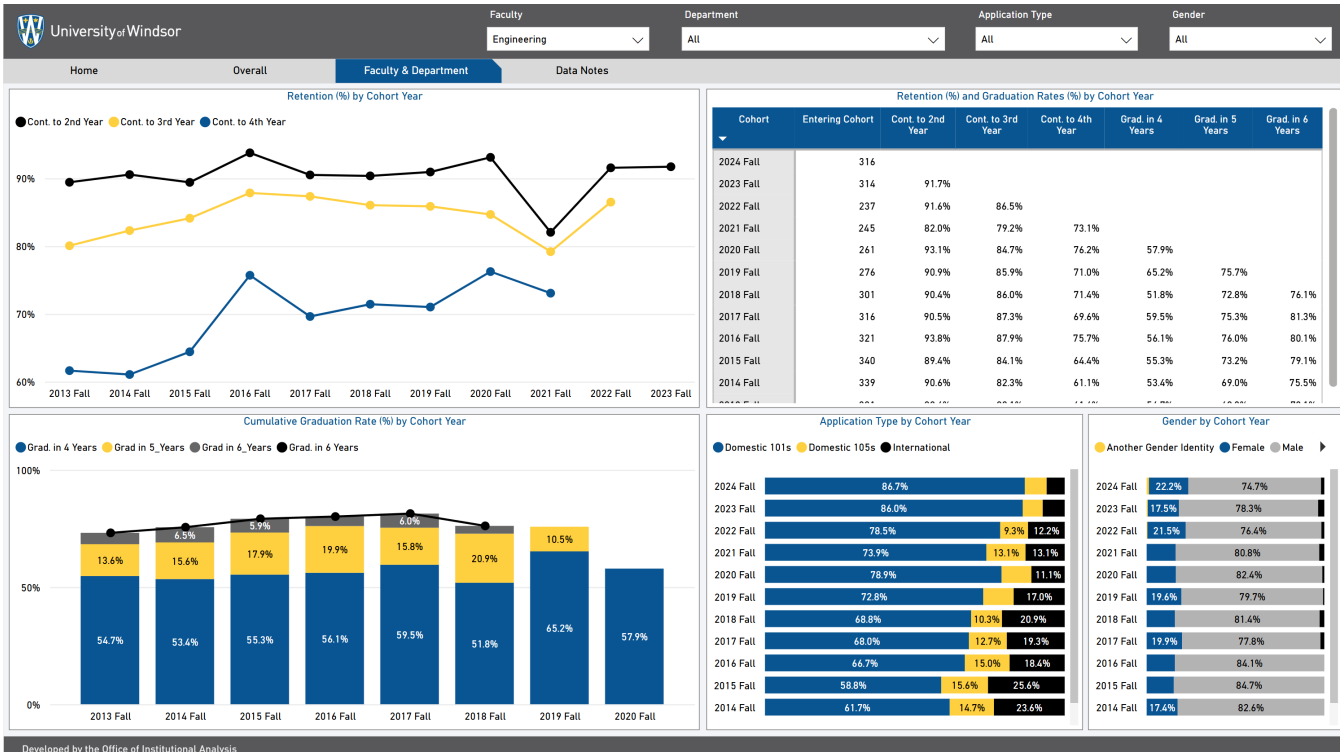
The degree completion program is focussed on attracting students from 3-year Ontario College of Applied Arts and Technology (CAAT) programs in related areas of study. Following shows the MCU codes for related college programs that would have opportunity for entry, based on the revised admission requirements, and the number of Ontario Colleges that offer these programs.

MTCU Code	MTCU Title English	Credential	ALGO	BORE	CAMB	CANA	CENT	CONF	CONS	DURH	FANS	GEOR	GRBR	HUMB	LACI	LOYT	MOHA	NIAG	NORT	SAUL	SENE	SHER	SLAW	SSFL	STCL	Grand Total
61003	Civil Engineering Technology	ADV Diploma	1		1	1		1	2	1	1	1	1	1	1	1	2		1		1		1		1	**19**
65613	Electrical Engineering Technology	ADV Diploma	1	1	1		1	1	1		1	1		1	1		1	1	2	1				1		**16**
65203	Electronics Engineering Technology	ADV Diploma	1	1	1		1		1	1				1	1		1	1			2	1			1	**14**
65700	Electronics Engineering Technology - Communications	ADV Diploma	1																							**1**
62700	Environmental Technology	ADV Diploma			1	1	1			1	1	1				1				1	1			1		**10**
60209	Industrial Engineering Technology - Management	ADV Diploma															1									**1**
67000	Manufacturing Engineering Technology	ADV Diploma							1		1														1	**3**
61007	Mechanical Engineering Technology	ADV Diploma	2		1	1	2	1	3	1		2		1	1		1	1	2	1	2	2			2	**26**
65300	Mechanical Engineering Technology - Tool And Machine Design	ADV Diploma											1													**1**
Grand Total			**6**	**2**	**5**	**3**	**5**	**3**	**8**	**4**	**4**	**5**	**2**	**4**	**4**	**2**	**6**	**3**	**5**	**3**	**6**	**3**	**1**	**2**	**5**	**91**

The opportunity is not limited to Ontario Colleges, as equivalent programs in Canada and globally would be considered for entry and there are international markets with programs that are aligned, such as the three-year degree/diplomas in India.

The introduction of a full 4-year degree will offer a few opportunities:

1. Attraction of students directly out of high school into an engineering discipline who may not be interested in completing the full BASc degree, or may not have the entrance requirements. A student would have the opportunity to start in the BET degree and later transfer to the BASc if they hold an average appropriate for admission and gain any missing admission prerequisites while studying in the BET.
2. The full 4-year BET offers a “landing” for students who are struggling and may be required to withdraw from the BASc. Currently, students are encouraged to explore other studies, mainly attending a college program, prior to be given an opportunity to return, amongst other measures. The BET offers an alternative landing spot for students to either recover, or to complete an alternative degree without losing significant progress, given the shared curriculum. The Faculty of Engineering currently experiences a 18.7-24.5% attrition rate, as seen in the table below, and this could help reduce the loss of these students.



Future opportunities for this degree can be in collaboration with other programs at UWindsor. A good example is the Concurrent Education program. The flexibility in the BET curriculum would allow a student aspiring to be an educator to have a background in technology in a concurrent program with Education, allowing them to follow a similar format and timeline to that offered for other disciplines around the University.

B.4.2 Estimated Enrolments (Senate Co-op Policy)

Provide details on projected enrolments for the first five years of operation of the revised program in the following table. (If the program is in operation, use actual and projected data.) For Co-op programs: normally an annual intake of a minimum of 20 students is required for new co-op programs or programs with other experiential learning component.

	First Year of Operation		Second Year of Operation		Third Year of Operation		Fourth Year of Operation		Fifth Year of Operation/Steady-state enrolment overall)	
	Domestic	Int'l	Domestic	Int'l	Domestic	Int'l	Domestic	Int'l	Domestic	Int'l
In the regular program (non-co-op)	8	1	10	2	13	4	16	5	19	6
In the co-op/ experiential learning stream (if applicable)	0	0	0	0	0	0	0	0	0	0

The proposed numbers start with the average number of BET students that were registered across the General, Mechanical and Civil Engineering streams from Fall 2018 to Fall 2024 as seen below. If we extrapolate for three new streams, we can assume double that number, with steady growth to the targeted number of the five years, assuming a more intentional marketing initiative is made. The last table shows the limited number of international students that have taken this program, but given the shorter lengths of the programs and three year diploma programs that exist, there are opportunities to grow this market. This data was pulled from IQAP provided data.

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General Stream

Year[1]	Applications[2]	Offers[3]	Registrations[4]	Registration Percentage from Applications[5]
Fall 2018	38.0	16.0	14.0	36.8%
Fall 2019	26.0	7.0	6.0	23.1%
Fall 2020	25.0	5.0	4.0	16.0%
Fall 2021	27.0	10.0	8.0	29.6%
Fall 2022	31.0	5.0	4.0	12.9%
Fall 2023	13.0	1.0	1.0	7.7%
Fall 2024	15.0	3.0	2.0	13.3%

Civil Stream

Year[1]	Applications[2]	Offers[3]	Registrations[4]	Registration Percentage from Applications[5]
Fall 2018	7	-	-	0.0%
Fall 2019				n/a
Fall 2020	10	2	1	10.0%
Fall 2021	9	4	4	44.4%
Fall 2022	7	-	-	0.0%
Fall 2023	14	2	2	14.3%
Fall 2024	13	4	3	23.1%

Mechanical Stream

Year[1]	Applications[2]	Offers[3]	Registrations[4]	Registration Percentage from Applications[5]
Fall 2018	36.0	3.0	2.0	5.6%
Fall 2019	21.0	1.0	1.0	4.8%
Fall 2020	19.0	2.0	2.0	10.5%
Fall 2021	26.0	2.0	1.0	3.8%
Fall 2022	23.0	3.0	3.0	13.0%
Fall 2023	18.0	5.0	4.0	22.2%
Fall 2024	20.0	1.0	1.0	5.0%

Citizenship	Fall 2018	Fall 2019	Fall 2020	Fall 2021	Fall 2022	Fall 2023	Fall 2024	% Ratio
Domestic	63.0	37.0	42.0	39.0	32.0	27.0	41.0	100.0%
Visa	3.0	2.0	-	2.0	1.0	2.0	-	0.0%
Grand Total	66.0	39.0	42.0	41.0	33.0	29.0	41.0	100%

There is no coop offered with the BET.

B.4.3 Duplication (Ministry section 3)

Indicate whether the revised program is in a new area of study or delivery for the institution.

List similar programs at the same credential level offered by other institutions in the Ontario university system. Resources to identify similar programs offered in Ontario include https://www.ontariouniversitiesinfo.ca/programs and https://www.universitystudy.ca/search-programs/.

If the revised program is similar to others in the Ontario university system, demonstrate that societal need and student demand justify the duplication. Identify innovative and distinguishing features of the revised program in comparison to similar programs

Bachelor programs in Engineering that are not accredited are relatively niche in Ontario and Canada. As such, there are very few comparators and risk of duplication. As well, of the programs that exist, none of them follow the same format as the majority of streams in our programs which includes the alignment to our BASc programs to allow for easy transfer between our BET and accredited BASc programs. All university-offered programs generally follow a "Degree Completion" format, following the completion of a college diploma or advanced diploma program. Only one example from those listed from other universities in Canada offers a full 4-year curriculum, Cape Breton University. Observation of the listings below shows that there are only a few direct competitors to the UWindsor existing and proposed programming, offering us a opportunity to be a destination program for this unique program offering.

The following summarizes the competitor programs in Canada, including several college technology degree programs:

1. **McMaster – Bachelor of Technology**
   https://www.eng.mcmaster.ca/programs/undergraduate-programs-degrees/bachelor-technology-btech-dcp/
   McMaster's BTech programs are vast in that they offer two different pathways. They offer a full BTech degree in 3 specializations – Automotive and Vehicle Engineering, Automation Systems Engineering Technology, and Biotechnology. Students in the full degree programs earn both a degree and college advanced diploma in 4.5 years as the program is shared between McMaster and Mohawk. McMaster also offers degree completion exclusive pathway programs with 4 specializations – Civil Engineering Infrastructure Technology, Power and Energy Engineering Technology, Manufacturing Engineering Technology and Software Engineering Technology. These generally are not aligned with our proposed offerings. Similar to UWindsor, these 4 are exclusively degree completion programs. Also similar to UWindsor, these programs are not accredited and therefore not eligible for Professional Engineering License. The programs are ACBSP accredited, giving them a Business Management Certificate. For all streams, they do offer coop and online courses and online courses. The courses in the McMaster technology programs are generally separate from those in the accredited programs, limiting the pathway between the technology and accredited engineering programs, where UWindsor's programs in the related streams are intentionally shared to allow students a pathway between the programs.

2. **Queens University**
   https://smithengineering.queensu.ca/mining/professional-development/btech/index.html
   Queens' BTech is limited to only a Mining focus. The program is a degree completion program with online course options. This program is suspended as per their website.

3. **Thompson Rivers University**
   https://www.tru.ca/distance/programs/bachelor-of-technology.html
   Thompson Rivers' programs are degree completion programs or two-year diplomas as only Ontario as a province offers three-year advanced diploma programs. The program also has entry for 4-year trade apprenticeship qualifications. The program does not have a specific specialization, but allows flexibility for course selection with specific requirements of groupings of courses to pick from, similar to our General stream. The program is 21 courses in length, similar to our program requirements with flexibility and some business focus. There is a secondary offering of a similar program, with a leadership specialization.

4. **Cape Breton University**
   https://www.cbu.ca/academics/programs/bachelor-of-engineering-technology/
   Cape Breton's programming offers full length degree and degree completion program through articulation agreements. The program is not eligible for Professional Engineering Licensing as per their website. The program appears to have multiple exit points, at a 2 year diploma, 3 year degree or 4 year degree. There are specializations in Chemical, Electronics & Controls, Environmental Studies, Manufacturing and Petroleum. It is difficult to understand the full layout of the program courses, but the program is available online.

College Programs

5. **Northern Alberta Institute of Technology (NAIT)**
   https://www.nait.ca/programs/btech
   NAIT's program specializes in "General Management", helping those with diploma qualifications in technology bridge the gap to management roles. The program is a degree completion program with 2 years following a two-year diploma as Alberta only offers two-year college diplomas in technology. There are specializations in General Management, Operations Management, Sustainability Management and Project Management.

6. **George Brown College**
   https://www.georgebrown.ca/programs/honours-bachelor-of-technology-program-construction-management-t312
   This is a full 4 year degree program focusing in Construction Management. The program is a unique degree offering in an Ontario college. The program has online and in person learning and one placement semester that is mandatory. There does not appear to be any degree completion offerings, but it is well aligned with their construction related diploma programs, so possibly some pathways between.

B.5 RESOURCES

*[The resource impact of a proposal is almost never neutral. Note: Proposers must also complete and submit the attached **Budget Summary** (Appendix A) with the revised program proposal.]*

B.5.1 Resources Available

B.5.1.1 Resources In Support of the Revised Program and Resource Implications for Other Campus Units or Programs (QAF section 2.1.2.6)

Describe, in general terms, all faculty and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the revised program. Please do not name specific individuals in this section. Describe the impact of the planned utilization of existing human, physical and financial resources (within and outside the unit) on other existing programs in the department or at the university. Provide an assessment of the reliance of the revised program on existing resources from other campus units and include evidence that there are adequate resources available and committed to the revised program to sustain the quality of scholarship produced by undergraduate students as well as graduate students' scholarship and research activities. Consider, for example: faculty resources (within and outside the unit), existing courses (within and outside the unit), equipment or facilities outside the proposer's control, external resources

requiring maintenance or upgrading using external resources, staff support, library, teaching and learning support, information technology support, laboratory access, student support services, space, equipment, facilities, GA/TA

The new program streams will not require any additional faculty expertise and resources, staff resources, physical resources, or GA support, etc., when compared to the existing program. The Bachelor of Engineering Technology program is strategically aligned with our Bachelor of Applied Science and other undergraduate offerings such that no new courses or offerings of existing courses are required with BET students joining these classes.

B.5.1.1a Faculty Expertise Available and Committed to Supporting the Revised Program (QAF section 2.1.2.6; 2.1.2.7; 2.1.2.8)

Assess faculty expertise available and actively committed to supporting the revised program. Provide evidence of a sufficient number and quality of faculty who are qualified to teach and/or supervise in and achieve the goals of the revised program and foster the appropriate academic environment, and of the appropriateness of this collective faculty expertise to contribute substantially to the revised program including student mentoring. Include:

- *evidence of the quality of the faculty (e.g., qualifications, funding, honours, awards, research, innovation and scholarly record)*
- *evidence that faculty have the recent research or professional/clinical expertise needed to sustain the revised program, promote innovation, and foster an appropriate intellectual climate*
- *any other evidence that the revised program and faculty will ensure the intellectual quality of the student experience*

As there are no new courses or curriculum to deliver in the program, the program will rely on the regular faculty assigned to the existing courses being shared with this program.

B.5.1.1b Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program (QAF section 2.1.2.6)

Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the revised program and the associate plans to ensure the sustainability of the revised program and quality of the student experience.

This program will add no additional reliance on additional faculty needs. Any reliance of adjunct, limited term and/or sessional faculty would be only relevant to the needs of the existing BASc programs in Engineering given there is no additional courses or deliveries of existing courses needed for this program and all streams.

B.5.1.1c Graduate Faculty Qualifications and Supervisory Loads (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Explain how supervisory loads will be distributed, and describe the qualifications and appointment status of faculty who will provide instruction and supervision in the revised program.

N/A

B.5.1.1d Financial Assistance for Graduate Students (where appropriate) (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Where appropriate to the revised program, provide evidence that financial assistance for graduate students will be sufficient to ensure adequate quality and numbers of students.

N/A

B.5.1.2 Anticipated New Resources (QAF sections 2.1.2.6)

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the revised program.*

As noted above, there are no anticipated new resources required for this program and streams. This program is strategically aligned with the delivery of the BASc programs, course calendar, and delivery, such that no additional course offerings or resources would be needed. The students in this program will join the sections of the existing courses already planned.

B.5.1.3 Planned Reallocation of Resources and Cost-Savings

Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the revised program. (e.g., streamlining existing programs and courses, deleting courses, etc.)

There are no planned reallocating of resources as the program and streams do not require new or additional resources.

B.5.1.4a Additional Resources Required – Resources Requested (QAF section 2.1.2.6f)

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to run the revised program.If not applicable, write n/a.*

Faculty:	N/A
Staff:	N/A
GA/TAs:	N/A

B.5.1.4b Additional Institutional Resources and Services Required by all Affected Areas or Departments (QAF section 2.1.2.6f)

*Describe all **additional institutional resources and services** required by all affected areas or departments to run the revised program, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance. If not applicable, write n/a.*

Library Resources and Services:	None
Teaching and Learning Support:	None
Student Support Services:	None
Space and Facilities:	None
Equipment (and Maintenance):	None

C. Program Details

C.1 s (QAF section 2.1.2.5)

Describe new or changes to

- *program-specific admission requirements,*
- *selection criteria,*
- *credit transfer,*
- *arrangements for exemptions or special entry, and*
- *alternative admission requirements, if any, for admission into the program, such as minimum average, additional language requirements or portfolios, recognition of prior work or learning experience (and how this will be assessed), etc.*

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Bachelor of Engineering Technology

Admission Requirements for All Streams
Applicants are eligible if they complete of an Ontario Secondary School Diploma (OSSD) with a minimum 70% overall average (or equivalent) of six Grade 12 U or M courses, specifically including, English - ENG4U, Advanced Functions / Pre-Calculus – MHF4U, and Physics – SPH4U.

Degree Completion Program Admission Requirements (All Streams)
Applicants are eligible if they:*

a. possess an Advanced Diploma in Technology from Ontario CAATs (**or** ~~an~~ equivalent ~~Canadian or International Institution~~) **containing at least one pre-calculus or college level differential calculus course**
b. possess an Engineering degree ~~from a Canadian university (or an equivalent recognized International Institution)~~
c. possess a ~~University~~ bachelors degree in a scientific or technical subject ~~from a Canadian university (or an equivalent international institution)~~
d. have completed the equivalent of three years of an engineering degree from a recognized international institution.

*Admission to the Bachelor of Engineering Technology Program ~~(General Stream)~~ also may be extended to students with a two-year Engineering Technology Diploma from ~~or Certificate from~~ **an** ~~Canadian~~ ~~College (~~**Ontario** CAAT**s (**or equivalent) and relevant significant work experience **(+3 years)** based on space availability in the program. **The two-year diploma must contain at least one pre-calculus or college level differential calculus course**. ~~Additional coursework may be required to ensure equivalency to the three-year diploma program as evaluated by the Office of Admissions and Faculty of Engineering.~~

Applicants must ~~And~~ meet the following minimum average requirement:

1. For ~~Canadian Colleges (~~**Ontario** CAAT**s (**or equivalent), Graduating Cumulative Average of **3.0 or** 70%.
2. ~~For international colleges (equivalent to CAAT's advanced diploma), Graduating Cumulative Average of 80% and minimum English language requirement as per University policy~~
3. For ~~Canadian University~~ bachelor degree holders who are seeking technology designation, ~~70~~65%.
4. ~~For international university degree holders who are seeking technology designation, 80% and minimum English language requirement as per University policy.~~
5. ~~For individuals who have completed the equivalent of three years of an engineering degree from a recognized international institution, cumulative average of 80%, or first class honours, or equivalent; and minimum English language requirements as per University policy.~~

~~Remark 1:~~
Streams – Degree Completion Programs
All admissible candidates are eligible for the Bachelor of Engineering Technology (General) stream. Eligibility for specific streams (i.e., Biomedical, Civil, Electrical, Environmental, Industrial, Mechanical, Mechatronics), are determined based on the student's previous post-secondary background. For example, ~~S~~students applying to Bachelor of Engineering Technology (Mechanical) must have received an advanced diploma in Mechanical Engineering Technology (or equivalent as stated in 1 and 2 above**).** ~~Students applying to Bachelor of Engineering Technology (Civil) must have received an advanced diploma in Civil Engineering Technology (or equivalent as stated in 1 and 2 above).~~
The following list provides an outline of possible post-secondary education alignment into the Bachelor of Engineering Technology Streams; however, a student educated in a field not listed will be evaluated for possible specific stream alignment:

BEng Degree Completion - CAAT Advanced Diplomas (or equivalent)*
General - Any 3-year advanced diploma in Technology or Science*
Mechanical Stream - Mechanical Engineering Technology
Civil Stream - Civil Engineering Technology

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Electrical Stream - Electrical Engineering Technology, Electronics Engineering Technology
Environmental Stream - Environmental Technology, Environmental Engineering Technology
Industrial Stream - Industrial Engineering Technology, Manufacturing Engineering Technology

***IMPORTANT: Any program must contain a college level pre-calculus or college level differential calculus course**

Transfer Credits – Degree Completion Program
~~**Remark 2:**~~
**Generally, students who are in the Degree Completion Program will not receive additional transfer credits as the shortened degree requirements are due to a block of credits earned for the student's previous studies. However, S~~s~~tudents, who received a four-year degree in a Science or technical subject~~ in Science, if admitted into BET program, may be asked to take additional courses beyond the minimum requirements, and~~ are eligible for up to ~~four~~ five courses in their original degree ~~can be~~ to count~~ing~~ towards the BET program, if appropriately aligned with the program course requirements.

C.1.1 Admission Requirements and Attainment of Learning Outcomes (QAF section 2.1.2.5)

Demonstrate that admission requirements for the revised program are sufficient to prepare students for successful attainment of the intended learning outcomes (degree level expectations) established for completion of the program.

The following changes were made to the listed admissions requirements listed in the Undergraduate Calendar:

- Addition of requirements for the full degree program with admission requirements from high school. These requirements are generally aligned with the entry requirements for the Bachelor of Applied Science programs, but with a lowered entrance average and the elimination of 12U chemistry as the curriculum defined does not specify a specific need for a chemistry course in the course requirements for the full 4-year curriculum.
- For the degree completion program, the changes being made are to avoid confusion and to improve the equity in consideration of diplomas and degrees earned outside of Canada, relying on standards applied by the admissions office for determining equivalency and conversion of averages:
  - Simplification of definition of diploma and degree requirements, allowing for broader definition of equivalency
  - Addition of a minimum mathematics requirement to align with the standardized mathematics courses in the curriculum and proposed learning outcome alignment.
  - Provided a more specific definition for where work experience will be considered for admission of a 2-year CAAT diploma (or equivalent). The previous definition was too open to interpretation and created confusion and admissions issues.
  - Removed inequity between Canadian and international grade point average requirements, allowing the Office of the Registrar to implement standard foreign GPA equivalency calculations.
  - Lower the average for bachelor's degree holders to be equivalent to accepted admissions to BET to 65% which is aligned with the transfer or bachelor's degree transfer into our existing BASc engineering programs.

C.2 Program Curriculum Structure/Program of Study (QAF sections 2.1.2.3 and 2.1.10)

NB: For graduate programs, provide evidence that each graduate student in the revised program is required to take a minimum of two-thirds of the course requirements from among graduate-level courses. Include course requirements with course numbers and course names. Identify in BOLD and STRIKETHROUGH the changes to program requirements.

BACHELOR OF ENGINERING TECHNOLOGY DEGREE COMPLETION PROGRAMS:

Bachelor of Engineering Technology (BET) Degree Completion Program - General Stream
Degree Requirements
Total courses: ~~A minimum~~ 15 courses

(a) MATH-1720 or MATH-1760, MATH-1730
(b) GENG-2102, GENG-2220, GENG-3130
(c) Ten additional engineering courses, which must include:
- **a. One 1st, 2nd or 3rd year engineering design course (e.g. GENG-1201, GENG-2201, GENG-3201, or ELEC-3000)**
- b. ~~Two 1000 courses, six~~ **Three** 2000 level engineering courses*, ~~three~~ **two** 3000 level engineering courses*, and four 4000 level engineering courses*. A higher-level course can replace a lower-level engineering course. ~~but the reverse is only allowed under extenuating circumstances~~. ~~The students are encouraged to take more 3000 and 4000 level courses~~.

***Engineering course options must be a course from the Faculty of Engineering, excluding GENG-1101, GENG-1102, GENG-1202, GENG-1110, GENG-2101 and all engineering Math/Science courses. Suggested course sequencing and planning is available from the Faculty of Engineering.**

~~**Suggested Courses**~~
~~Fall Courses~~
~~MECH-3212. Thermodynamics~~
~~ELEC-2320. Software Fundamentals~~
~~ELEC-2141. Circuit Analysis I~~
~~GENG-2500. Engineering and the Environment~~
~~GENG-2220. Probability and Statistics for Engineering~~
~~MECH-3233. Fluid Mechanics I~~
~~GENG-3130. Engineering Economics~~
~~CIVL-3530. Structural Analysis~~
~~CIVL-4820. Planning and Construction Management~~
~~MECH-4850. Welding Engineering~~
~~Winter Courses~~
~~GENG-2190. Engineering Materials Fundamentals~~
~~MECH-2230. Advanced Engineering and Design~~
~~GENG-2220. Probability and Statistics for Engineering~~
~~GENG-4210. Engineering and Society~~
~~CIVL-2200. Civil Engineering Information Systems~~
~~INDE-3020. Health, Safety and Human Factors~~
~~INDE-3110. Computer Aided Design and Computer Aided Manufacturing~~
~~MECH-4212. Mechatronics (Laboratory Based)~~
~~Summer Courses~~
~~GENG-4210. Engineering and Society~~
~~GENG-4830. Engineering Report~~
~~CIVL-3650. Transportation and Traffic Engineering~~
~~MECH-3220. Fluid Mechanics II~~
~~ENVE-4810. Sustainability in Engineering~~

Bachelor of Engineering Technology (BET) Degree Completion Program - Mechanical Stream
Degree Requirements
Total courses: ~~**A minimum**~~ 20 courses
(a) MATH-1720 or MATH-1760, MATH-1730, MATH-1270 (or MATH-1250)
(b) **GENG-2102,** GENG-2180, GENG-2190, GENG-2220, GENG-3130
(c) MECH-2210, MECH-3211, MECH-3212, MECH-3224, MECH-3233, MECH-4228
(d) Six additional engineering courses, which must include:
- **a. One engineering design course from GENG-1201, GENG-2201 or GENG-3201**

b. Three 4th year MECH or INDE courses
c. Two additional MECH or INDE courses (any year)

Suggested course sequencing and planning is available from the Faculty of Engineering. Selection of engineering courses will be limited by course prerequisite requirements.

~~Fall Courses~~
~~MECH-3212. Thermodynamics~~
~~GENG-2220. Probability and Statistics for Engineering~~
~~ELEC-2320. Software Fundamentals~~
~~MECH-3233. Fluid Mechanics 1 (or CIVL-3510 Fluid Mechanics)~~
~~GENG-2500. Engineering and the Environment~~
~~Winter Courses~~
~~GENG-2180. Mechanics of Deformable Bodies~~
~~GENG-2200. Numerical Analysis for Engineering~~
~~MECH-2230. Advanced Engineering and Design~~
~~GENG-2190. Engineering Materials Fundamentals~~
~~One (1) course from the following list:~~
~~INDE-3020. Health, Safety and Human Factors~~
~~INDE-3270. Product Quality and Reliability~~
~~INDE-3110. Computer Aided Design and Computer Aided Manufacturing~~
~~CIVL-4720. Hydraulics~~
~~Summer Courses~~
~~MECH-3217. Applied Thermodynamics~~
~~MECH-4228. Sustainability in Engineering~~
~~MECH-4255. Environmental Effects and Control of Noise~~
~~GENG-4210. Engineering and Society~~
~~One (1) course from the following list:~~
~~MECH-3224. Engineering Measurements~~
~~MECH-4259. Computer Aided Engineering~~
~~MECH-4258. Computational Fluid Dynamics~~
~~MECH-3670. Aerospace Engineering Fundamentals~~
~~MECH-3430. Automotive Engineering Fundamentals~~
~~MECH-3830. Materials and their Properties~~
~~Fall Courses~~
~~GENG-3130. Engineering Economics~~
~~INDE-3210. Manufacturing Process Design~~
~~MECH-3211. Stress Analysis (or CIVL-3520 Stress Analysis)~~
~~Two (2) courses from the following list:~~
~~INDE-3150. Product and Process Design~~
~~INDE-4280. Facilities Design and Logistics~~
~~MECH-2210. Dynamics~~
~~MECH-4850. Welding Engineering~~

Bachelor of Engineering Technology (BET) Degree Completion Program - Civil Stream

Degree Requirements

Total courses: ~~**A minimum**~~ 20 courses ~~**as follows:**~~

(a) MATH-1720 or MATH-1760, MATH-1730, MATH-1270 (or MATH-1250)
(b) **GENG-1201, GENG-2102,** GENG-2180, GENG-2220, GENG-3130
(c) CIVL-2190, CIVL-3510, CIVL-3520, CIVL-3530, CIVL-3540, CIVL-3650

(d) **ENVE-2200,** ENVE-4810

(e) Four additional engineering courses, which must include:

- **a. Three 3rd or 4th year CIVL or ENVE courses**
- **b. One additional CIVL or ENVE courses (any year)**

Suggested course sequencing and planning is available from the Faculty of Engineering. Selection of engineering courses will be limited by course prerequisite requirements.

Bachelor of Engineering Technology (BET) Degree Completion Program - Electrical Stream

Degree Requirements

Total courses: 20 courses

(a) MATH-1720 or MATH-1760, MATH-1730, MATH-1270 (or MATH-1250)

(b) GENG-2102, GENG-2220, GENG-3130

(c) ELEC-2200, ELEC-2240, ELEC-2260, ELEC-2320, ELEC-3040, ELEC-3130, ELEC-3270, and one of ELEC-3010 or ELEC-3240

(d) Six additional engineering courses, which must include:

- **a. One engineering design course from GENG-1201or ELEC-3000**
- **b. Three 4th year ELEC courses**
- **c. Two additional ELEC courses (any year)**

Suggested course sequencing and planning is available from the Faculty of Engineering. Selection of engineering courses will be limited by course prerequisite requirements.

~~Fall Courses~~
~~GENG-2220. Probability and Statistics for Engineering~~
~~ELEC-2320. Software Fundamentals~~
~~GENG-2500. Engineering and the Environment~~
~~CIVL-3510. Fluid Mechanics (or MECH-3233 Fluid Mechanics I)~~
~~One (1) course from the following list:~~
~~MECH-2210. Dynamics~~
~~GENG-1110. Engineering Mechanics I~~

~~Winter Courses~~
~~GENG-2180. Mechanics of Deformable Bodies~~
~~CIVL-2200. Civil Engineering Information Systems~~
~~CIVL-2190. Materials in Civil and Environmental Engineering~~
~~GENG-4210. Engineering and Society~~
~~One (1) course from the following list:~~
~~ENVE-3630. Water and Wastewater treatment~~
~~ENVE-4710. Water Distribution and Wastewater Collection Systems~~
~~CIVL-4720. Hydraulics~~
~~INDE-3020. Health, Safety, and Human Factors~~
~~Summer Courses~~
~~GENG-1190. Technical Communications~~
~~ENVE-4810. Sustainability in Engineering~~
~~MECH-4255. Environmental Effects and Control of Noise~~
~~Two (2) courses from the following list:~~
~~CIVL-3650. Transportation and Traffic Engineering~~
~~CIVL-4820. Planning and Construction Management~~
~~CIVL-4810. Highway Design and Construction~~

~~ENVE-3620. Air Pollution Control~~
~~Fall Courses~~
~~GENG-3130. Engineering Economics~~
~~CIVL-3520. Stress Analysis~~
~~CIVL-3540. Concrete Design~~
~~CIVL-3530. Structural Analysis~~
~~One (1) course from the following list:~~
~~CIVL-3550. Geotechnical Engineering I~~
~~MECH-3220. Fluid Mechanics II~~

Bachelor of Engineering Technology (BET) Degree Completion Program - Environmental Stream
Degree Requirements
Total courses: 20 courses

- **(a) MATH-1720 or MATH-1760, MATH-1730, MATH-1270 (or MATH-1250)**
- **(b) GENG-2102, GENG-2220, GENG-3130**
- **(c) ENVE-3510, ENVE-3520, ENVE-3630, ENVE-4810**
- **(d) CIVL-2190, CIVL-2200, CIVL-3510**
- **(e) Seven additional engineering courses, which must include:**
  - **a. One engineering design course from GENG-1201 or GENG-2201**
  - **b. Three 3rd or 4th year ENVE or CIVL courses**
  - **c. Three additional ENVE or CIVL courses (any year)**

Suggested course sequencing and planning is available from the Faculty of Engineering. Selection of engineering courses will be limited by course prerequisite requirements.

Bachelor of Engineering Technology (BET) - Degree Completion Program - Industrial Stream
Degree Requirements
Total courses: 20 courses

- **(a) MATH-1720 or MATH-1760, MATH-1730, MATH-1270 (or MATH-1250)**
- **(b) GENG-2102, GENG-2190, GENG-2220, GENG-3130**
- **(c) STEN-1000, ACCT-1510**
- **(d) INDE-3120, INDE-3150, INDE-3140, INDE-3270, INDE-4280**
- **(e) Six additional engineering courses, which must include:**
  - **a. One engineering design course from GENG-1201 or GENG-2201**
  - **b. Three 4th year INDE or MECH courses**
  - **c. Two additional INDE or MECH courses (any year and can include MSCI-2130 and MSCI-2250)**

Suggested course sequencing and planning is available from the Faculty of Engineering. Selection of engineering courses will be limited by course prerequisite requirements.

BACHELOR OF ENGINERING TECHNOLOGY FOUR YEAR PROGRAMS

Bachelor of Engineering Technology (BEngTech) - General Stream
Total Courses: 40 courses

- **(a) MATH-1720 or MATH-1760, MATH-1730, MATH-1270 or MATH-1250, PHYS-1400, and two additional math or science courses**
- **(b) GENG-1101, GENG-1102, GENG-1202, GENG-1110, GENG-2101, GENG-2102, GENG-2220, GENG-3130**
- **(c) Eighteen additional engineering courses, which must include:**
  - **i) Two 1st, 2nd or 3rd year engineering design course (e.g. GENG-1201, GENG-2201, GENG-3201, or ELEC-3000)**
  - **ii) One 2nd or 3rd year engineering graphics or computer aided design course**

iii) Three 2000 level engineering courses*, two 3000 level engineering courses*, and four 4000 level engineering courses*. A higher-level engineering course can replace a lower-level engineering course.
iv) Six additional engineering courses* at any level.

(d) Eight additional complimentary study courses, at least three of which must be at the 2000 level or higher and they must follow these requirements:
   i) Two courses from the approved Faculty of Engineering Complementary Studies lists, specifically one each from lists A and B
   ii) Six courses from the Faculty of Engineering, the Faculty of Nursing, Department of Psychology, the Faculty of Science, the Odette School of Business, and/or the Faculty of Education, or any Minor (Minors consist of six courses, but note that some courses may require prerequisites that are not part of the Minor; students are strongly encouraged to seek academic guidance from the academic advisor in the appropriate department).

*Engineering course options must be a course from the Faculty of Engineering, excluding GENG-1101, GENG-1102, GENG-1202, GENG-1110, GENG-2101 and all engineering Math/Science courses.
Suggested course sequencing and planning is available from the Faculty of Engineering. Selection of engineering courses will be limited by course prerequisite requirements.

<u>Bachelor of Engineering Technology (BEngTech) - Mechanical Stream</u>
Total Courses: 40 courses

(a) MATH-1720 or MATH-1760, MATH-1730, MATH-1270 or MATH-1250, PHYS-1400, and two additional math or science courses
(b) GENG-1101, GENG-1102, GENG-1202, GENG-1110, GENG-2101, GENG-2102, GENG-2180, GENG-2190, GENG-2220, GENG-3130
(c) MECH-2210, MECH-2230 or GENG-2230, MECH-3211, MECH-3212, MECH-3224, MECH-3233, MECH-4228
(d) Nine additional engineering courses, which must include:
   i) Two 1st, 2nd or 3rd year engineering design course (e.g. GENG-1201, GENG-2201, GENG-3201)
   ii) Three 4th year MECH or INDE courses
   iii) Two additional MECH or INDE courses (any year)
   iv) Two engineering courses* at any level.
(e) Eight additional complimentary study courses, at least three of which must be at the 2000 level or higher and they must follow these requirements:
   i) Two courses from the approved Faculty of Engineering Complementary Studies lists, specifically one each from lists A and B
   ii) Six courses from the Faculty of Engineering, the Faculty of Nursing, Department of Psychology, the Faculty of Science, the Odette School of Business, and/or the Faculty of Education, or any Minor (Minors consist of six courses, but note that some courses may require prerequisites that are not part of the Minor; students are strongly encouraged to seek academic guidance from the academic advisor in the appropriate department).

*Engineering course options must be a course from the Faculty of Engineering, excluding GENG-1101, GENG-1102, GENG-1202, GENG-1110, GENG-2102 and all engineering Math/Science courses.
Suggested course sequencing and planning is available from the Faculty of Engineering. Selection of engineering courses will be limited by course prerequisite requirements.

<u>Bachelor of Engineering Technology (BET) – Civil Stream</u>
Total Courses: 40 courses

(a) MATH-1720 or MATH-1760, MATH-1730, MATH-1270 or MATH-1250, PHYS-1400, and two additional math or science courses

(b) GENG-1101, GENG-1102, GENG-1201, GENG-1202, GENG-1110, GENG-2101, GENG-2102, GENG-2180, GENG-2220, GENG-3130
(c) CIVL-2100, CIVL-2190, CIVL-3510, CIVL-3520, CIVL-3530, CIVL-3540, CIVL-3650
(d) ENVE-2200, ENVE-4810
(e) Seven additional engineering courses, which must include:
- **i) One design course from CIVL-3610 or CIVL-3640**
- **ii) Three 3rd or 4th year CIVL or ENVE courses**
- **iii) One additional CIVL or ENVE courses (any year)**
- **iv) Two engineering courses* at any level.**

(f) Eight additional complimentary study courses, at least three of which must be at the 2000 level or higher and they must follow these requirements:
- **i) Two courses from the approved Faculty of Engineering Complementary Studies lists, specifically one each from lists A and B**
- **ii) Six courses from the Faculty of Engineering, the Faculty of Nursing, Department of Psychology, the Faculty of Science, the Odette School of Business, and/or the Faculty of Education, or any Minor (Minors consist of six courses, but note that some courses may require prerequisites that are not part of the Minor; students are strongly encouraged to seek academic guidance from the academic advisor in the appropriate department).**

***Engineering course options must be a course from the Faculty of Engineering, excluding GENG-1101, GENG-1102, GENG-1202, GENG-1110, GENG-2102 and all engineering Math/Science courses.**
Suggested course sequencing and planning is available from the Faculty of Engineering. Selection of engineering courses will be limited by course prerequisite requirements.

<u>Bachelor of Engineering Technology (BET) –Electrical Stream</u>
Total Courses: 40 courses
(a) MATH-1720 or MATH-1760, MATH-1730, MATH-1270 or MATH-1250, PHYS-1400, and two additional math or science courses
(b) GENG-1101, GENG-1102, GENG-1201, GENG-1202, GENG-1110, GENG-2101, GENG-2102, GENG-2220, GENG-3130
(c) ELEC-2200, ELEC-2240, ELEC-2260, ELEC-2320, ELEC, 3000, ELEC-3010, ELEC-3040, ELEC-3130, ELEC-3240, ELEC-3270
(d) Seven additional engineering courses, which must include:
- **i) Three 4th year ELEC courses**
- **ii) Two additional ELEC courses (any year)**
- **iii) Two engineering courses* at any level.**

(g) Eight additional complimentary study courses, at least three of which must be at the 2000 level or higher and they must follow these requirements:
- **i) Two courses from the approved Faculty of Engineering Complementary Studies lists, specifically one each from lists A and B**
- **ii) Six courses from the Faculty of Engineering, the Faculty of Nursing, Department of Psychology, the Faculty of Science, the Odette School of Business, and/or the Faculty of Education, or any Minor (Minors consist of six courses, but note that some courses may require prerequisites that are not part of the Minor; students are strongly encouraged to seek academic guidance from the academic advisor in the appropriate department).**

***Engineering course options must be a course from the Faculty of Engineering, excluding GENG-1101, GENG-1102, GENG-1202, GENG-1110, GENG-2102 and all engineering Math/Science courses.**
Suggested course sequencing and planning is available from the Faculty of Engineering. Selection of engineering courses will be limited by course prerequisite requirements.

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Bachelor of Engineering Technology (BET) – Environmental Stream

Total Courses: 40 courses

(a) MATH-1720 or MATH-1760, MATH-1730, MATH-1270 or MATH-1250, PHYS-1400, and two additional math or science courses

(b) GENG-1101, GENG-1102, GENG-1201, GENG-1202, GENG-1110, GENG-2101, GENG-2102, GENG-2201, GENG-2220, GENG-3130

(c) ENVE-2200, ENVE-3510, ENVE-3520, ENVE-3630, ENVE-4810

(d) CIVL-2190, CIVL-2200, CIVL-3510

(e) Eight additional engineering courses, which must include:
- **i) Three 3rd or 4th year ENVE or CIVL courses**
- **ii) Three additional ENVE or CIVL courses (any year)**
- **iii) Two engineering courses* at any level.**

(h) Eight additional complimentary study courses, at least three of which must be at the 2000 level or higher and they must follow these requirements:
- **i) Two courses from the approved Faculty of Engineering Complementary Studies lists, specifically one each from lists A and B**
- **ii) Six courses from the Faculty of Engineering, the Faculty of Nursing, Department of Psychology, the Faculty of Science, the Odette School of Business, and/or the Faculty of Education, or any Minor (Minors consist of six courses, but note that some courses may require prerequisites that are not part of the Minor; students are strongly encouraged to seek academic guidance from the academic advisor in the appropriate department).**

***Engineering course options must be a course from the Faculty of Engineering, excluding GENG-1101, GENG-1102, GENG-1202, GENG-1110, GENG-2102 and all engineering Math/Science courses.**
Suggested course sequencing and planning is available from the Faculty of Engineering. Selection of engineering courses will be limited by course prerequisite requirements.

Bachelor of Engineering Technology (BET) – Industrial Stream

Total Courses: 40 courses

(a) MATH-1720 or MATH-1760, MATH-1730, MATH-1270 or MATH-1250, PHYS-1400, and two additional math or science courses

(b) GENG-1101, GENG-1102, GENG-1201, GENG-1202, GENG-1110, GENG-2101, GENG-2102, GENG-2190, GENG-2201, GENG-2220, GENG-2230 or MECH-2230, GENG-3130

(c) STEN-1000, ACCT-1510

(d) INDE-3120, INDE-3150, INDE-3140, INDE-3270, INDE-4280

(e) Seven additional engineering courses, which must include:
- **i) Three 4th year INDE or MECH courses**
- **ii) Two additional INDE or MECH courses (any year and can include MSCI-2130 and MSCI-2250),**
- **iii) Two engineering courses* at any level.**

(i) Eight additional complimentary study courses, at least three of which must be at the 2000 level or higher and they must follow these requirements:
- **i) Two courses from the approved Faculty of Engineering Complementary Studies lists, specifically one each from lists A and B**
- **ii) Six courses from the Faculty of Engineering, the Faculty of Nursing, Department of Psychology, the Faculty of Science, the Odette School of Business, and/or the Faculty of Education, or any Minor (Minors consist of six courses, but note that some courses may require prerequisites that are not part of the Minor; students are strongly encouraged to seek academic guidance from the academic advisor in the appropriate department).**

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***Engineering course options must be a course from the Faculty of Engineering, excluding GENG-1101, GENG-1102, GENG-1202, GENG-1110, GENG-2102 and all engineering Math/Science courses.**
Suggested course sequencing and planning is available from the Faculty of Engineering. Selection of engineering courses will be limited by course prerequisite requirements.

Courses used to calculate the major average are:
A separate major average is not required for the Degree Completion programs.

For the full four-year degree program curriculum, the following course requirements would be utilized to calculate the major average for each stream:

BET Stream	Course Requirement Sections (see above)
General	(a) through (c)
Civil	(a) through (e)
Mechanical	(a) through (d)
Electrical	(a) through (d)
Environmental	(a) through (e)
Industrial	(a) through (e)

Description of thesis option (if applicable): Not Applicable

Does the revised program include new courses?:

____ Yes [All new course proposals must be submitted on PDC Form Ds and submitted for approval with the revised program proposal (PDC Form B)]
__**X**__ No [If yes, list all new courses]

C.2.1 Co-op/Experiential Learning Component (if applicable)

Provide requirements for the co-op/experiential learning component, including length of co-op/experiential learning component and credit weight, and explain how they differ for students who complete the experiential learning option and those who opt not to. **Ensure that learning outcomes for the co-op/experiential learning component have been included in the learning outcomes table. (C.4)*

Not applicable. No co-op option for this program at this time.

Is the completion of the experiential learning/co-op component a requirement of the revised program?

Not applicable. No co-op option for this program at this time.

C.2.2 Suggested Sequencing for Revised Program (Optional)

Provide suggested program sequencing for each year of the revised program (including any work/study/placement sequencing), ensuring that all pre-requisites are met in the sequencing. For Co-op programs: The proposed work/study sequence or alternative arrangement should allow for year-round availability of students for employers (if appropriate) and, wherever possible, should meet the guidelines for co-operative education as set out by the Canadian Association for Co-operative Education (see Policy on Co-op Programs).

The Faculty of Engineering will provide suggested sequencing for programs so that it is entirely aligned with the existing offering of all shared courses with the respective BASc programming, to ensure there are no additional course offerings required to run any of the programs. The sequencing is not proposed to be published in the academic calendars as it will remain flexible to shift with changes in sequencing required for the BASc programs in the future. The sequencing also respects all existing prerequisite requirements for courses. There is no proposed co-op stream, so no sequencing consideration for co-op is listed.

C.2.3 Program Structure/Requirements and Attainment of Learning Outcomes (QAF section 2.1.2.6)

Describe how the structure and requirements of the revised program are sufficient to prepare students for successful attainment of the intended program-level learning outcomes and the associated undergraduate or graduate degree level expectations.

The above requirements are structured with a balance of those required for students entering Bachelor of Applied Science programs, but balanced with additional opportunities where they do not take the full depths of the accredited engineering programs. The requirements list the fundamental outcomes related to each technology stream that would be expected core knowledge to those streams and to that of a student with a technology degree. The balance of requirements allow for options to seek other specialties or certificates that may assist in pursuit of careers and fields that are adjacent to engineering careers in other roles that required a balance of non-engineering skills. It also provides the ability to pick up optional courses that will help with pathways to other professions such as law, education, etc. Regarding the specific streams, the work done across all streams, new and existing, was to ensure consistency in the outcomes and expectations to provide better alignment of what a base technology graduate should know, paired with core knowledge from the specified area that would ensure the stream concentration is satisfied in a consistent manner. Overall, the Faculty of Engineering is satisfied that this requirement prepares students to achieve program learning outcomes adequately.

C.3.1 For Graduate Program ONLY (QAF sections 2.1.2.3; Senate Co-op Policy)

C.3.1.1 Normal Duration for Completion

Provide a clear rationale for program length that ensures that the revised program requirements can be reasonably completed within the proposed time period.

N/A

C.3.1.2 Program Research Requirements

For research-focused graduate programs, provide a clear indication of the nature and suitability of the major research requirements for completion of the revised program.

N/A

C.3.1.3 New or Changes to Fields in a Graduate Program (optional)

Where fields are contemplated, provide the following information:
The master's program comprises the following fields: ...[list, as applicable]
The PhD program comprises the following fields: ...[list, as applicable]

N/A

C.3.2 For All Program Proposals

C.3.2.1 New or Changes to Standing Required for Continuation in Program

Minimum average requirements for continuation in the program. Must conform to the regulations for standing required for continuation in the program as set out in Senate policy.Specify new or changes to standing required for continuation in the experiential learning option or co-op option of the revised program, where applicable.

The current requirement for Continuation in the Program is a 60% Cumulative Average. It is proposed that for the four year full degree, there will be a major average and thus the requirement for Continuation in the Program should be a 60% Cumulative Average and a 60% Major Average.

C.3.2.2 New or Changes to Standing Required for Graduation

Minimum average requirement to graduate in the program. Must conform to the regulations for standing required for continuation in the program as set out in Senate policy.Specify new or changes to standing required for graduation in the experiential learning option or co-op option of the revised program, where applicable.

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The current requirement for Graduation in Program is a 60% Cumulative Average. It is proposed that for the four year full degree, there will be a major average and thus the requirement for Graduation in Program should be a 60% Cumulative Average and a 60% Major Average.

C.4 NEW OR CHANGES TO LEARNING OUTCOMES (Degree Level Expectations)(QAF section 2)

COMPLETE THIS TABLE FOR UNDERGRADUATE PROGRAMS

In the following table, provide the specific learning outcomes (degree level expectations) that constitute the overall goals of the Combined program or Concurrent offering (i.e., the intended skills and qualities of graduates of this program). Link each learning outcome to the Characteristics of a University of Windsor Graduate" by listing them in the appropriate rows. A learning outcome may link to more than one of the specified Characteristics of a University of Windsor Graduate. All University of Windsor programs should produce graduates able to demonstrate each of the nine characteristics. Program design must demonstrate how students acquire all these characteristics. All individual courses should contribute to the development of one or more of these traits: a program in its entirety must demonstrate how students meet all of these outcomes through the complete program of coursework. Proposers are strongly encouraged to contact the Centre for Teaching and Learning for assistance with the articulation of learning outcomes (degree level expectations). ***For Combined Programs and Concurrent Offerings:*** *The program learning outcomes would include the outcomes for the two standalone programs with a few additional outcomes to reflect the benefits of pursuing the two disciplines in an integrated manner. [For learning outcome A, the integration of knowledge can be within a program and between the two programs.]* ***For programs with an Experiential Learning or Co-op Option****: Include learning outcomes for the program with a few additional outcomes highlighted to reflect the benefits of pursuing the experiential learning/co-op option.*

Bachelor of Engineering Technology (BEng Tech) Learning Outcomes

General Stream
Civil Stream
Electrical Stream
Environmental Stream
Industrial Stream
Mechanical Stream

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A UWindsor graduate will have the ability to demonstrate:	**COU-approved Undergraduate Degree Level Expectations**
Appropriately incorporate economics and management, and business practices (such as project, risk, and change management into the practice of engineering, while recognizing associated limitations and constraints.	A. the acquisition, application and integration of knowledge	1.Depth and Breadth of Knowledge 2.Knowledge of Methodologies 3. Application of Knowledge 5.Awareness of Limits of Knowledge
Apply research skills, including the ability to define problems and access, retrieve and evaluate information, to define and solve engineering problems.	B. research skills, including the ability to define problems and access, retrieve and	1. Depth and Breadth of Knowledge 2. Knowledge of Methodologies 3. Application of Knowledge

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Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A UWindsor graduate will have the ability to demonstrate:	**COU-approved Undergraduate Degree Level Expectations**
	evaluate information (information literacy)	5. Awareness of Limits Knowledge
Design solutions for complex, open-ended engineering problems.	C. critical thinking and problem-solving skills	1. Depth and Breadth of Knowledge 2. Knowledge of Methodologies 3. Application of Knowledge 5. Awareness of Limits of Knowledge
Design systems, components, or processes that meet specified needs with appropriate attention to the assessment of health and safety risks, legislative, regulatory standards, cultural, societal, economic, and environmental factors.	C. critical thinking and problem-solving skills	2. Knowledge of Methodologies 3. Application of Knowledge 5.Awareness of Limits of Knowledge
Critically evaluate, summarize, explain, and/or use written and numerical information in engineering-related work.	D. literacy and numeracy skills	4.Communication Skills 5. Awareness of Limits of Knowledge
Explain and apply the roles and responsibilities engineering and technology professionals in society, especially the primary role of protection of the public and the public interest.	E. responsible behaviour to self, others and society	5. Awareness of Limits of Knowledge 6.Autonomy and Professional Capacity
Communicate effectively about complex engineering activities within the profession and with society at large. Write effective reports and design documentation. Give and effectively respond to clear instructions.	F. interpersonal and communications skills	4. Communication Skills 6. Autonomy and Professional Capacity
Work independently and as a member and/or leader in diverse teams and in multi-disciplinary settings.	G. teamwork, and personal and group leadership skills	4. Communication Skills 6. Autonomy and Professional Capacity
Design solutions for complex, open-ended engineering problems and apply discipline-specific methodologies as follows: General: broad engineering problem-solving methods. Civil: structures, materials, transportation, fluids.	H. creativity and aesthetic appreciation	2. Knowledge of Methodologies 3. Application of Knowledge 6. Autonomy and Professional Capacity

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A UWindsor graduate will have the ability to demonstrate:	**COU-approved Undergraduate Degree Level Expectations**
Electrical: circuits, electronics, microprocessors, electromechanical systems . Environmental: sustainability, fluid systems, thermodynamics, water/wastewater. Industrial: operations research, process design, quality, analytics . Mechanical: solid mechanics/dynamics, thermodynamics, fluid mechanics, materials.		
Independently gather, evaluate, and synthesize information to identify deficiencies or gaps in knowledge and independently initiate measures to fill the knowledge gaps.	I. the ability and desire for continuous learning	6. Autonomy and Professional Capacity

C.4.3 Mode of Delivery (QAF section 2.1.2.2)

Demonstrate that the proposed modes of delivery are appropriate to facilitate students' successful attainment of the new or revised program learning outcomes. Discuss online vs. face-to-face (e.g., lecture, seminar, tutorial, lab) modes of delivery, as well as specialized approaches intended to facilitate the acquisition of specific skills, knowledge, and attitudes.

All the engineering courses in this program are aligned with the existing delivery of courses in the BASc program, with no unique offerings required for BET. As such, the mode of delivery for all engineering courses will be dictated by the mode chosen for these existing programs. Primarily, these courses are run in a face-to-face delivery environment. Most of the engineering courses will have a lecture component and a tutorial or lab component tied to it. The tutorial and lab elements for the engineering and science courses are meant to provide the student with the ability to practice problems associated with the theory being learned and/or practical experience through real-world experiments that relate to the subject matter.

The courses outside of engineering, for the full four year degree, are intended to allow the student to explore other areas and expertise outside of engineering. The modes of delivery for any such courses are set by the corresponding Faculty as deemed appropriate and the student will benefit from any diversity in modes that are experienced in their course selection.

D. MONITORING AND EVALUATION (QAF section 2.1.2.4)

Describe and explain the appropriateness of the proposed methods of assessing student achievement given the new or revised intended learning outcomes and degree level expectations.

In the Faculty of Engineering, undergraduate course learning outcomes are assessed for each offering of a course. Instructors consider the percentage of students who Do Not Meet Expectations (assessment grades lower than 50%), Marginal (assessment grades that are 50% or higher, but below 60%), Meet Expectations (assessment grades that are 60% or higher, but below 80%), and Exceed Expectations (assessment grade that are 80% or higher) for each learning outcome. Instructors are encouraged to use multiple assessments of each learning outcome, e.g., homework questions, one or more test questions, and part of the requirements for a project. The assessment data enable

instructors to make informed decisions about changes to their courses. As well, it enables issues to be noted across the curricula and data-driven changes to be made.

As the majority of the courses that are critical to the major are offered and monitored using these methods to support our CEAB accreditation, a well-structured process is in place to monitor outcomes at the course level that can be related to the program level outcomes.

D.1 Plan for Documenting and Demonstrating Program Quality and Student Performance (QAF section 2.1.2.4)

Describe the appropriateness of the plans to monitor and assess:

- *the overall quality of the revised program;*
- *whether the revised program is achieving in practice its proposed objectives;*
- *whether its students are achieving the program-level learning outcomes;*
- *the perceived student workload and student experience; and*
- *how the resulting information will be documented and subsequently used to inform continuous program improvement.*

Overall Program Quality

In Fall 2021, a new faculty position and Pathways Success Learning Specialist (AAS/LS II) was created. This role increases outreach to Ontario CAAT faculties and their students to help promote these programs. The Pathways Success Learning Specialist also meets with students to help with registration, choosing courses, and other program questions as a program advisor. The Academic Standing Committee meets every semester and reviews the progress of all students for all programs and ensures they are meeting the requirements for progression through their programs.

Whether the revised program is achieving in practice its proposed objectives

These programs are aligned with our Faculty AAUs who have, in recent years, formed Industrial Advising Committees to help monitor these programs from an external perspective. Industry members who hire our students in cooperative education positions and our graduates provide meaningful insight to the effectiveness of our programs. They provide insight on the knowledge that students are coming with, what gaps we can address, and what should be anticipated for the future. The details captured in these committees form part of the program feedback reviewed in curriculum and continual improvement committees. This continuous loop of feedback ensures the proposed objectives are not only met but are maintained relevant as the related industries change.

Whether the students are achieving the program-level learning outcomes

Learning outcomes are assessed in all undergraduate programs and reviewed by instructors each term. As part of CEAB accreditation, the BASc program outcomes are continuously monitored. As a result, the existing General, Mechanical, and Civil streams, along with the newly proposed Electrical, Industrial and Environmental streams have all their courses continuously monitored and annual reports suggest improvements for the programs. The information is fed into annual and accreditation reports that are prepared for the CEAB programs inform the continuous improvement of the programs.

The perceived student workload and student experience

Students in the BET program have a reduced workload compared to that in our BASc programs where this program is limited to five courses per semester, in comparison to some semester that have 6 courses per semester in the BASc program. The program will be challenging as some of the engineering courses are demanding in their scope and practice; however, the workload and activities in those courses are subject to review as part of the CEAB monitoring process in place. These practices have led to changes to courses to shift workload, such as major projects, to their own course to provide a more balanced experience. The students in the BET program will benefit from this continual improvement effort that addresses these concerns.

The student experiences in place for our BASc undergraduate students, such as those led by the Student Engineering Society or one of our many student clubs, are all available to our BET students. The students have access to our WINONE office for student counselling and other support services. The recently hired Pathway Success Learning Specialist is a direct point of contact for these students to seek assistance and guidance unique to their needs and program and are able to reach out to a managed email inbox or book online or in person appointments directly with this faculty member.

How the resulting information will be documented and subsequently used to inform continuous program improvement

The results of the monitoring process in place on a course-by-course basis described above feeds into the continuous improvements efforts completed by each AAU that propose curriculum and course enhancements. Any improvement and enhancement to the BASc courses has a direct positive impact on the BET programs where curriculum is shared. Thus, the program is always under continued improvement to remain in line with accreditation requirements.

E. NEW OR REVISIONS TO EXPERIENTIAL LEARNING/CO-OP COMPONENT ONLY (Senate Co-op Policy)

Not applicable. No coop option for this program at this time.

PROGRAM DEVELOPMENT COMMITTEE
MAJOR PROGRAM CHANGES
FORM B

APPENDIX A – BUDGET SUMMARY SHEET

Contact the Office of Quality Assurance for assistance in completing this form.
Tuition Fee and Funding Level (Program Weight) Assessed by Ministry (sections 4&5)

Projections of Enrolment, Expenditures and Revenues (enrolments over 5 years)						
Year	**1**	**2**	**3**	**4**	**5**	**Total**
Revenue						
Tuition income*						
Potential Provincial funding**						
Other sources of funding *(please list)*						
Total Revenue						
Expenses						
Additional Faculty member	0	0	0	0	0	0
Additional Staff/Technician	0	0	0	0	0	0
GA/TA***	0	0	0	0	0	0
External Examiners *(for graduate programs)*	0	0	0	0	0	0
Library Resources	0	0	0	0	0	**0**
New Facilities/Equipment	0	0	0	0	0	**0**
Facilities/Equipment Maintenance	0	0	0	0	0	**0**
Technology/CTL resources	0	0	0	0	0	**0**
Other expenses *(please list)*						
Total Expenses	**0**	**0**	**0**	**0**	**0**	**0**
Net Income						

*Estimate $xxx per full-time equivalent domestic undergraduate student; $xxx per full-time equivalent international undergraduate student; $xxxx per full-time equivalent domestic Masters student; $xxxx per full-time equivalent international Masters student; $xxxx per full-time equivalent domestic doctoral student; $xxxx per full-time equivalent international doctoral student.

**Estimate $xxx per full-time equivalent domestic undergraduate student; $xxx per full-time equivalent international undergraduate student; $xxxx per full-time equivalent domestic Masters student; $xxxx per full-time equivalent international Masters student; $xxxx per full-time equivalent domestic doctoral student; $xxxx per full-time equivalent international doctoral student.

***Estimate $xxx per GA/TA allocation

University of Windsor
Program Development Committee

5.2 **Bachelor of Applied Science in Civil Engineering Honours with Architecture Option (with/without Co-op) – Major Program Changes (Form B)**

Item for: **Approval**

Forwarded by: **Faculty of Engineering**

MOTION: That the Bachelor of Applied Science in Civil Engineering Honours with Architecture Option (Cooperative Education) major program change, be approved, and that the requirements for the Minor in Media Art History and Visual Culture be changed in accordance with the program/course change forms.^

^Subject to approval of the expenditures required.

Rationale/Approvals:

- The major program change has been approved by the School of Creative Arts Council (Feb 13, 2026), the Civil and Environmental Engineering Council (February 25, 2026), the Faculty of Engineering Coordinating Council (March 12, 2026) and Provost delegate (May 7, 2026)
- Provost Comments: The new pathway was seen as a promising direction with strong potential for student interest. There was also interest in considering a soft launch in Fall 2026. The interdisciplinary collaboration between the programs was identified as a key strength and an important feature to highlight in future promotion of the program.
- The proposed five-year Civil Engineering degree with an Architecture Option will create a distinctive and appealing pathway for prospective students who are interested in an integrated focus on engineering with architectural design, sustainability, and the built environment.
- The cross-disciplinary nature of the program may increase the attractiveness of UWindsor as a university choice.
- Students in the program may choose to complete their studies with or without co-op. They will also be eligible to graduate with a Minor in Media Art History and Visual Culture.
- Graduates of the program may choose to pursue a graduate degree in Engineering or follow the established VABE pathway to a Master of Architecture at Detroit Mercy.
- *See attached.*

PROGRAM DEVELOPMENT COMMITTEE
MAJOR PROGRAM CHANGES
FORM B

A. Basic Program Information

Faculty(ies)	Faculty of Engineering
Department(s)/School(s)	Civil and Environmental Engineering
Name of Program as it Will Appear on the Diploma (*e.g.*, Bachelor of Arts Honours Psychology with thesis)	Bachelor of Applied Science in Civil Engineering Honours with Architecture Option (Cooperative Education)
Proposed Year of Offering* [Fall, Winter, Spring]: **(subject to timely and clear submission)*	Fall 2027
Mode of Delivery:	In-person
Planned steady-state Student Enrolment (per section B.4.2)	15 additional students
Normal Duration for Completion:	5 years
Will the program run on a cost-recovery basis?	No

B. Major Program Changes - Overall Plan

B.1 Objectives of the Program/Summary of Proposal (QAF section 2.1.2.1; Ministry section 3)

Please provide a rationale for the proposed change, including a brief statement about the direction, relevance and importance of the revised program. Describe the overall aim and intended impact of the revised program. Describe the consistency of the revised program with the institution's mission, goals and objectives as defined in its strategic plan. (to view the strategic plan go to: www.uwindsor.ca/president)

The Department of Civil and Environmental Engineering in collaboration with the Visual Arts and the Built Environment (VABE) program in the School of Creative Arts proposes to offer a Civil Engineering Degree with Architecture Option (Cooperative Education). The degree option program would consist of the existing, core civil engineering program and option courses provided primarily by the VABE program.

INTRODUCTION and BACKGROUND

The disciplines of civil engineering and architecture have historically and professionally been aligned. Thematically, both disciplines emphasize the design process in which students' study how engineered civil works or architectural solutions address human habitation and community needs. Practically, both disciplines work collaboratively on multiple civil projects encompassing a broad range of professional infrastructure projects. Furthermore, key technical components, such the study of basic forces in structural elements, are shared in the early years of program study of either discipline.

With respect to choices university bound students make, students who have an interest in the built environment – particularly academically strong and curious ones – are often uncertain if they should choose civil engineering or architecture to study. The choice is significant because choosing one discipline versus the other reduces the opportunity to readily pursue the other discipline after the first degree is complete. Moreover, the study requirements generally prevent a student in one discipline from readily exploring the other discipline while in program.

RATIONALE

For students interested in both disciplines, studying or even exploring one discipline after the other, is a potentially risky and time-consuming venture because there is often no ready pathway between the two disciplines. For example, should a student wish to study architecture after studying civil engineering, the student must pursue additional introductory courses for the fundamental concepts in architecture, prepare a portfolio to apply to professional architecture schools, and then achieve a terminal master's degree in architecture. Unlike engineering, the Masters degree in architecture is deemed the necessary degree for professional practice.

Locally, our UWindsor advisors and representatives are often asked at open houses and outreach events what is the difference between civil engineering and architecture because prospective students are struggling to decide between the two. This strongly suggests that such prospects are struggling to recognize the differences between the two

disciplines, especially since there are similarities: both civil engineering and architecture overlap both technically and professionally. Should the prospect decide on architecture, we direct them to our colleagues in the Visual Arts and Built Environment (VABE) Program which currently offers a joint international initiative with the School of Architecture and Community Development at the University of Detroit Mercy. This current program offers a dual undergraduate degree in 4 years of study (General BA in Visual Arts and a BSc. Architecture) and a direct pathway to the Masters in Architecture. However, there remain prospective students who are undecided or uncertain, as well as prospects who wish to somehow explore both interests.

An alternative that allows civil engineering students to explore architecture should therefore attract students who might be undecided between both professional disciplines. This would serve to: 1) reinforce the attractiveness of UWindsor Engineering as their university of choice; and 2) because of the relative lack of such cross-discipline programs related to both civil engineering and architecture in Ontario and Canada, serve to attract more students from outside of the Windsor-Essex region to UWindsor.

RELEVANCE and IMPORTANCE

VABE has noted that they are at capacity and cannot accept more students into their program. However there are only two courses that would be taken by both VABE and Civil with Architecture option students, where this concern arises (VABE 1100 : Architectural Design I and VABE 1200: Architectural Design II). As is discussed below, this can be alleviated for the Civil/Architecture program with the addition of two sessional appointments to provide one additional section of each.

The additional students, however, trend as academically strong students and many already have senior high school physics. Students who lack the math and science pre-requisites to enter engineering normally do not pursue engineering; those who choose engineering later on can struggle to pre-qualify. However, because students who sought VABE normally have taken Physics, they are in a stronger position to consider studying engineering as an alternative choice. An analysis of five years of information showed that 70% of Ontario Secondary Students who applied to VABE and Engineering were eligible for admission academically to both programs. This did include students who were not Canadian citizens and thus were not eligible for VABE. Students that cannot be accepted into VABE because of resource or citizenship limitations could potentially consider civil engineering with an architecture option.

The VABE Program further requires that all program students be Canadian citizens so that they can cross the US-Canada border to study specific courses at Detroit Mercy. VABE therefore cannot accept students who are not yet full Canadian citizens. VABE reports that there are a notable number of applicants (10 to 20 students) to their program who potentially qualify but cannot be accepted. However, these students could be acceptable to engineering and, if necessary, would only have a limited number of high school equivalent pre-requisite courses to make up for entry to engineering.

From our current engineering enrolment perspective, the enrolment numbers for civil engineering have remained relatively flat in the last decade, typically hovering at about 50 students in each of years 2, 3, and 4. This is consistent with observed trends at civil engineering schools across Canada: interest in civil engineering studies remains flat or with low rates of increase. In addition, the recent addition of Mechatronics in our Engineering Faculty can spur additional interest in our existing Mechanical and Electrical programs. This spillover benefit, however, is unlikely to benefit enrolment in Civil or Environmental programs because of the differences in the disciplines.

Geographically, there are very limited engineering schools offering an undergraduate architecture option or specialization in Ontario. The University of Waterloo offers a full undergraduate degree in Architectural Engineering. Other universities, such as Carleton, offer a degree in Engineering-Architectural Conservation and Sustainability. Detroit Mercy also offers an Architectural Engineering Degree spanning 5 years. Should UWindsor offer a 5-year Civil Engineering degree with Architecture Option, it would be a unique program both in terms of program layout and degree classification in southwestern Ontario, and the province as a whole.

In addition, after completing the proposed Civil Engineering degree with Architecture Option, graduates could then pursue a Masters of Architecture at Detroit Mercy, leveraging the current pathway established for VABE students. This would add clarity and improve efficiency to the architectural application process and reduce uncertainty for interested students. This potential opportunity may also increase the attractiveness of UWindsor as a university choice because it provides for long term planning. To our knowledge, there are no existing pre-planned engineering-to-architecture pathways in Ontario (or Canada).

Finally, offering a Civil Engineering degree with Architecture Option provides a built-in "off ramp" for students who may be considering the option, but over time, decide they do not want to pursue it. Although this is an option stream, the degree is based on our current civil engineering curriculum. If students opt out of the architecture option, they would/can complete and graduate with a civil engineering degree.

B.2 Changes to Program Content (QAF Section 2.1.2.2)

Evidence that the revised curriculum is consistent with the current state of the discipline or area of study.

The revised curriculum retains all the elements of the Civil Engineering program, distributed over five years, and includes the core course requirements from the current VABE program offered at UWindsor. It is notable that our Civil Engineering program was recently awarded a 6V – the highest possible rating – by the Canadian Engineering Accreditation Board. The revised curriculum further leverages the existing agreement between the University of Detroit Mercy and VABE and provides a pathway to a Master's in Architecture, which is the terminal degree for architecture. Thus, a direct path is provided to potentially complete two professional degrees and to obtain the related professional designations. This clearly reflects the consistency of the proposed revisions with the current state of the disciplines.

B.2.1 Unique or Innovative Curriculum, Program Delivery, or Assessment Practices (QAF Section 2.1.1)

*State the unique or innovative curriculum, program delivery, or assessment practices distinguishing the revised program from existing programs elsewhere**, as appropriate.***

Architecture and civil engineering are closely related disciplines that work together to design and construct the built environment. Architects and civil engineers collaborate throughout the design and construction process, translating design intent into buildable, code-compliant solutions. Together, they integrate creativity and technical rigor to deliver structures that are visually compelling, structurally sound, sustainable, and responsive to social, environmental, and economic needs. To be successful in either career, one needs to understand the function of the other profession – something that is currently lacking in our (and most) civil engineering curriculums in Canada.

The proposed revised program is distinguished by its intentional integration of civil engineering and architecture within a single, cohesive curriculum. Unlike traditional programs where engineering and architectural studies are often siloed, this program embeds architectural design studios and related courses directly into the engineering sequence. Students engage in interdisciplinary learning that mirrors professional practice, requiring them to develop skills and knowledge related to structural performance, constructability, sustainability, and aesthetics simultaneously.

Although somewhat similar programs exist within Ontario (i.e., at Waterloo and Carleton), it is important to emphasize that both do not provide a potential, direct path to a Masters in Architecture.

B.2.2 Indigenous (First Nations, Métis, or Inuit) Content, Perspectives, or Material

*The University of Windsor is committed to building and sustaining stronger, more meaningful inclusive partnerships with Indigenous students, scholars, and communities. Indigenization of curriculum takes place in a larger context, including a requirement to respond to the four Calls to Action in education of the Truth and Reconciliation Report (2015) (page 1), the unique legal requirements of the Constitution Act 1982 (Sections 25, 35), the provincial legal requirements of the Ontario Human Rights Code, 1990, and provincial legislation Bill Pr36 (1967). In revising this program, **how** has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*

Please consider these prompt questions and additional Resources including disciplinary examples:

- *What **process** has your department/Faculty used to consider Indigenization?*
- ***How** have you considered the importance or relevance to the course/program?*
- *How has your department or faculty approached raising awareness for Indigenous knowledges in your area?*
- *What do the TRC and University Principles documents suggest relevant to your course?*
- *What have other similar courses/programs done that might be relevant to your course/program?*
- *In what ways could your course/program have flexibility to include new ways of learning, or content for Indigenous approaches or knowledges?*
- *What is your awareness of the history or background to approaches you are considering, such as the land acknowledgement? How have you developed your awareness?*
- *Which literatures, sources, or Indigenous Knowledge Holders have you consulted? (Please confirm you have permission to share any names, it may be helpful to have the person confirm the text if you will be submitting their name)*
- *Are you engaging in critical analysis of Settler Colonialism and/or Decolonization?*
- *Have you included the information in the other relevant areas in the PDC form such as learning outcomes and/or in the syllabus where appropriate?*

The proposed revised program retains all the requirements of the current Civil Engineering program. Thus, the proposed revised program will incorporate Indigenous content, perspectives, and material in a similar method. While not every course lends itself to the incorporation of the content or perspectives of Indigenous Peoples (IP), there are common core courses in the faculty where this is possible and can be utilized to study what is referred to as the "4Rs" of Indigenous research: Respect, Relevance, Reciprocity, and Responsibility in a way that is meaningful to students and relevant to course content.

The following information describes how the undergraduate engineering programs incorporates Indigenous content, perspectives, and material and what the Faculty of Engineering is doing to learn and grow in this area.

1. What process has your department/Faculty used to consider Indigenization?

The process the Faculty of Engineering has taken has been to create presentations that are provided to students in courses that are common to all B.A.Sc. programs in each year of study. These presentations discuss residential schools, Truth and Reconciliation, and colonialism. Following these presentations, students are assigned a writing assignment to reflect upon the information and discuss its relevance to them and/or the engineering profession. This approach has been taken to reinforce the fact that these issues are important to the engineering profession, regardless of discipline, as discussed below. This process was undertaken by the Associate Dean Academic, in communication with the Indigenization Learning Specialist within the Centre for Teaching and Learning.

GENG-1101 (Engineering 1) provides a presentation about residential schools, Truth and Reconciliation, and colonialism and assigns a reflection assignment for the first-year program, which is common to all engineering students. GENG-2101 (Engineering 2) provides a project in which students consider an engineering-focused issue facing an Indigenous community. GENG-3130 (Engineering Economics) includes a presentation on Indigenous issues, and students complete a related assignment. Capstone Design courses in the final year incorporate the Seventh Generation Principle into the decision-making process, encouraging design teams to consider the impacts of their design choices and materials on the next seven generations. This is a concept that is introduced in the first-year course GENG-1201 (Cornerstone Design).

2. How have you considered the importance or relevance to the course/program?

Engineering design is a topic that is part of the curricula throughout students' four years of study. A much-overlooked aspect of engineering design has historically been considering the environmental and social impacts of designs. This has contributed to the most pressing global issue: climate change. The Engineering profession can learn from

Indigenous ways of knowing, especially the appreciation that our current activities will impact, as IP believe, the next seven generations.

As well, Indigenization is relevant when we discuss ethics and equity issues within the profession and Canadian society. “Ethics and Equity” is one of 12 Graduate Attributes to be demonstrated by students graduating from an accredited Engineering program. Within this context, students are made aware of their responsibility to act equitably and ethically in their actions with their community, colleagues, clients, and society. The most important requirement within the Professional Engineers Ontario (PEO) Code of Ethics is to “regard the practitioner’s duty to public welfare as paramount” [1]. This duty lends itself to discussing respect for and collaboration with Indigenous communities when developing infrastructure and processes.

3. How has your department or faculty approached raising awareness for Indigenous knowledges in your area?
This is an area of weakness within the Faculty of Engineering. The initial process was created by the Associate Dean, Academic, without much involvement by faculty members. However, changes are being made to raise awareness. Through the Faculty's former Equity, Diversity and Inclusion Advisor, faculty members have been made aware of relevant presentations and workshops, e.g., events that were held on and around Orange Shirt Day as well as slides for instructors to use in their classes to provide information about Orange Shirt Day. The Faculty of Engineering Curriculum Committee has identified Indigenous knowledge as a topic that should be more thoroughly covered within all B.A.Sc. curricula. Previously, the Associate Dean, Academic, and the Undergraduate Programs Coordinator have enrolled in the short course "Pulling Together: A Guide for Curriculum Developers." All the instructors in the Faculty were also encouraged to attend the workshops to raise awareness. As part of each program's continuous improvement process, communications and discussions suggesting instructors to consider if, and how, their courses can include Indigenous content have occurred.

4. What do the TRC and University Principles documents suggest relevant to your course?
The process that the Faculty of Engineering is taking (described in the answer to question 1) affirms the spirit of the TRC Call to Action item 62(i), to create a "curriculum on residential schools, Treaties, and Aboriginal peoples' historical and contemporary contributions to Canada" [2]. As well, the University Principles document states that focus should be placed on learning outcomes. This is an activity that the Faculty has been working to implement for over a decade. Furthermore, the Faculty's current process of presenting information on residential schools, Truth and Reconciliation, and colonialism aligns with the principle "Recognize the importance of providing greater exposure and knowledge for non-Indigenous students on the realities, histories, cultures and beliefs of Indigenous people in Canada" [3]. Finally, the ELEVATE program provides funding and collaborative opportunities for Indigenous students in Engineering, which aligns with the principle of committing to "develop opportunities for Indigenous students" [3].

5. What have other similar courses/programs done that might be relevant to your course/program?
The Faculty of Engineering began by developing and implementing our own approach. We then began to explore what other engineering programs are doing across Canada. A grant was received on February 7, 2023, to fund research into the current practices within engineering programs across Canada. The research produced some recommendations that were part of two additional phases of work planned for the project. However, this work was being led by the Equity, Diversity, and Inclusion Advisor for the Faculty of Engineering. They left the University at the end of May 2024 and the position has not been filled.

6. In what ways could your course/program have flexibility to include new ways of learning, or content for Indigenous approaches or knowledges?
The answers to questions 1 and 2 have identified specific areas of the programs that are most relevant for the inclusion of Indigenous approaches or knowledge, i.e., in considering the environmental and social impacts of product and process designs, and when we discuss “ethics and equity” and respect for others, our community, and “regard the practitioner’s duty to public welfare as paramount” [1].

7. What is your awareness of the history or background to approaches you are considering, such as the land acknowledgement? How have you developed your awareness?

As a whole, the Faculty's awareness is limited. Some faculty members are better informed than others, but this is another area of weakness. The former Equity, Diversity and Inclusion Advisor in Engineering, who left us recently, had begun providing relevant resources and workshops to faculty members. Indigenous issues are part of these materials. For example, slides were prepared and provided to all instructors to include in our classes to make students aware of Orange Shirt Day, what it is and why it is important, and to advertise events that occurred on Orange Shirt Day.

8. Which literatures, sources, or Indigenous Knowledge Holders have you consulted? (Please confirm you have permission to share any names, it may be helpful to have the person con-firm the text if you will be submitting their name)

We have met with the Indigenization Learning Specialist, Jaimie Kechego, to review our process and the presentations that are provided to students. This has been an iterative process; we have been learning and improving as the process develops, and we will continue to make changes as we learn. We have met with Mr. Cory Jones, the President of Neegan Burnside, an Indigenous-owned engineering and environmental consulting company. Mr. Jones has provided a lecture to fourth-year students about his experiences in delivering infrastructure to Canadian Indigenous communities. As well, the Faculty of Engineering invited Mr. Randy Herrmann, Director of the Engineering Access Program at the University of Manitoba, to provide a workshop about enabling Indigenous students' success in engineering.

PEO has recently published an issue of its official publication, Engineering Dimensions, about Indigenous engineering firms, Indigenizing engineering, and Indigenous pathways to engineering. This literature provides an Ontario-based foundation for our research into the current state of the profession and approaches taken by other institutions.

In 2025, the Canadian Society for Civil Engineering (CSCE) embarked on a 1-year project to address Indigenizing the Civil Engineering Curriculum. The project is on going, and the first year results will be reviewed and shared in mid-2026. All Heads and Chairs of civil engineering departments across Canada participate as part of the CSCE, including the current head of our Civil and Environmental Engineering Department here at UWindsor.

9. Are you engaging in critical analysis of Settler Colonialism and/or Decolonization? Have you included the information in the other relevant areas in the PDC form (such as learning outcomes) or in the course syllabus where appropriate?

No, we have not performed this critical analysis. Much more learning needs to occur for those within the Faculty who are developing the curricula to better understand what decolonization looks like within engineering. This is a project that will begin with educating ourselves; the Associate Dean, Academic, and the Undergraduate Programs Coordinator took the six-week course "Pulling Together: A Guide for Curriculum Developers" offered by the University of Windsor and taught by Jaimie Kechego. Faculty members have been encouraged to also participate in similar workshops and courses.

10. Have you included the information in the other relevant areas in the PDC form (such as learning outcomes) or in the course syllabus where appropriate?

As noted above, this is included in the syllabi in the following ways: GENG-1101 Engineering 1 is the first-year course that provides a presentation about residential schools, Truth and Reconciliation, and colonialism and assigns a reflection assignment for the first-year program, which is common to all engineering students. GENG-2101 Engineering 2 is the second-year course that provides a project in which students consider an engineering-focused issue facing an Indigenous community. GENG-3130 Engineering Economics is the third-year course that provides a presentation about Indigenous issues and students complete an assignment. Capstone Design is the fourth-year course that incorporates the Seventh Generation Principle into the decision-making process for design teams to consider the impacts of their design choices and materials on the next seven generations. This is a concept that is introduced in the first-year course GENG-1201 Cornerstone Design.

References
1. Government of Ontario. "R.R.O. 1990, Regulation 941: GENERAL under Professional Engineers Act, R.S.O. 1990, c. P28." January 1, 2023. https://www.ontario.ca/laws/regulation/900941
2. Truth and Reconciliation Commission of Canada. "Truth and Reconciliation Commission of Canada: Calls to Action." 2015. https://ehprnh2mwo3.exactdn.com/wp-content/uploads/2021/01/Calls_to_Action_English2.pdf
3. Universities Canada. "Universities Canada principles on Indigenous education." June 29, 2015. https://www.univcan.ca/media-room/media-releases/universities-canada-principles-on-indigenous-education/

B.3 Changes to Program Name and Degree Designation/Nomenclature (QAF Section 2.1.2.1; Ministry section 1)

Explanation of the appropriateness of the proposed new name and degree designation for the program content and current usage in the discipline

The proposed name (i.e., Bachelor of Applied Science in Civil Engineering Honours with Architecture Option (Cooperative Education)) is transparent. It communicates that Civil Engineering is the primary feature of the program, but also distinguishes it from the existing program. Identifying the inclusion of architecture as an option to an existing program, rather than a new program altogether, is important for engineering program accreditation. Furthermore, the naming is consistent with degree option programs in other engineering departments (e.g., mechanical engineering with automotive option).

B.4 Demand for the Modified Program

B.4.1 Student and Market Demand/Societal Need (Ministry section 1)

Describe the tools and methodology used to conduct the market assessment and/or societal need assessment in support of the proposed program revisions, where appropriate. Provide quantitative evidence of student and market demand for the revisions to the program, both within and outside the local region (e.g., responses/statistics from surveys, etc.), where appropriate.
Provide evidence of societal need for graduates of the revised program, including expert input. Proposers should consider, where appropriate, the:
1) dimensions of the societal need (e.g., socio-cultural, economic, scientific, or technological),
2) the geographic scope of the societal need (e.g., local, regional, provincial, or national), and/or
***3)** the anticipated duration of, and trends in societal need.*
Append any comments or letters solicited from potential employers and/or relevant professional associations regarding the need for graduates of the revised program within their organization and field of endeavour.

A preliminary analysis reveals that 63 students applied to both Engineering and VABE for Fall 2025 entry to the University of Windsor. We conservatively estimate that 10 students would select the Civil Engineering with Architecture Option program, with the intake increasing to potentially 15 students once the program is established.

B.4.2 Estimated Enrolments (Senate Co-op Policy)

Provide details on projected enrolments for the first five years of operation of the revised program in the following table. (If the program is in operation, use actual and projected data.) For Co-op programs: normally an annual intake of a minimum of 20 students is required for new co-op programs or programs with other experiential learning component.

	First Year of Operation		Second Year of Operation		Third Year of Operation		Fourth Year of Operation		Fifth Year of Operation/Steady-state enrolment overall)	
	Domestic	Int'l	Domestic	Int'l	Domestic	Int'l	Domestic	Int'l	Domestic	Int'l

In the regular program (non-co-op)										
In the co-op/ experiential learning stream (if applicable)	5	5	10	10	15	15	20	20	25	25

Based on available data, the values in the above table assume:

- The intake is divided between both domestic and international applicants. The ratio between the two categories may change.
- That all students will initially prefer to enroll in the coop stream.
- An additional 10 students are enrolled each successive year. The numbers shown assume cumulative students through all applicable years as the program runs from years 1 through 5.
- That all students will complete the program in the specified 5-year curriculum schedule.
- Coop positions are preferably related to architectural, building, or other constructed infrastructure positions. However, coop positions for this option program may also come from existing coop opportunities for civil and environmental engineering students.

B.4.3 Duplication (Ministry section 3)

Indicate whether the revised program is in a new area of study or delivery for the institution. List similar programs at the same credential level offered by other institutions in the Ontario university system. Resources to identify similar programs offered in Ontario include https://www.ontariouniversitiesinfo.ca/programs and https://www.universitystudy.ca/search-programs/.
If the revised program is similar to others in the Ontario university system, demonstrate that societal need and student demand justify the duplication. Identify innovative and distinguishing features of the revised program in comparison to similar programs

The revised program merges two existing areas of study to form a unique option for our students.
As identified above, two similar programs exist within Ontario:

- Architectural Engineering, University of Waterloo
- Engineering – Architectural Conservation and Sustainability, Carleton University

The proposed revised program is unique in that it provides a more structured, potential path to a Masters of Architecture, a Professional Engineer license, and to register as an Architect. The proposed revised program is not simply a duplication of existing programs: it offers a desirable combination of degree skill sets not widely available in Ontario. The geographic separation between Windsor, Waterloo, and Ottawa further supports the uniqueness of the proposed revised program.

B.5 Resources

*[The resource impact of a proposal is almost never neutral. Note: Proposers must also complete and submit the attached **Budget Summary** (Appendix A) with the revised program proposal.]*

B.5.1 Resources Available

B.5.1.1 Resources In Support of the Revised Program and Resource Implications for Other Campus Units or Programs (QAF section 2.1.2.6)

Describe, in general terms, all faculty and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the revised program. Please do not name specific individuals in this section. Describe the impact of the planned utilization of existing human, physical and financial resources (within and outside the unit) on other existing programs in the department or at the university. Provide an assessment of the reliance of the revised program on existing resources from other campus units and include evidence that there are adequate resources available and committed to the revised program to sustain the quality of scholarship produced by undergraduate students as well as graduate students' scholarship and research activities. Consider, for example: faculty resources (within and outside the unit), existing courses (within and outside the unit), equipment or facilities outside the proposer's control, external resources requiring maintenance or upgrading using external resources, staff support, library, teaching and learning support, information technology support, laboratory access, student support services, space, equipment, facilities, GA/TA

The proposed revised program is supported by existing faculty and staff resources across the Civil Engineering and VABE programs within the university. Faculty expertise, course offerings, laboratories, and administrative support already exist and are currently underutilized in Civil Engineering. The Civil Engineering program has sufficient instructional capacity to support the revised curriculum and anticipated enrollment growth. Within VABE, limited additional instructional support may be required (e.g., sessional lecturers to support design-studio activities). Regardless, there will be negligible additional demands from what would be required for additional enrollment in the Civil Engineering or VABE program independently.

The program will introduce modest administrative duties related to coordination and oversight. These responsibilities are relatively minor and can be absorbed within existing departmental structures. No new administrative positions or significant increases in workload are anticipated.

B.5.1.1a Faculty Expertise Available and Committed to Supporting the Revised Program (QAF section 2.1.2.6; 2.1.2.7; 2.1.2.8)

Assess faculty expertise available and actively committed to supporting the revised program. Provide evidence of a sufficient number and quality of faculty who are qualified to teach and/or supervise in and achieve the goals of the revised program and foster the appropriate academic environment, and of the appropriateness of this collective faculty expertise to contribute substantially to the revised program including student mentoring.
Include:

- *evidence of the quality of the faculty (e.g., qualifications, funding, honours, awards, research, innovation and scholarly record)*
- *evidence that faculty have the recent research or professional/clinical expertise needed to sustain the revised program, promote innovation, and foster an appropriate intellectual climate*
- *any other evidence that the revised program and faculty will ensure the intellectual quality of the student experience*

The proposed revised program is supported by existing faculty whose collective expertise aligns directly with the program's goals and learning outcomes. Participating faculty are drawn from the two existing programs and include tenured and tenure-track members with established records of teaching, research, and student supervision. As no new courses are being proposed, and the core courses remain identical to the existing programs, the faculty expertise is best reflected in the quality of the existing programs. For example, Civil and Environmental Engineering recently received a 6V rating from the Canadian Engineering Accreditation Board – which is the highest possible rating.

B.5.1.1b Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program (QAF section 2.1.2.6)

Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the revised program and the associate plans to ensure the sustainability of the revised program and quality of the student experience.

The capacity of the VABE program, as it relates to the proposed revised program, is primarily limited by two design-studio courses (i.e., VABE 1100-51, VABE 1200-51). The National Architectural Accrediting Board limits the number of students per section: any enrollment growth necessitates offering additional sections. There are two probable scenarios:

- The VABE design studios are under capacity: In this case, the proposed program could be utilized to supplement enrollment to bring VABE up to full capacity without hiring sessional lecturers.
- The VABE design studios are at capacity: In this case, two sectional lecturers would be required to satisfy the design-studio requirements. Note that this would allow for additional enrollment through VABE directly (which currently receives more applicants than can be admitted), as well as through the proposed revised program. Thus, the proposed revised program may act as a catalyst to boost VABE capacity simultaneously and ensure that any additional section offerings are filled.
- With respect to Engineering, the current faculty complement should be sufficient to meet the additional demands from proposed program. However, because the students will have an expanded program, Engineering may need to retain an occasional sessional lecturer should there be gap in course offerings, especially if overall enrolment in either the general Civil Engineering or the proposed Architecture Option exceeds current enrolment capacities.

As the proposed revised program involves a curriculum of over 50 courses, the possibility of hiring two additional sessional lecturers represents a reasonable and modest reliance on these positions. Note that other courses may be taught by adjunct, limited term or sessional faculty, but this is an existing dependency that is not amplified by the proposed revised program. In fact, increasing the enrolment overall will make such offerings more economical.

B.5.1.1c Graduate Faculty Qualifications and Supervisory Loads (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Explain how supervisory loads will be distributed, and describe the qualifications and appointment status of faculty who will provide instruction and supervision in the revised program.

Not applicable.

B.5.1.1d Financial Assistance for Graduate Students (where appropriate) (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Where appropriate to the revised program, provide evidence that financial assistance for graduate students will be sufficient to ensure adequate quality and numbers of students.

Not applicable.

B.5.1.2 Anticipated New Resources (QAF sections 2.1.2.6)

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the revised program.*

There are no anticipated new resources.

B.5.1.3 Planned Reallocation of Resources and Cost-Savings

Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the revised program. (e.g., streamlining existing programs and courses, deleting courses, etc.)

All the impacted courses are offered as part of other existing programs which are constrained by accreditation requirements. There are no anticipated, further are no further opportunities to minimize costs.

B.5.1.4a Additional Resources Required – Resources Requested (QAF section 2.1.2.6f)

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to run the revised program.If not applicable, write n/a.*

Faculty:	Two sessional lecturers to offer an additional section of VABE 1100-51 and VABE 1200-51. One additional sessional lecturer in Engineering during years 2 and 3 of a program cycle.
Staff:	N/A
GA/TAs:	N/A

B.5.1.4b Additional Institutional Resources and Services Required by all Affected Areas or Departments (QAF section 2.1.2.6f)

*Describe all **additional institutional resources and services** required by all affected areas or departments to run the revised program, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance. If not applicable, write n/a.*

Library Resources and Services:	N/A
Teaching and Learning Support:	N/A
Student Support Services:	N/A
Space and Facilities:	N/A
Equipment (and Maintenance):	N/A

C. Program Details

C.1 Admission Requirements (QAF section 2.1.2.5)

Describe new or changes to

- *program-specific admission requirements,*
- *selection criteria,*
- *credit transfer,*
- *arrangements for exemptions or special entry, and*
- *alternative admission requirements, if any, for admission into the program, such as minimum average, additional language requirements or portfolios, recognition of prior work or learning experience (and how this will be assessed), etc.*

Students will follow the admission requirements for Civil and Environmental Engineering:
ENG4U, MHF4U, SCH4U and SPH4U required. MCV4U is strongly recommended.
A minimum average of 74% in all math and science courses (except Biology/SB14U) is also required.

There are no new or revised admission requirements that differentiate the proposed revised program from the existing requirements for Civil and Environmental Engineering. The admission requirements for VABE and Civil and Environmental Engineering are nearly identical with three exceptions: Chemistry is required for all Engineering disciplines. VABE has a minimum average of 75% (vs. 74% in Civil Engineering) and, VABE cannot accept international students. Engineering can accept international students. Currently, the requirement to attend the University of Detroit Mercy prohibits VABE from accepting international students or permanent residents. Within the proposed revised program, attending Detroit Mercy is not required, and therefore provides a pathway for access to VABE for international students and permanent residents. The difference in minimum average is considered inconsequential, and requiring Chemistry exceeds the requirements for VABE.

Comparison Chart

Admission Requirements	**VABE**	**Civil Engineering**
Required Courses	Advanced Functions Physics	Advanced Functions Physics

	English	English Chemistry
Recommended Courses	Calculus and Vectors	Calculus and Vectors
Minimum Average	75%	74%
Citizenship	Canadian	No restriction

C.1.1 Admission Requirements and Attainment of Learning Outcomes (QAF section 2.1.2.5)

Demonstrate that admission requirements for the revised program are sufficient to prepare students for successful attainment of the intended learning outcomes (degree level expectations) established for completion of the program.

As the current admission requirements from VABE and Civil Engineering are being maintained or surpassed, there is no concern that students will not be well positioned to achieve the intended learning outcomes.

C.2 Program Curriculum Structure/Program of Study (QAF sections 2.1.2.3 and 2.1.10)

NB: For graduate programs, provide evidence that each graduate student in the revised program is required to take a minimum of two-thirds of the course requirements from among graduate-level courses. Include course requirements with course numbers and course names. Identify in BOLD and STRIKETHROUGH the changes to program requirements.

Bachelor of Applied Science in Civil Engineering with Architecture Option

Note: Students completing this program are eligible for a Minor in Media Art History and Visual Culture and are encouraged to add this minor through self-service.

Degree Requirements
Total Courses: 52 courses (plus 3 work terms for Co-op students)

Year 1 - Fall (Semester 1)
GENG-1101. Engineering 1
GENG-1102. Engineering Graphics
MATH-1720. Differential Calculus
MATH-1270. Linear Algebra (Engineering)
PHYS-1400. Introductory Physics I

Year 1 - Winter (Semester 2)
GENG-1110. Engineering Mechanics I
GENG-1201. Cornerstone Design
GENG 1202. Introductory Electrical and Computer Engineering
MATH-1730. Integral Calculus
CHEM-1103. Topics in General Chemistry

SECOND YEAR
Students must have completed at least eight (8) of their 1st year courses before being allowed to register into the 2nd year courses.

Year 2 - Fall Term (Semester 3)
GENG-2101. Engineering II
MATH-2780. Vector Calculus
PHYS-2100. Topics in Physics
VABE-1100. Architecture Design 1 (double weighted)
VSAR-1070. Introduction to Drawing and Painting

Year 2 - Winter Term (Semester 4)
GENG-2220. Probability and Statistics for Engineering
MATH-2790. Differential Equations
VABE-1200. Architecture Design 2 (double weighted)
MACS-2150. Art and Visual Culture

Year 2 - Summer Term (Co-op students only)
Students must complete at least three co-op work terms over four possible terms
GENG-2980. (Work Term I) (Optional)

THIRD YEAR
Students must have completed all the 1st year courses and at least nine (9) of their 2nd year courses before being allowed to register into the 3rd year courses.

Year 3 - Fall (Semester 5)
GENG-2102. Programming and Algorithms
GENG-2180. Mechanics of Deformable Bodies
GENG-3130. Engineering Economics
MACS-2050. Art and Material Culture
Architecture Theory (one of the following: MACS-2200 Art Architecture and Public Spaces, MACS-2500 Stories of the City, MACS-4520 Urban Ecologies)

Year 3 – Winter Term (Semester 6)
CIVL-2190. Materials in Civil and Environmental Engineering
CIVL-3520. Stress Analysis
ENVE-2200. Environmental Concepts and Applications in Engineering
VSAR-2330. Sculpture
PHIL-1100. Introduction to Western Philosophy

Year 3 - Summer Term (Co-op students only)
Students must complete at least three co-op work terms over four possible terms
GENG-2980. Work Term I (Optional)
OR
GENG-3980. Work Term II (Optional)

FOURTH YEAR
Students must have completed all the 1st year and 2nd year courses and at least six (6) of their 3rd year Engineering courses.

Year 4 – Fall Term (Semester 7)
CIVL-2200. Civil Engineering Information Systems
CIVL-3510. Fluid Mechanics
CIVL-3530. Structural Analysis
CIVL-3540. Concrete Design
CIVL-3650 Transportation and Traffic Engineering
VABE-4600 Space in Acoustics and Light

Year 4 - Winter Term (Co-op students Only)
Students must complete at least three co-op work terms over four possible terms.
GENG-3980. Work Term II (Optional)

OR
GENG-4980. Work Term III (Optional)

Year 4 - Summer (Semester 8)
CIVL-3610. Masonry and Concrete Design
CIVL-3550. Geotechnical Engineering I
CIVL-3640. Structural Steel Design
CIVL-4710. Hydrology

1 course from the following list:
CIVL-3620. Finite Element for Analysis and Design
CIVL-4940. Transportation Systems Analysis
CIVL-4950. Building Information Technology
CIVL-4960. Wood Design
CIVL-4970. Life Cycle Thinking
ENVE-3630. Water and Wastewater Treatment,
ENVE-4810. Sustainability in Engineering
ENVE-4820. Hydrogeological Engineering
ENVE-4811. Climate Change and Infrastructure

FIFTH YEAR
Students cannot register into any 5th year courses until they have completed nine (9) 4th year Civil Engineering courses and all courses from 1st, 2nd and 3rd year.

Year 5 – Fall Term (Co-op students only)
Students must complete at least three co-op work terms over four possible terms
GENG-4980. Work Term III (Optional)

Year 5 - Winter (Semester 9)
CIVL-4000. Capstone Design
ENVE-4710. Water Distribution and Wastewater Collection Systems
CIVL-3630. Geotechnical Engineering II
CIVL-4720. Hydraulics
MACS-3910. Contemporary Architecture

Year 5 - Summer (Semester 10)
CIVL-4000. Capstone Design
CIVL-4810. Highway Design and Construction
CIVL-4820. Plan and Construction Management

2 courses from the following list:
CIVL-3620. Finite Element for Analysis and Design
CIVL-4920. Advanced Topics in Structural Design
CIVL-4940. Transportation Systems Analysis,
CIVL-4950. Building Information Technology
CIVL-4960. Wood Design
CIVL-4970. Life Cycle Thinking
ENVE-3630. Water and Wastewater Treatment
ENVE-4810. Sustainability in Engineering
ENVE-4820. Hydrogeological Engineering
ENVE-4811. Climate Change and Infrastructure

Technical Elective courses offered every year:
CIVL-4920. Advanced Topics in Structural Design
CIVL-4970. Life Cycle Thinking
ENVE-3630. Water and Wastewater Treatment
ENVE-4810. Sustainability in Engineering
ENVE-4820. Hydrogeological Engineering
ENVE-4811. Climate Change and Infrastructure

Technical Elective courses offered every other year:
CIVL-3620. Finite Element for Analysis and Design
CIVL-4940. Transportation Systems Analysis
CIVL-4950. Building Information Technology
CIVL-4960. Wood Design

Courses used to calculate the major average are the same as the current Civil Engineering Degree major average calculations.

Description of thesis option (if applicable): Not applicable.

Minor in Media Art History and Visual Culture
Two from the following:
VSAR-1050 Studio Practice and Ideas/Space
VSAR-1060 Intro to Elements of Art and Principles of Design **or VABE-1100 Architecture Design 1**
VSAR-1070 Intro to Drawing and Painting
VSAR-1080 Studio Practice

MACS-2050 Art and Material Culture
MACS-2150. Art and Visual Culture

two additional MACS courses.
MACS-XXXX
MACS-XXXX

Does the revised program include new courses?:
____ Yes [All new course proposals must be submitted on PDC Form Ds and submitted for approval with the revised program proposal (PDC Form B)]
X No. [All courses come from the existing Civil Engineering and VABE curriculum.]
If yes, list all new courses:

C.2.1 Co-op/Experiential Learning Component (if applicable)

Provide requirements for the co-op/experiential learning component, including length of co-op/experiential learning component and credit weight, and explain how they differ for students who complete the experiential learning option and those who opt not to. **Ensure that learning outcomes for the co-op/experiential learning component have been included in the learning outcomes table. (C.4)*

Co-op will remain optional with identical requirements to the Civil Engineering program with the exception that the duration of the program is five years which potentially allows an optional additional work term:

Year Two Application Requirements:
- Year one cumulative average of 60% and no more than one outstanding grade below 50% .

Continuation Requirement:

- Year one cumulative average of 70% is required for students directly admitted to co-op for automatic continuation in year 2 co-op. A student with a year 1 average of 60 – 69.9% must re-apply for co-op in year two.
- Years two, three, four and five must maintain a cumulative average of 60% and no more than one outstanding grade below 50% .

A notable difference is that students in the proposed revised program have an additional year to complete the requirements. This provides students with additional flexibility on when to complete the requirements, or possibly to obtain an additional co-op placement if permitted.

Is the completion of the experiential learning/co-op component a requirement of the revised program?

Co-op remains optional and would be administered the same as coop for the to the existing Civil Engineering program.

C.2.2 Suggested Sequencing for Revised Program (Optional)

Provide suggested program sequencing for each year of the revised program (including any work/study/placement sequencing), ensuring that all pre-requisites are met in the sequencing. For Co-op programs: The proposed work/study sequence or alternative arrangement should allow for year-round availability of students for employers (if appropriate) and, wherever possible, should meet the guidelines for co-operative education as set out by the Canadian Association for Co-operative Education (see Policy on Co-op Programs).

Year	Fall	Winter	Summer
1	Study	Study	Off
2	Study	Study	Work/Off
3	Study	Study	Work/Off
4	Study	Work/Off	Study
5	Work/Off	Study	Study

In the above schedule, a student may select to complete their work terms in three of the four work/off terms in Year 2, 3, 4 and 5. The Coop Office has already been notified of the proposed program and coop sequence presented above.

C.2.3 Program Structure/Requirements and Attainment of Learning Outcomes (QAF section 2.1.2.6)

Describe how the structure and requirements of the revised program are sufficient to prepare students for successful attainment of the intended program-level learning outcomes and the associated undergraduate or graduate degree level expectations.

The program integrates the learning outcomes of the current Civil Engineering and VABE programs. Consequently, students participating in the proposed revised program will exceed the preparation provided by students participating in either program independently. Of particular note is that the proposed revised program provides a direct pathway to two professional designations. Students can choose to pursue either or both upon graduation.

C.3.2 For All Program Proposals

C.3.2.1 New or Changes to for Continuation in Program

Minimum average requirements for continuation in the program. Must conform to the regulations for standing required for continuation in the program as set out in Senate policy. Specify new or changes to standing required for continuation in the experiential learning option or co-op option of the revised program, where applicable.

There are no changes to the standing requirements for continuation in program. It will be maintained identical to Civil Engineering.

[Without Co-op: 60% and with Co-op: 70% at the end of Year 1]

C.3.2.2 New or Changes to Standing Required for Graduation

Minimum average requirement to graduate in the program.
Must conform to the regulations for standing required for continuation in the program as set out in Senate policy.
Specify new or changes to standing required for graduation in the experiential learning option or co-op option of the revised program, where applicable.

There are no changes to the standing required for graduation. It will be maintained identical to Civil Engineering.

C.4 NEW OR CHANGES TO LEARNING OUTCOMES (Degree Level Expectations)(QAF section 2)
COMPLETE THIS TABLE FOR UNDERGRADUATE PROGRAMS

Civil Engineering with Architecture Option (with/without Co-op)

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A UWindsor graduate will have the ability to demonstrate:	**COU-approved Undergraduate Degree Level Expectations**
A. Apply principles of natural sciences and engineering fundamentals in an inter-layered and integrated approach to engineering and architectural problems. Employ specialized engineering practices to analyze and design engineering systems and built environments. Integrate engineering, architectural, and contextual considerations when designing solutions for the built environment. *Co-op: Apply additional real-world experience gained through work placements to solve practical engineering problems*	A. the acquisition, application and integration of knowledge	1.Depth and Breadth of Knowledge 2.Knowledge of Methodologies 3. Application of Knowledge 5.Awareness of Limits of Knowledge
B. Explain why an experimental methodology is appropriate for a given problem. Conduct experiments and interpret the results to formulate valid conclusions. Select, create, modify, and navigate the limitations of computational and analytical methods to model and analyze engineering systems. Select, create, modify, and navigate the limitations of measuring instruments and testing equipment to collect data for analysis. Independently summarize, analyze, synthesize, and evaluate information from a wide variety of sources, including library	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)	1. Depth and Breadth of Knowledge 2. Knowledge of Methodologies 3. Application of Knowledge 5. Awareness of Limits Knowledge

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A UWindsor graduate will have the ability to demonstrate:	**COU-approved Undergraduate Degree Level Expectations**
methods, relevant codes/standards/regulations, and digital methods. Formulate questions and synthesize data to answer them. Distinguish between primary and secondary sources to identify appropriate kinds of resource material.		
C. Classify problems according to commonly used solution methods. Identify the necessary given and missing information, and assumptions when formulating solutions. Execute problem solutions and interpret the results. Evaluate the relevance and quality of different solutions to design problems. Apply conceptual, perceptual, and analytical approaches to design solutions.	C. critical thinking and problem-solving skills	1. Depth and Breadth of Knowledge 2. Knowledge of Methodologies 3. Application of Knowledge 5. Awareness of Limits of Knowledge
D. Apply mathematical methods and modelling techniques to analyze problems. Evaluate the economic and financial performance of an engineering and architectural activity, including life-cycle costs and benefits. Estimate, organize, and manage engineering and architectural activities to be within time and budget constraints Interpret and apply conventions used in building representations (e.g., plans, sections, and technical schematics). Explain the functioning of basic construction principles, building types, and structural methods. Effectively use interactive multimedia tools and resources.	D. literacy and numeracy skills	4. Communication Skills 5. Awareness of Limits of Knowledge
E. Describe the role of the engineer and architect in protecting and promoting the public welfare both locally and globally.	E. responsible behaviour to self, others and society	5. Awareness of Limits of Knowledge 6. Autonomy and Professional Capacity

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A UWindsor graduate will have the ability to demonstrate:	**COU-approved Undergraduate Degree Level Expectations**
Employ professional behaviour in individual interactions with others (Examples: proper etiquette in e-mail and other communications, adherence to submission deadlines, courteous interactions with students and staff). Identify legal issues relevant to engineering and/or architectural activities. Analyze the societal and environmental impacts of engineering and/or architectural activities to propose strategies that mitigate potential negative effects. Apply ethical principles, including the PEO Code of Ethics, to engineering and architectural practice. Identify equity issues within the engineering and architectural profession and Canadian society, with an emphasis on the role of Aboriginal peoples, women, visible minorities, persons with disabilities, and sexual minorities Apply conservation ecology methodologies and principles to the built environment.		
F. Compose, deliver, and assess written and oral communications both from and for a variety of audiences. Prepare, integrate and interpret graphical communications used in written and visual formats (Examples: data depicted through graphs, charts, and tables; other engineering drawings). Present design ideas and solutions using graphic and verbal communication in collaborative design settings (e.g., charrettes). Review, discuss, and debate scholarly literature and research among student peers, faculty, students, and stakeholders (Also applicable to B). *Co-op: Receive, incorporate and act on feedback acquired in professional settings.*	F. interpersonal and communications skills	4. Communication Skills 6. Autonomy and Professional Capacity

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A UWindsor graduate will have the ability to demonstrate:	**COU-approved Undergraduate Degree Level Expectations**
G. Share and define individual contributions to a team effort. Employ interpersonal skills to promote team dynamics. Integrate individual contributions into coherent team reports or presentations. Work with public and private stakeholders in planning and design processes of the built environment. *Employ professionalism in their workplace settings.*	G. teamwork, and personal and group leadership skills	4. Communication Skills 6. Autonomy and Professional Capacity
H. Generate problem statements and design objectives. Evaluate design alternatives while considering constraints and stakeholder needs (e.g., health and safety, codes and standards, economic, environmental, social, and cultural factors). Refine and advance designs to their final end state. Apply creative and critical design processes when developing solutions. Apply and evaluate art and architectural theory, building regulatory techniques, and environmental policy.	H. creativity and aesthetic appreciation	2. Knowledge of Methodologies 3. Application of Knowledge 6. Autonomy and Professional Capacity
I. Identify the benefits of becoming a member of a professional society. Describe the importance and necessity of ongoing study to maintain and expand acquired skills.	I. the ability and desire for continuous learning	6. Autonomy and Professional Capacity

C.4.3 Mode of Delivery (QAF section 2.1.2.2)

Demonstrate that the proposed modes of delivery are appropriate to facilitate students' successful attainment of the new or revised program learning outcomes. Discuss online vs. face-to-face (e.g., lecture, seminar, tutorial, lab) modes of delivery, as well as specialized approaches intended to facilitate the acquisition of specific skills, knowledge, and attitudes.

The mode of delivery will be face-to-face, identical to the existing Civil Engineering and VABE programs. As the learning outcomes are identical, and no new courses are being offered, maintaining the current mode of delivery is most practical. The current mode of delivery has been successful in both existing programs.

D. MONITORING AND EVALUATION (QAF section 2.1.2.4)

Describe and explain the appropriateness of the proposed methods of assessing student achievement given the new or revised intended learning outcomes and degree level expectations.

The proposed revised program will be assessed on a continual basis via the external accreditation process conducted for VABE and Civil Engineering (i.e., NAAB and CEAB).

D.1 Plan for Documenting and Demonstrating Program Quality and Student Performance (QAF section 2.1.2.4)

Describe the appropriateness of the plans to monitor and assess:

- *the overall quality of the revised program;*
- *whether the revised program is achieving in practice its proposed objectives;*
- *whether its students are achieving the program-level learning outcomes;*
- *the perceived student workload and student experience; and*
- *how the resulting information will be documented and subsequently used to inform continuous program improvement.*

See the response to the previous section.

E. NEW OR REVISIONS TO EXPERIENTIAL LEARNING/CO-OP COMPONENT ONLY (Senate Co-op Policy)

[Complete this section ONLY if the program change includes new or revisions to the experiential learning/co-op component involving paid or unpaid placements.]

E.1 Experiential Learning Component and Nature of Experience (Ministry section 2)

Describe the new or revised experiential learning component and the nature of the experience (field placement, required professional practice, service-learning, internship, etc.)

The experiential learning experience via the coop program remains the same as with the current civil engineering with cooperative education option.

E.2 Knowledge and Skills Brought to the Workplace

Provide a description of the knowledge and skills that students will be bringing to the workplace/placement based on the revised curriculum.

In addition to the current knowledge and skills civil engineering students bring to current workplace placements, future students in this proposed program will bring additional skills relevant to architectural practices.

E.3 Evidence of Availability of Placements (Ministry section 2)

*Provide evidence of the availability of **sufficient** good quality positions both inside and outside the Windsor area for the new or revised co-op/experiential learning option (including names and contact information of potential employers, written statements or surveys from potential employers; and employer feedback concerning the hiring of graduates). Provide a summary of the types of positions that would be suitable at each level of work-term. How will these placements/opportunities be developed? [NB: For co-op programs, the majority of Ontario placements should qualify for the Co-op Education tax credit. See Policy on Co-op Programs for more details.]*

The availability and suitability of coop placements should align current placement trends in the existing civil engineering cooperative option program. Current coop placement opportunities that are relevant to infrastructure and the built environment would be useful and meaningful. In addition, coop opportunities with firms that feature architectural and civil engineering services can be further pursued given the additional skills of the students. Finally, the potential, additional coop term provides greater flexibility in securing the minimum number of coop placements.

E.4 Supervision of Placements (QAF section 2.1.2.6)

If required, explain the provision of supervision of new or revised experiential learning opportunities.

The supervision should remain the same as in the current civil engineering cooperative option program.

E.5 Fees Associated with Experiential Learning Component

Provide information on the fees associated with the new or revised experiential learning component, if applicable. NB: all proposed fees must be approved as part of the University's operating budget, via the Ancillary Fee Committee.

Any associated fees should remain the same as in the current civil engineering cooperative option program.

E.6 AAU Council Approval of New or Revised Co-op Component

Please obtain signatures for the following statement for new/revised co-op programs.

Before a determination can be made regarding the feasibility of a co-op program, there must be a clear indication of support for the program from the AAU. Support implies that the area will provide ongoing departmental funding to establish a co-op faculty representative who will liaise with the Centre for Career Education in the operation of the program and that the area will ensure that an adequate number of faculty members in the AAU or program contribute to the co-operative education program by grading work-term reports, attending and evaluating work-term presentations, assisting in the job development process, establishing a departmental co-op committee as appropriate, etc. (see Policy on Co-op Programs, Summary of AAU/Faculty Member Involvement in a Co-operative Education Program, for more on the role of the AAU and faculty members). This commitment must be agreed to by the AAU Council at a meeting at which the development or modification of a co-op program was considered and approved.

*Signed agreement by the AAU Head, acting as chair of the AAU Council, that AAU members support the development of the co-op program.**

Name of AAU Head (typed or e-signature):_ ***Edwin Tam Approved by CEE Council February 25, 2026***_____
[Approval of the program by the AAU Council shall constitute agreement and support by AAU members of the development of the co-op program.]

Name of Director of the Co-op Services (typed or e-signature):__***Kerri Zold, Support given on February 19, 2026***_
[Approval of the program by the Director of Co-op Services shall constitute agreement and support of the development of the co-op program.]

The Cooperative Education Office has approved this program in principle.

PROGRAM DEVELOPMENT COMMITTEE
MAJOR PROGRAM CHANGES
FORM B

E.7 Guidelines for the Establishment of New/Revised Co-op Programs: CHECKLIST

Final Overview: Please complete this checklist to ensure that the Senate-approved guidelines for the establishment of a new co-op program have been addressed.

Does the proposal:

☒include the endorsement of/involvement by the Centre for Career Education?
☒adequately describe the academic program?
☒include a strong rationale for co-operative education?
☒list the types of positions suitable to students at the junior, intermediate and senior work-term?
☒articulate the possibility for international placements at a later point?
☒provide for a reasonable proportion of international students to obtain appropriate placement opportunities?
☒include a plan to monitor the availability of work placements on an ongoing basis?
☒articulate specific learning outcomes (degree level expectations) and co-op requirements?
☒include a commitment by the department to adequately support the program by funding a co-op faculty representative?:
☒include a commitment by the department to adequately support the program by ensuring that an adequate number of faculty members are willing to grade work term assignments, assist in the job development process, etc.?

Will the program:

☒attract a sufficient number of students including students from outside of the Windsor-Essex region (a minimum annual intake of 20 students enrolled in the co-op component)?
☒be able to attract and sustain an adequate number of positions of good quality both inside and outside of the Windsor-Essex region?
☒provide year-round availability of students to the workplace in some manner?
☒meet the requirements for accreditation by the Canadian Association of Co-operative Education (see guidelines)?

PROGRAM DEVELOPMENT COMMITTEE
MAJOR PROGRAM CHANGES
FORM B

APPENDIX A – BUDGET SUMMARY SHEET

Contact the Office of Quality Assurance for assistance in completing this form. [1]
Tuition Fee and Funding Level (Program Weight) Assessed by Ministry (sections 4&5)

Projections of Enrolment, Expenditures and Revenues (enrolments over 5 years)						
Year	**1**	**2**	**3**	**4**	**5**	**Total**
Revenue						
Tuition income*[2]						
Potential Provincial funding**						
Other sources of funding *(please list)*						
Total Revenue						
Expenses						
Additional Faculty member [3]						
Additional Staff/Technician						
GA/TA***						
External Examiners *(for graduate programs)*						
Library Resources						
New Facilities/Equipment						
Facilities/Equipment Maintenance						
Technology/CTL resources						
Other expenses *(please list)*						
Total Expenses						
Net Income						

*Estimate $xxx per full-time equivalent domestic undergraduate student; $xxx per full-time equivalent international undergraduate student; $xxxx per full-time equivalent domestic Masters student; $xxxx per full-time equivalent international Masters student; $xxxx per full-time equivalent domestic doctoral student; $xxxx per full-time equivalent international doctoral student.

**Estimate $xxx per full-time equivalent domestic undergraduate student; $xxx per full-time equivalent international undergraduate student; $xxxx per full-time equivalent domestic Masters student; $xxxx per full-time equivalent international Masters student; $xxxx per full-time equivalent domestic doctoral student; $xxxx per full-time equivalent international doctoral student.

***Estimate $xxx per GA/TA allocation

[1] Projections are being reviewed by the Faculty of Engineering Financial and Administrative Manager.

[2] Additional revenue projection would be calculated from estimated student intake multiplied by current tuition fee rates for full time undergraduate engineering students.

[3] As previously stated, VABE would be projected to require two additional sessional instructors should the current VABE program capacity be filled as normally expected. Civil Engineering may require an occasional sessional if there is programming gap.

University of Windsor
Program Development Committee

*5.2.1: **SoCA - Summary of Minor Course and Calendar Changes (Form E)**

Item for: **Information**

Forwarded by: **Faculty of Art, Humanities and Social Sciences**

Form History *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

Date of Modification	Approval Body Modifying	Reason for Modification

INSTRUCTIONS ARE PROVIDED IN SHADED AREAS. DO NOT WRITE IN SHADED AREAS.

ALL SECTIONS OF THIS FORM ***MUST*** BE COMPLETED. **LEARNING OUTCOMES MUST BE PROVIDED FOR LISTED COURSES WHERE** THERE ARE **NO OFFICIAL LEARNING OUTCOMES FOR THE COURSE** IN THE PDC/SENATE RECORD (check the CuMA database at https://ctl2.uwindsor.ca/cuma/public/)

Confirmation of Consultation with AAUs That Will Be Affected, in Major Ways, by the Changes

AAU Consulted	AAU Head/Directors	Date Consulted	Supportive	
			Yes	No

Please specify to which calendar *[Undergraduate or Graduate]* **the changes will be made. Include the effective date*** *[Fall, Winter, Spring, 20XX]***.** **(subject to timely and clear submission)* **These changes require no new resources.**	Undergraduate Fall 2026

A. Proposed Course Calendar Revisions

Please provide the current and the proposed new course information by cutting and pasting from the current undergraduate or graduate online calendar (www.uwindsor.ca/secretariat/calendars) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining. For contact hour/laboratory requirement changes which do not always appear in the calendar, please type in the current information and clearly mark deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining. Example: **CHEM-1001. University Senates ~~– Role and Power~~** This course explores the history, role, and power of Senates in Canadian universities. ~~(Also offered as BIOC-1001.)~~ (Prerequisite: CHEM-1000.) ~~2 lecture hours and 1 tutorial hour per week~~ **3 lecture hours/week**

VSAR-2330. Sculpture
An introduction to the various concepts and processes of contemporary sculpture practice. Issues will be addressed through group discussion and practical application. (Prerequisites: VSAR-1060 **or VABE 1100 for students in the Civil Engineering with Architecture Option**) (Lab fees may apply.)

VABE-1100. Architectural Design I
An introduction to the fundamental skills and critical concepts of visual perception and production common to all areas of 2-dimensional image-making. Basic principles of composition and design, light and pigment-based colour theory, as these apply to painting, photo-based processes, and print production. Their use and application will be explored within the contemporary art context. Class projects may involve interdisciplinarity between these media. Studio assignments are combined with related critical theory, historical practice and current strategies. The lab is intended to introduce students to design concept of form, space, composition, in two and three dimensions, and how

they relate to human experiences. Students are introduced to the principles of design and the design process as a foundation for architectural design. (6 lecture hours and 6 laboratory hours per week.) (6.0 credit course) (Credit will not be granted for VSAR-1060 if taken subsequently to VABE-1100.) (Restricted to students in the Visual Arts and the Built Environment program **and the Civil Engineering with Architecture option program**.) (This is an experiential learning course).

A.1 Experiential Learning Categories

Does the proposed course revision include the addition or deletion of an experiential learning component? For definitions go to: https://www.uwindsor.ca/cces/1423/experiential-learning-definitions

☒ **No** - the revision(s) does (do) not include the addition or deletion of experiential learning component(s).

☐ **Yes** - the revision(s) include(s) the addition or deletion of experiential learning component(s). Check all that apply:

Experiential Learning Categories	**Addition**	**Deletion**
applied research	☐	☐
Capstone	☐	☐
Clinic	☐	☐
co-op	☐	☐
community service learning	☐	☐
creative performance or exhibit (*for visual and performing arts*)	☐	☐
Entrepreneurship	☐	☐
field experience or site visit	☐	☐
field work	☐	☐
industry/community consulting project	☐	☐
interactive simulations	☐	☐
internship – full-time	☐	☐
internship – part-time	☐	☐
professional practicum	☐	☐
research project	☐	☐
study abroad	☐	☐
Labs	☐	☐

A.2 <u>Are any of the courses being deleted currently required in one or more programs?</u> *(if no courses are being deleted, check "No".)*

____ Yes [A minor program change proposal (PDC Form C) or major program change proposal (PDC Form B) must be submitted <u>with</u> the summary of minor course and calendar changes (PDC Form E)]

____ No. If yes, list all courses that are being deleted and the programs in which they are currently required:

B. Learning Outcomes for the Courses Listed above <u>where there are no official learning outcomes for the course</u>.

VSAR-2330. Introductory Sculpture. Learning Outcomes were last updated April 19, 2022.
VABE-1100. Architectural Design I. No learning outcomes.

University of Windsor
Program Development Committee

5.3: **Biology – Major Program Change(Form B)**

Item for: **Approval**

Forwarded by: **Faculty of Science**

MOTION 1: That the Honours Biological Science be renamed Honours *Biology* and that the following three streams Life Sciences, Animal Biology and Aquatic Biology, be approved.^

MOTION 2: That the Minor in Biological Sciences be renamed Minor in *Biology*.^

^Subject to approval of the expenditures required.

Rationale/Approvals:

- The major program changes have been approved by the Department of Biology Council, the Science Program Development Committee (SPDC) (as delegated by the Faculty of Science Coordinating Council), and the Provost delegate (May 7, 2026).
- Provost Comments: Appreciation was expressed for the work undertaken to streamline the required courses and strengthen the program's appeal to prospective students.
- On March 13, 2026 the Department of Integrative Biology was renamed Department of Biology and the Honours Biological Science programs are being renamed "biology" to better reflect this change.
- The three new streams: Life Sciences, Animal Biology and Aquatic Biology will attract new students, highlight the expertise in our department, and help the University of Windsor be competitive with other postsecondary institutions who offer programs in life sciences, animal biology and aquatic biology.
- Many students are also uncertain which courses to choose in order to prepare for common career paths such as health sciences such as medicine, dentistry, optometry, physician assistant studies, veterinary medicine, teaching, environmental consulting, and research; the new streams will help guide them into making these decisions.
- *See attached.*

PROGRAM DEVELOPMENT COMMITTEE
MAJOR PROGRAM CHANGES
FORM B

A. Basic Program Information

Faculty(ies)	Science
Department(s)/School(s)	Biology
Name of Program as it Will Appear on the Diploma (*e.g.*, Bachelor of Arts Honours Psychology with thesis)	Honours Biology – Life Sciences Stream Honours Biology – Animal Biology Stream Honours Biology – Aquatic Biology Stream
Proposed Year of Offering* [Fall, Winter, Spring]: **(subject to timely and clear submission)*	Fall 2026
Mode of Delivery:	Face-to-face
Planned steady-state Student Enrolment (per section B.4.2)	500+
Normal Duration for Completion:	4 years
Will the program run on a cost-recovery basis?	no

B. Major Program Changes - Overall Plan

B.1 Objectives of the Program/Summary of Proposal (QAF section 2.1.2.1; Ministry section 3)

Please provide a rationale for the proposed change, including a brief statement about the direction, relevance and importance of the revised program. Describe the overall aim and intended impact of the revised program. Describe the consistency of the revised program with the institution's mission, goals and objectives as defined in its strategic plan. (to view the strategic plan go to: www.uwindsor.ca/president)

Rationale, overall aim and intended impact of the revised program

The biological sciences are very broad, with a focus that ranges from biomolecules all the way to entire ecosystems. Due to this, biological sciences programs vary considerably in their focus – from offering targeted curriculum in ecology, animal biology, aquatic biology, and the life sciences, to curriculum that offers a broad overview of the field. While the breadth and flexibility of our current broad biological sciences undergraduate program attract many high school students, it can also be overwhelming to others. Many are uncertain as to which courses they should take to prepare for common career goals like health sciences (e.g., medicine, dentistry, optometry, physician's assistant), veterinary medicine, teaching, environmental consulting, and research. The proposed changes to the biological sciences program aim to create different pathways to these common career goals, enhance student experience, and attract and retain more students. Currently, we lose students to institutions like the University of Guelph for example, when they wish to study animal biology. While we offer similar courses at the University of Windsor and can offer these students an undergraduate program in biology that could prepare them to submit a competitive application to veterinary medicine, students opt to go to an institution where they can graduate with a degree in animal biology, as a perceived clear path to their goal.

The proposal in this application seeks to:

- Increase flexibility in our undergraduate program in the biological sciences by reducing the number of required courses;
- Change the name of our undergraduate program from Honours in Biological Sciences to Honours in Biology to better align with competitor schools, and with preferences from applicants and current students; and
- Introduce three streams to the Honours Biology undergraduate program following multiple requests for these areas of study from prospective students at recruitment events: Life sciences, animal biology, and aquatic biology.

To implement these proposed revisions, the Department of Biology is not proposing the introduction of new courses. Instead, the revisions involve making use of already existing courses and packaging them into the three streams. Providing specific and targeted curricula under the umbrella of these streams will attract new students, highlight the

expertise in our department, and help the University of Windsor be competitive with other postsecondary institutions who offer programs in life sciences, animal biology and aquatic biology.

Consistency of revised program with the institution's mission, goals and objectives as defined in its strategic plan
In Aspire, Together for Tomorrow, the University of Windsor committed to six strategic priorities, and this proposal aligns with the following two:

- Ensuring high quality, relevant and just teaching, learning, and student experience for everyone
- Advancing bold, impactful research, scholarship, and creative activity

A scan of programs offered in the biological sciences at competitor schools (e.g., University Western Ontario, University of Guelph, Brock University, and York University) revealed the following:

- Most schools, with the exception of Brock University, are moving away from offering general degrees in the biological sciences.
- Instead, they offer undergraduate degrees in biology with an area of specialization.

To remain relevant, competitive and successful in our goal of ensuring high quality, relevant and just teaching, learning and student experience for everyone, the introduction of streams that provide students with the ability to specialize in one area of biology and graduate with a parchment that recognizes their choice is critical.

Moreover, creating areas of specialization in biology will help support students as they navigate the breadth of biology, providing more structured opportunities to engage in bold and impactful research with the internationally-recognized faculty in the Department of Biology.

B.2 Changes to Program Content (QAF Section 2.1.2.2)

Evidence that the revised curriculum is consistent with the current state of the discipline or area of study.

The revised curricula were developed in consultation with departmental experts in the disciplines along with pedagogical specialists. They are similar to those offered by other universities who have the expertise/facilities to provide them. Moreover, changes to program content do not include the introduction of new courses, but instead the packaging of existing courses into defined streams.

B.2.1 Unique or Innovative Curriculum, Program Delivery, or Assessment Practices (QAF Section 2.1.1)

*State the unique or innovative curriculum, program delivery, or assessment practices distinguishing the revised program from existing programs elsewhere**, as appropriate.***

N/A

B.2.2 Indigenous (First Nations, Métis, or Inuit) Content, Perspectives, or Material

*The University of Windsor is committed to building and sustaining stronger, more meaningful inclusive partnerships with Indigenous students, scholars, and communities. Indigenization of curriculum takes place in a larger context, including a requirement to respond to the four Calls to Action in education of the (2015) (page 1), the unique legal requirements of the Constitution Act 1982 (Sections 25, 35), the provincial legal requirements of the Ontario Human Rights Code, 1990, and provincial legislation Bill Pr36 (1967). In revising this program, **how** has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum? Please consider these prompt questions and additional Resources including disciplinary examples:*

- *What **process** has your department/Faculty used to consider Indigenization?*
- ***How** have you considered the importance or relevance to the course/program?*
- *How has your department or faculty approached raising awareness for Indigenous knowledges in your area?*
- *What do the TRC and University Principles documents suggest relevant to your course?*
- *What have other similar courses/programs done that might be relevant to your course/program?*

- *In what ways could your course/program have flexibility to include new ways of learning, or content for Indigenous approaches or knowledges?*
- *What is your awareness of the history or background to approaches you are considering, such as the land acknowledgement? How have you developed your awareness?*
- *Which literatures, sources, or Indigenous Knowledge Holders have you consulted? (Please confirm you have permission to share any names, it may be helpful to have the person confirm the text if you will be submitting their name)*
  - *Are you engaging in critical analysis of Settler Colonialism and/or Decolonization?*
  - *Have you included the information in the other relevant areas in the PDC form such as learning outcomes and/or in the syllabus where appropriate?*

The Department of Biology has committed to decolonizing and Indigenizing our teaching and research practices. We recognize that many of our courses and practices do not yet incorporate Indigenous knowledges or ways of knowing, and that we have much to learn and re-learn, and much work to do to successfully meet our commitment. To date, our efforts have been approached from different fronts. A curriculum review is currently underway, with Indigenization and decolonization as one of the key areas for inclusion/improvement. As part of this process, individual instructors have been working to identify aspects of courses that should include (or raise awareness) of Indigenous knowledges. We are excited to have welcomed an Indigenous Knowledge Connector, Clint Jacobs, who joined our department in January 2024. In Winter 2024, Clint designed and offered a new course for senior students entitled "Relationships with Nature", which filled to capacity in less than a week. In Fall 2024, he developed another course, "Using Native Plants to Restore Community", and it also filled to capacity in one week. These two courses were again offered in the 2025-2026 academic year. We are looking forward to continuing to invest in deeply relational work with him, as well as other Indigenous partners on campus and in the community.

Through our work on this journey, members of the Department of Biology have also secured grants to support work on Indigenizing and decolonizing our teaching and research practices. Dr. Tina Semeniuk obtained NSERC CREATE funding to create FishCAST, and a suite of micro-credentials, one of which is focused on Indigenous-Canada relations. Dr. Catherine Febria co-led with Clint Jacobs and Anneke Smit, the establishment of the National Urban Park hub. Catherine and Clint also created an Indigenous Youth Circle, and we look forward to working with them over the coming year to implement their proposal for Indigenizing the workplace. Dr. Isabelle Barrette-Ng, department head, is a co-PI on a CTL Curriculum Project Engagement (COPE) grant with Clint Jacobs, Dr. Phil Dutton and Dr. Dora Cavallo-Medved, and their work is focused on studying the Indigenization of curriculum across the Faculty of Science. Although we are proud of the work currently in progress, we realize that there is much more to do, and we are committed to learning, unlearning and re-learning.

We have committed to continuing to seek and make use of literature and other resources to help inform curricular revisions for specific courses, and in our programs. Previous PDC forms submitted by the Department of Biology describe some of the work we have already completed in this ongoing effort. We are committed to continuing this work for all courses in our curriculum.

B.3 Changes to Program Name and Degree Designation/Nomenclature (QAF Section 2.1.2.1; Ministry section 1)

Explanation of the appropriateness of the proposed new name and degree designation for the program content and current usage in the discipline

(1) Change from Honours in Biological Sciences to Honours in Biology undergraduate program

A survey of competitor institutions revealed that most offer undergraduate programs in "biology" instead of "biological sciences". The change in name to Honours Biology is being made to maintain relevance considering competitor institutions, but also to help attract more undergraduate students to our program. The name "biology" aligns better with how the topic is taught in high schools and makes our program easier to find and consider for prospective applicants.

(2) Addition of three streams

Undergraduate programs at most competitor institutions, with the exception of Brock University, are moving away from offering general degrees in the biological sciences. Instead, they offer undergraduate degrees in biology with an area of specialization. The three streams (Life sciences, Animal biology, Aquatic biology) will offer students the opportunity to select an area of biology in which to specialize, and to have their work in that area officially recognized on their diploma at graduation.

B.4 DEMAND FOR THE MODIFIED PROGRAM

B.4.1 Student and Market Demand/Societal Need (Ministry section 1)

Describe the tools and methodology used to conduct the market assessment and/or societal need assessment in support of the proposed program revisions, where appropriate. Provide quantitative evidence of student and market demand for the revisions to the program, both within and outside the local region (e.g., responses/statistics from surveys, etc.), where appropriate. Provide evidence of societal need for graduates of the revised program, including expert input. Proposers should consider, where appropriate, the:

1) dimensions of the societal need (e.g., socio-cultural, economic, scientific, or technological),
2) the geographic scope of the societal need (e.g., local, regional, provincial, or national), and/or
3) the anticipated duration of, and trends in societal need.

Append any comments or letters solicited from potential employers and/or relevant professional associations regarding the need for graduates of the revised program within their organization and field of endeavour.

A multifaceted approach that relied on both primary and secondary data sources was used to conduct the market assessment for the proposed revisions to the biology undergraduate program. This approach supports the conclusion that there is evidence of student and market demand for the revised Honours Biology program and its three new streams.

Student survey data

Primary data on student demand and interest for the revised Honours Biology program and the three new streams were collected through surveys of prospective students in the Windsor-Essex region and students currently enrolled in the Honours Biological Sciences program (with or without thesis) at the University of Windsor.

57 prospective students completed our anonymous survey, which contained questions about what aspects were important to them when selecting a postsecondary institution to pursue an undergraduate degree in biology. 92% of survey respondents shared that the ability to specialize in a certain area of biology was important since they believed it would help them better achieve their career goals. When presented with seven different options for streams, the options selected, in order of greatest interest were: (1) Life Sciences, (2) Animal Biology, and (3) Aquatic Biology.

27 current undergraduate students enrolled in the Honours Biological Sciences program also completed our anonymous survey. 95% of survey respondents shared that they also wished that their parchment at graduation would specify the area in which they had specialized. When presented with the same options for streams as the prospective students, identical results were obtained.

Since the surveys were administered, we have remained in consultation with current undergraduate students through regular meetings with student representatives from the Biology Students' Union. Due to their interest and excitement in seeing these streams be implemented, they have helped guide the development of the curriculum of each of the three streams.

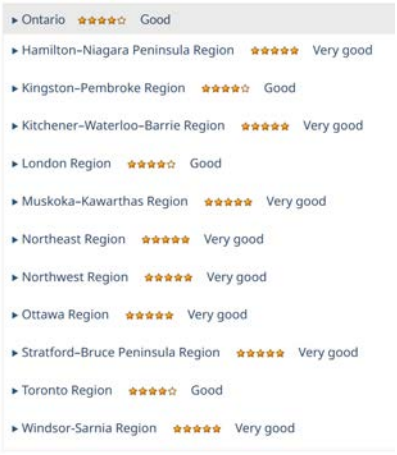
Labour market

Biology is an interdisciplinary field that encompasses the study of life from biomolecules to entire ecosystems. The design of the curriculum of each of the three streams was designed to ensure that students gain specialized knowledge

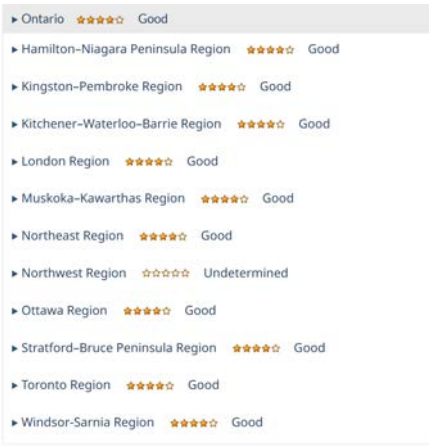
and skills in an area of biology as well as the ability to integrate this knowledge across the discipline. This approach helps ensure that students are prepared for a wide range of career opportunities as well as postgraduate programs.

Given the variety of career opportunities for our graduates, we completed a labour market analysis in Ontario to highlight a few of these opportunities, with the caveat that the list summarized below is not exhaustive.

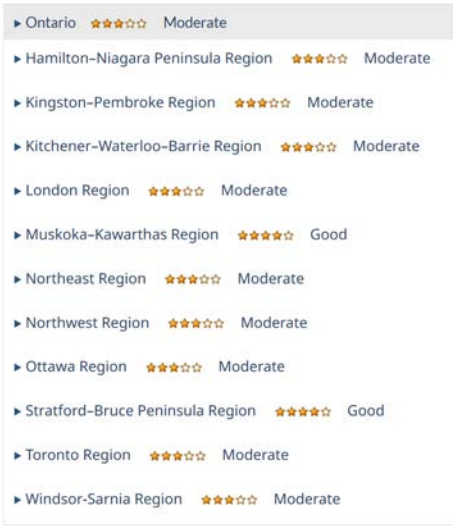
- Physician (reproduced from https://www.jobbank.gc.ca/outlookreport/occupation/24431)



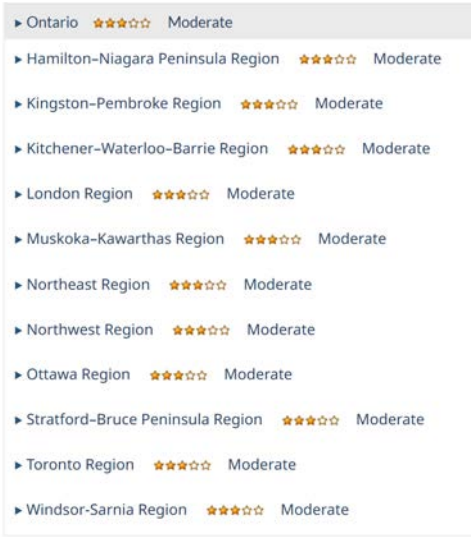
- Veterinarian (reproduced from https://www.jobbank.gc.ca/outlookreport/occupation/4127)



- Biology high school teacher (reproduced from https://www.jobbank.gc.ca/outlookreport/occupation/15876)



- **Biology professor (reproduced from https://www.jobbank.gc.ca/outlookreport/occupation/4619)**



To summarize, the curriculum included in the proposed biology streams aligns with the discipline and meets student demand. Based on the review of market demand and student interest, we believe that there is sufficient evidence for the creation of the streams. All courses within each stream are already being offered at the University of Windsor. The streams are simply packaging the courses in distinct areas of specialization that are appealing to prospective and current students.

B.4.2 Estimated Enrolments (Senate Co-op Policy)

Provide details on projected enrolments for the first five years of operation of the revised program in the following table.
(If the program is in operation, use actual and projected data.)

For Co-op programs: normally an annual intake of a minimum of 20 students is required for new co-op programs or programs with other experiential learning component.

The projected enrolment data provided in the table below correspond to the combined projected enrolment for students enrolling in the Honours Biology (with or without thesis), and those enrolling in the Honours Biology (with or without a thesis) in one of the three streams. While we project that over 80% of students in Biology will likely select either the Life Sciences or Animal Biology streams based on surveys of prospective and current students, students can elect to declare a stream when they first apply to the program, or transfer into a stream at any point prior to graduation. As such, we provided combined enrolment data below.

	First Year of Operation		Second Year of Operation		Third Year of Operation		Fourth Year of Operation		Fifth Year of Operation/Steady-state enrolment overall)	
	Domestic	Int'l	Domestic	Int'l	Domestic	Int'l	Domestic	Int'l	Domestic	Int'l
In the regular program (non-co-op)	480	15	485	15	490	15	495	15	500	15
In the co-op/ experiential learning stream (if applicable)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

B.4.3 Duplication (Ministry section 3)

Indicate whether the revised program is in a new area of study or delivery for the institution.

List similar programs at the same credential level offered by other institutions in the Ontario university system. Resources to identify similar programs offered in Ontario include https://www.ontariouniversitiesinfo.ca/programs and https://www.universitystudy.ca/search-programs/.

If the revised program is similar to others in the Ontario university system, demonstrate that societal need and student demand justify the duplication. Identify innovative and distinguishing features of the revised program in comparison to similar programs

Although undergraduate degree programs in biology are offered at nearly all Ontario universities, most institutions have developed streams, with a few offering streams in Life Sciences, Aquatic Biology and Animal Biology.

Ontario universities offering undergraduate programs in Life Sciences:
University of Toronto Mississauga
University of Toronto Scarborough
University of Waterloo
McMaster University
Queen's University

Ontario universities offering undergraduate programs in Animal Biology:
University of Guelph
Lakehead University

Ontario universities offering undergraduate programs in Aquatic Biology:
University of Guelph (marine and freshwater biology)
Ontario Tech University (marine biology)

The three streams in this proposal were carefully selected to be consistent with the state of the discipline in each of the three areas of biology, yet also offer a unique perspective on the area of study. Of note, the Life Sciences stream offered at the University of Windsor differs from most other life sciences programs at different Ontario universities. Life Sciences at the University of Windsor is offered as part of a biology undergraduate degree program rather than a standalone program and as such will provide greater flexibility to our students. There are very few programs in animal biology in Ontario, which presents challenges for students interested in pursuing a career in veterinary medicine or in animal research. Lastly, few programs in aquatic biology also exist in Ontario. The Animal Biology stream at the University of Windsor will offer several advantages to students over those at the University of Guelph and at Ontario Tech University:

- Our proximity to the Great Lakes and association with the internationally-renowned GLIER research centre will provide students with access to world-class facilities and hands-on learning opportunities not offered by other institutions.
- Dr. Nigel Hussey, an internationally-renowned great white shark researcher, is working to open the Tancook Marine Field Station in Nova Scotia. Once opened, the Tancook Marine Field Station will welcome undergraduate students for field courses. These courses will be unique to the University of Windsor.

Despite any similarities that may exist between the three proposed new streams and other biology programs in Ontario, it is important for the University of Windsor to expand its programming to attract more prospective students, which is one of the President's four pillars. The University of Windsor is a key regional university in this part of the province, and new streams will increase public awareness of our strengths and undergraduate training possibilities within this region. Without the addition of these three new streams, students will likely choose to attend other institutions that offer programs in these popular areas of biology.

B.5 RESOURCES

*[The resource impact of a proposal is almost never neutral. Note: Proposers must also complete and submit the attached **Budget Summary** (Appendix A) with the revised program proposal.]*

B.5.1 Resources Available

B.5.1.1 Resources In Support of the Revised Program and Resource Implications for Other Campus Units or Programs (QAF section 2.1.2.6)

Describe, in general terms, all faculty and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the revised program. Please do not name specific individuals in this section. Describe the impact of the planned utilization of existing human, physical and financial resources (within and outside the unit) on other existing programs in the department or at the university. Provide an assessment of the reliance of the revised program on existing resources from other campus units and include evidence that there are adequate resources available and committed to the revised program to sustain the quality of scholarship produced by undergraduate students as well as graduate students' scholarship and research activities. Consider, for example: faculty resources (within and outside the unit), existing courses (within and outside the unit), equipment or facilities outside the proposer's control, external resources requiring maintenance or upgrading using external resources, staff support, library, teaching and learning support, information technology support, laboratory access, student support services, space, equipment, facilities, GA/TA

With fewer required courses than the current Honours Biological Sciences program, our proposed revised Honours Biology program provides more flexibility to students wishing to complete the program. The three new streams provide a pathway for students wishing to study biology to specialize in the life sciences, animal biology or aquatic biology. Courses that make up the revised Honours Biology program and the three new streams are offered regularly within the current academic calendar. As such, no anticipated additional resources will be required beyond what is associated with natural enrollment growth over time. Most courses that make up the revised Honours Biology program and the three new streams are currently offered by the Department of Biology, with a small number of additional required courses from the Departments of Chemistry and Biochemistry, and Mathematics and Statistics. Students can also take courses from the Departments of Biomedical Sciences and Physics and the School of the Environment to complete

their program requirements. Students enrolled in the current Honours Biological Sciences are already currently taking these courses as they complete their program requirements, and, as such, no changes in resource implications are anticipated. It should be noted that students in any of the updated/proposed programs will have room for fewer BIOM courses than in the current Biological Sciences programs – see Appendix B for details. Any growth over time can be absorbed within current course offerings and faculty teaching loads. Consequently, there will be no negative impact on other programs.

Required core courses for the revised Honours Biology program and the three new streams are regularly taught by faculty members within various departments in the Faculty of Science. These faculty members have the current knowledge, expertise and skills to ensure that the curriculum of the program and streams can be delivered successfully. With the addition of one additional tenure-track assistant professor (currently recruiting with anticipated start date of September 1, 2026), the Department of Biology will be able to offer all core courses required for the revised program and three streams. The addition of another faculty member would allow the department to design and offer additional senior-level courses.

Students who choose to enroll in the revised Honours Biology program or in one of the three new streams will continue to make use of the same supports available to all students at the University of Windsor, including the Leddy Library, Centre for Teaching and Learning, Information Technology Services, and student services (e.g., central academic advising, career services, and mental health and wellness). Program-specific academic advising will continue to be offered by academic advisors within the Department of Biology. No negative impacts are anticipated on these units and additional resources will not be required to accommodate the revisions to our program.

No additional equipment, laboratories or facilities beyond those used by students in the current Honours Biological Sciences program will be needed, other than those needed to support anticipated growth over time. Additional GA/TA support may be required to handle program growth, but this will be based upon enrollment numbers.

B.5.1.1a Faculty Expertise Available and Committed to Supporting the Revised Program (QAF section 2.1.2.6; 2.1.2.7; 2.1.2.8)

Assess faculty expertise available and actively committed to supporting the revised program. Provide evidence of a sufficient number and quality of faculty who are qualified to teach and/or supervise in and achieve the goals of the revised program and foster the appropriate academic environment, and of the appropriateness of this collective faculty expertise to contribute substantially to the revised program including student mentoring.
Include:

- *evidence of the quality of the faculty (e.g., qualifications, funding, honours, awards, research, innovation and scholarly record)*
- *evidence that faculty have the recent research or professional/clinical expertise needed to sustain the revised program, promote innovation, and foster an appropriate intellectual climate*
- *any other evidence that the revised program and faculty will ensure the intellectual quality of the student experience*

All required courses for the revised Honours Biology program and the three new streams are offered by faculty in the Departments of Biology, Biomedical Sciences, Chemistry and Biochemistry, Mathematics and Statistics, and Physics, all of whom are experts that have doctoral degrees in their respective disciplines, as well as on-going engagement in research and scholarship. With the addition of one tenure-track assistant professor (search currently on-going; anticipated to start in September 2026), the Department of Biology should have the number of highly-qualified faculty to support the revisions in our program and the three new streams, and offer the required core courses that will allow students to successfully complete their degree requirements. The addition of an additional faculty member would allow the Department of Biology to design and offer additional senior-level courses.

The Department of Biology has a strong commitment to high quality research and training, and offers excellent learning environments. The department maintains a strong research and teaching profile with special expertise in ecology,

evolution, genetics, genomics, neuroscience, and physiology. Faculty members in the Department of Biology are internationally recognized experts in their field, with over $16 million in research funding from the tri-council and other sources. Many are also members of GLIER, and Dr. Trevor Pitcher is the director of FREC. The department has a strong network of expertise in tropical to temperate to polar field environments, diverse study species, state-of-the-art infrastructure managed by faculty and staff, equipment to facilitate collaborative field studies, as well as on-campus analytical facilities in the areas of genetics, genomics, transcriptomics, flow cytometry, and imaging. Taken together, the excellence of faculty research programs combined with access to world-class research facilities at the local, regional, provincial, national and international levels help to ensure that students in the revised Honours Biology program and the three new streams are provided with opportunities for hands-on, experiential learning that will prepare them to be sought-after leaders in the field. Moreover, in addition to research excellence, many faculty in the department are also recipients of teaching and mentorship awards including the Roger Thibert Teaching Excellence Award (highest teaching award in the Faculty of Science) and the 3M National Teaching Fellowship.

In summary, the revised program and the three new streams leverage existing personnel, infrastructure and financial resources without requiring additional commitments. These revisions will enhance the quality of student learning and the student experience.

B.5.1.1b Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program (QAF section 2.1.2.6)

Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the revised program and the associate plans to ensure the sustainability of the revised program and quality of the student experience.

In delivering the revised Honours Biology program and the three new streams, there is no anticipated reliance on adjunct, limited-term, and sessional faculty beyond what is already being used in the Department of Biology to offer all required BIOL courses.

B.5.1.1c Graduate Faculty Qualifications and Supervisory Loads (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Explain how supervisory loads will be distributed, and describe the qualifications and appointment status of faculty who will provide instruction and supervision in the revised program.

Not applicable

B.5.1.1d Financial Assistance for Graduate Students (where appropriate) (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Where appropriate to the revised program, provide evidence that financial assistance for graduate students will be sufficient to ensure adequate quality and numbers of students.

Not applicable

B.5.1.2 Anticipated New Resources (QAF sections 2.1.2.6)

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the revised program.*

We do not anticipate that there will be any new resources required to support the revised Honours Biology program, or the three new streams. We are currently recruiting for a tenure-track assistant professor to replace previous faculty who retired, with an anticipated start date of September 1, 2026. The revised Honours Biology program and the three new streams depend on courses that are offered regularly within the current academic calendar. Additional GA/TA support may be required to handle program growth, but this will be based upon enrollment numbers. An additional faculty member would help with designing and offering additional senior-level courses. However, required core courses can now be offered with our current faculty complement.

B.5.1.3 Planned Reallocation of Resources and Cost-Savings

Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the revised program. (e.g., streamlining existing programs and courses, deleting courses, etc.)

No reallocation of resources or cost-savings measures are required to support the revised Honours Biology program and the three new streams. The proposed revisions use the same suite of courses that are currently offered in the department, along with the same faculty complement and student support services. Due to this, there is no need to streamline or delete courses. The approach used in this proposal ensures efficiency since the revisions maximize the use of resources already committed to biology education in the Faculty of Science, while enhancing the quality of student experience.

B.5.1.4a Additional Resources Required – Resources Requested (QAF section 2.1.2.6f)

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to run the revised program. If not applicable, write n/a.*

Faculty:	N/A
Staff:	N/A
GA/TAs:	No additional GA/TA resources beyond what would be expected for growth.

B.5.1.4b Additional Institutional Resources and Services Required by all Affected Areas or Departments (QAF section 2.1.2.6f)

*Describe all **additional institutional resources and services** required by all affected areas or departments to run the revised program, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance. If not applicable, write n/a.*

Library Resources and Services:	N/A
Teaching and Learning Support:	N/A
Student Support Services:	N/A
Space and Facilities:	N/A
Equipment (and Maintenance):	N/A

C. Program Details

C.1 Admission Requirements (QAF section 2.1.2.5)

Describe new or changes to

- *program-specific admission requirements,*
- *selection criteria,*
- *credit transfer,*
- *arrangements for exemptions or special entry, and*
- *alternative admission requirements, if any, for admission into the program, such as minimum average, additional language requirements or portfolios, recognition of prior work or learning experience (and how this will be assessed), etc.*

There are no changes to the admission requirements. More specifically, admission to the Honours Biology (with or without thesis), Honours Biology with the Life Sciences stream (with or without thesis), Honours Biology with the Animal Biology stream (with or without thesis), and Honours Biology with the Aquatic Biology stream (with or without thesis) require the following:

- Advanced functions (MHF4U)
- Chemistry (SCH4U)
- Biology (SBI4U)
- English (ENG4U)

Calculus and vectors (MCV4U) is strongly recommended, but it is not required. Physics (SPH4U) is recommended, but not required.

Applicants require a minimum average of 70% of all attempted science and math courses.

Students will be able to apply directly from high school to the Honours Biology, Honour Biology with the Life Sciences stream, Honours Biology with the Animal Biology stream, and Honours Biology with the Aquatic Biology stream. Students may also transfer in and out of any of the four programs as this was considered carefully in the overall curriculum design.

Exemptions and credit transfers will be handled following current practices for the existing biological sciences programs. Students transferring from other institutions to upper levels of any of the four programs will be handled following current practices by the Registrar's Office.

C.1.1 Admission Requirements and Attainment of Learning Outcomes (QAF section 2.1.2.5)

Demonstrate that admission requirements for the revised program are sufficient to prepare students for successful attainment of the intended learning outcomes (degree level expectations) established for completion of the program.

The proposed admission requirements listed above are equivalent to current admission requirements for the existing and rigorous biological sciences undergraduate programs. In our internal program evaluations, these have been deemed sufficient preparation for successful completion of our undergraduate programs. The latest retention rates also lend support to this conclusion, with 87.2% of students continuing to second year in the Fall 2024 cohort.

C.2 Program Curriculum Structure/Program of Study (QAF sections 2.1.2.3 and 2.1.10)

NB: For graduate programs, provide evidence that each graduate student in the revised program is required to take a minimum of two-thirds of the course requirements from among graduate-level courses. Include course requirements with course numbers and course names.

Identify in BOLD and STRIKETHROUGH the changes to program requirements.

We are introducing greater flexibility in the biology undergraduate program (in addition to changing its name from "biological sciences" to "biology"). Moreover, we are introducing three new streams to the biology honours undergraduate program (previously known as "biological sciences"): life sciences, animal biology, and aquatic biology. Each of the three streams requires the following core courses: BIOL-1101, BIOL-1111, BIOL-2101, BIOL-2111, BIOL-2142, and BIOL-3022. BIOM-2131 is not required, but it will be strongly recommended in the biology program, and the life sciences and animal biology streams. In Appendix B, requirements are compared across the current and proposed programs, highlighting differences between them.

Calendar updates:

Honours **Biology** ~~Biological Sciences~~

~~Undergraduate students may be allowed, with the consent of the instructor, to take one graduate course for credit.~~

Degree Requirements
Total courses: forty.
(a)~~ twenty courses, including the~~ "~~Core courses~~ BIOL-1101, BIOL-1111, BIOL-2101, BIOL-2111, ~~BIOM-2131, and~~ BIOL-2142 **and BIOL-3022**.

(b) ~~and fourteen~~ **twelve** ~~other~~ additional ~~Biology~~ (BIOL-and BIOM-~~)~~ courses **with at**~~. At~~ least ~~nine~~ **seven** courses ~~must be~~ at the 3000 level or above.***** ~~(Recommended: BIOL-2071 and BIOL-3022.~~
(c)~~(b)eight Science courses, including~~ CHEM-1100, CHEM-1110, ~~CHEM-2300, BIOC-2010~~, STAT-2910, MATH-1720 (or MATH-1760 **or MATH-1250 or MATH-1260**)~~*~~, ~~and at least one pair of both ESCI-1100 and ESCI-1111, or both PHYS-1300 and PHYS-1310, or both PHYS-1400 and PHYS-1410 (or PHYS-1310), or both COMP-1047 or COMP-2067 and COMP-2057, or both COMP-1400 and COMP-1410, or both ESCI-1130 and ESCI-2400~~
(d)~~(c) six~~ **ten** additional Science courses including additional ~~courses in Biology~~ **BIOL and/or BIOM courses with a maximum of six BIOL and/or BIOM courses**. At least two of these courses must be at the 3000 level or above. ******
(e) ~~(d)~~ four courses from Arts/Languages or Social Sciences, with at least one from each
(f) ~~(e) two~~ **four** courses from any area of study.

*** BIOM-2131 is strongly recommended.**
**** CHEM-2300 and BIOC-2010 are strongly recommended.**

Courses used to calculate the major average are: courses listed under requirement (a), and any other BIOL and BIOM courses taken.

Honours **Biology** ~~Biological Sciences~~ with Thesis

~~Undergraduate students may be allowed, with the consent of the instructor, to take one graduate course for credit.~~

Degree Requirements
Total courses: forty.
(a)~~ twenty courses, including the "Core"~~ BIOL-1101, BIOL-1111, BIOL-2101, BIOL-2111, ~~BIOM-2131, and~~ BIOL-2142**, BIOL-3022, and BIOL-4904* or BIOM-4904*.**
(b)~~ and fourteen~~ **ten** ~~other~~ additional ~~Biology~~ (BIOL-and BIOM-~~)~~ courses **with at**~~. At~~ least ~~nine~~ **seven** courses ~~must be~~ at the 3000 level or above ******. (~~Recommended: BIOL-2071 and BIOL-3022~~.
(c)~~(b)eight Science courses, including~~ CHEM-1100, CHEM-1110, ~~CHEM-2300, BIOC-2010~~, STAT-2910, MATH-1720 (or MATH-1760 **or MATH-1250 or MATH-1260**)~~*~~, ~~and at least one pair of both ESCI-1100 and ESCI-1111, or both PHYS-1300 and PHYS-1310, or both PHYS-1400 and PHYS-1410 (or PHYS-1310), or both COMP-1047 or COMP-2067 and COMP-2057, or both COMP-1400 and COMP-1410, or both ESCI-1130 and ESCI-2400~~
(d)~~(c) six~~ **ten** additional Science courses including additional ~~courses in Biology~~ **BIOL-and/or BIOM- courses with a maximum of six BIOL and/or BIOM courses**. At least two of these courses must be at the 3000 level or above. *******
(e) ~~(d)~~ four courses from Arts/Languages or Social Sciences, with at least one from each
(f) ~~(e) two~~ **four** courses from any area of study.

Courses used to calculate the major average are: courses listed under requirement (a), and any other BIOL and BIOM courses taken.

* ~~Only students who have maintained a major average of 70% and a cumulative average of 60% will be considered for enrolment permitted to enroll in BIOL-4904 or BIOM-4904~~. Registration in BIOL-4904 and BIOM-4904 is competitive and requires the consent of the Course Instructor.
**** BIOM-2131 is strongly recommended.**
***** CHEM-2300 and BIOC-2010 are strongly recommended.**

Courses used to calculate the major average are: courses listed under requirement (a), and any other BIOL or BIOM courses taken.

Honours Biology – Life Sciences stream

Total courses: forty
Degree requirements:
(a) BIOL-1101, BIOL-1111, BIOL-2101, BIOL-2111, BIOL-2142, and BIOL-3022
(b) twelve additional BIOL/BIOM courses, including:

- **two of: BIOL-2040, BIOL-2050, BIOL-2071, BIOL-2080, BIOL-2480;**
- **two of: BIOL-3212, BIOL-3250, BIOL-3281, BIOL-4212, BIOL-4252, BIOL-4270, BIOL-4370, BIOL-4570;**
- **eight additional BIOL/BIOM courses with at least five courses at the 3000 level or above***

(c) CHEM-1100, CHEM-1110, CHEM-2300, BIOC-2010, STAT-2910, MATH-1720 (or MATH-1760, or MATH-1250 or MATH-1260), and two BIOC courses at the 3000 level or above.
(d) six additional Science courses.
(e) four courses from Arts/Languages or Social Sciences, with at least one from each area **
(f) four courses from any area of study

*** BIOM-2131 is strongly recommended**
**** PSYC-1150 and PSYC-1160 are recommended**

Courses used to calculate the major average are: Courses listed under requirement (a), and any other BIOL or BIOM courses taken.

Honours Biology – Life Sciences stream with thesis

Total courses: forty
Degree requirements:
(a) BIOL-1101, BIOL-1111, BIOL-2101, BIOL-2111, BIOL-2142, BIOL-3022 and BIOL-4904 or BIOM-4904*
(b) ten additional BIOL/BIOM courses, including:

- **two of: BIOL-2040, BIOL-2050, BIOL-2071, BIOL-2080, BIOL-2480;**
- **two of: BIOL-3212, BIOL-3250, BIOL-3281, BIOL-4212, BIOL-4252, BIOL-4270, BIOL-4370. BIOL-4570;**
- **six additional BIOL/BIOM courses with at least three courses at the 3000 level or above***

(c) CHEM-1100, CHEM-1110, CHEM-2300, BIOC-2010, STAT-2910, MATH-1720 (or MATH-1760, or MATH-1250 or MATH-1260), and two BIOC courses at the 3000 level or above.
(d) six additional Science courses
(e) four courses from Arts/Languages or Social Sciences, with at least one from each area ***
(f) four courses from any area of study

*** Registration in BIOL-4904 and BIOM-4904 is competitive and requires the consent of the Course Instructor.**
**** BIOM-2131 is strongly recommended**
***** PSYC-1150 and PSYC-1160 are recommended**

Courses used to calculate the major average are: Courses listed under requirement (a), and any other BIOL or BIOM courses taken.

Honours Biology – Animal Biology stream

Total courses: forty
Degree requirements:
(a) BIOL-1101, BIOL-1111, BIOL-2101, BIOL-2111, BIOL-2142, BIOL-3022, BIOL-3230, and BIOL-4262
(b) ten BIOL/BIOM courses including:

- **two of: BIOL-2040, BIOL-2050, BIOL-2480;**

- **two of: BIOL-3201, BIOL-3212, BIOL-3241, BIOL-3250, BIOL-3261, BIOL-4252, BIOL-4270, BIOL-4450;**
- **six additional BIOL/BIOM courses with at least five courses at the 3000 level or above***

(c) CHEM-1100, CHEM-1110, STAT-2910, MATH-1720 (or MATH-1760, or MATH-1250 or MATH-1260)
(d) ten additional Science courses, with a maximum of six BIOL and/or BIOM courses. At least two of these courses must be at the 3000 level or above.**
(e) four courses from Arts/Languages or Social Sciences, with at least one from each area
(f) four courses from any area of study

*** BIOM-2131 is strongly recommended.**
**** CHEM-2300 and BIOC-2010 are strongly recommended.**

Courses used to calculate the major average are: Courses listed under requirement (a), and any other BIOL or BIOM courses taken.

Honours Biology – Animal Biology stream with thesis

Total courses: forty
Degree requirements:
(a) BIOL-1101, BIOL-1111, BIOL-2101, BIOL-2111, BIOL-2142, BIOL-3022, BIOL-3230, BIOL-4262 and BIOL-4904 or BIOM-4904*
(b) eight BIOL/BIOM courses including:

- **two of: BIOL-2040, BIOL-2050, BIOL-2480;**
- **two of: BIOL-3201, BIOL-3212, BIOL-3241, BIOL-3250, BIOL-3261, BIOL-4252, BIOL-4270, BIOL-4450;**
- **four additional BIOL/BIOM courses with at least three courses at the 3000 level or above****

(c) CHEM-1100, CHEM-1110, STAT-2910, MATH-1720 (or MATH-1760, or MATH-1250 or MATH-1260)
(d) ten additional Science courses, with a maximum of six BIOL and/or BIOM courses. At least two of these courses must be at the 3000 level or above.***
(e) four courses from Arts/Languages or Social Sciences, with at least one from each area
(f) four courses from any area of study

***Thesis topic is expected to relate to animal biology. Registration in BIOL-4904 and BIOM-4904 is competitive and requires the consent of the Course Instructor.**

**** BIOM-2131 is strongly recommended.**
***** CHEM-2300 and BIOC-2010 are strongly recommended.**

Courses used to calculate the major average are: Courses listed under requirement (a), and any other BIOL or BIOM courses taken.

Honours Biology – Aquatic Biology stream

Total courses: forty
Degree requirements:
(a) BIOL-1101, BIOL-1111, BIOL-2101, BIOL-2111, BIOL-2142, BIOL-3022, BIOL-3241, BIOL-4241, and BIOL-4280
(b) nine BIOL courses, where at least five courses must be at the 3000 level or above, and including at least three courses from the following: BIOL-3212, BIOL-3230, BIOL-3250, and BIOL-4270
(c) CHEM-1100, CHEM-1110, STAT-2910, MATH-1720 (or MATH-1760, or MATH-1250 or MATH-1260)
(d) ten additional Science courses, at least two of which must be at the 3000 level or above, with a maximum of six BIOL and/or BIOM courses, and including at least one from the following: ESCI-2600, ESCI-3310, or ESCI-4500.*

(e) four courses from Arts/Languages or Social Sciences, with at least one from each area, and at least one from the following: ESTU-1100, PHIL-2270, PHIL-3290, or POLS-2120
(f) four courses from any area of study

*** CHEM-2300 and BIOC-2010 are strongly recommended.**

Courses used to calculate the major average are: Courses listed under requirement (a), and any other BIOL or BIOM courses taken.

Honours Biology – Aquatic Biology stream with thesis

Total courses: forty
Degree requirements:
(a) BIOL-1101, BIOL-1111, BIOL-2101, BIOL-2111, BIOL-2142, BIOL-3022, BIOL-3241, BIOL-4241, BIOL-4280 and BIOL-4904*
(b) seven BIOL courses, where at least three courses must be at the 3000 level or above, and including at least three courses from the following: BIOL-3212, BIOL-3230, BIOL-3250, and BIOL-4270
(c) CHEM-1100, CHEM-1110, STAT-2910, MATH-1720 (or MATH-1760, or MATH-1250 or MATH-1260)
(d) ten additional Science courses, at least two of which must be at the 3000 level or above, with a maximum of six BIOL and/or BIOM courses, and including at least one from the following: ESCI-2600, ESCI-3310, or ESCI-4500.**
(e) four courses from Arts/Languages or Social Sciences, with at least one from each area, and at least one from the following: ESTU-1100, PHIL-2270, PHIL-3290, or POLS-2120
(f) four courses from any area of study

***Thesis topic is expected to relate to aquatic biology. Registration in BIOL-4904 is competitive and requires the consent of the Course Instructor.**
**** CHEM-2300 and BIOC-2010 are strongly recommended.**

Courses used to calculate the major average are: Courses listed under requirement (a), and any other BIOL or BIOM courses taken.

Minor in <u>Biology</u> ~~Biological Sciences~~
The minor in Biological Sciences consists of six courses including BIOL-1101, BIOL-1111, plus four BIOL- or BIOM- courses at the 2000 level or above, one of which must be at the 3XXX level or above. Courses that cannot count toward the Biological Sciences minor are BIOL-1013, BIOM-1073, and BIOM-2093. A minimum grade of 60% must be received in each course.

Rationale: to change the minor name in accordance with the approved department name, Biology.

<u>Does the revised program include new courses?:</u>
____ Yes [All new course proposals must be submitted on PDC Form Ds and submitted for approval <u>with</u> the revised program proposal (PDC Form B)]
__X__ No (If yes, list all new courses: not applicable)

C.2.1 Co-op/Experiential Learning Component (if applicable)

Provide requirements for the co-op/experiential learning component, including length of co-op/experiential learning component and credit weight, and explain how they differ for students who complete the experiential learning option and those who opt not to. **Ensure that learning outcomes for the co-op/experiential learning component have been included in the learning outcomes table. (C.4)*

Not applicable

Is the completion of the experiential learning/co-op component a requirement of the revised program?

No.

C.2.2 Suggested Sequencing for Revised Program (Optional)

Provide suggested program sequencing for each year of the revised program (including any work/study/placement sequencing), ensuring that all pre-requisites are met in the sequencing.For Co-op programs: The proposed work/study sequence or alternative arrangement should allow for year-round availability of students for employers (if appropriate) and, wherever possible, should meet the guidelines for co-operative education as set out by the Canadian Association for Co-operative Education (see Policy on Co-op Programs).

Honours Biology

First year	ten courses including BIOL-1101, BIOL-1111, CHEM-1100, CHEM-1110, MATH-1720 (or MATH-1760, or MATH-1250 or MATH-1260)
Second year	ten courses including BIOL-2101, BIOL-2111, BIOL-2142
Third and fourth years	twenty courses including BIOL-3022

Honours Biology with thesis

First year	ten courses including BIOL-1101, BIOL-1111, CHEM-1100, CHEM-1110, MATH-1720 (or MATH-1760, or MATH-1250 or MATH-1260)
Second year	ten courses including BIOL-2101, BIOL-2111, BIOL-2142
Third and fourth years	twenty courses including BIOL-3022, BIOL-4904 or BIOM-4904

Honours Biology with the Life Sciences stream

First year	ten courses including BIOL-1101, BIOL-1111, CHEM-1100, CHEM-1110, MATH-1720 (or MATH-1760, or MATH-1250 or MATH-1260)
Second year	ten courses including BIOL-2101, BIOL-2111, BIOL-2142, CHEM-2300, BIOC-2010
Third and fourth years	twenty courses including BIOL-3022 *

* In satisfying the degree requirements for this stream, students must complete each of the following:

- 2 of: BIOL-2040, BIOL-2050, BIOL-2071, BIOL-2080, BIOL-2480;
- 2 of: BIOL-3212, BIOL-3250, BIOL-3281, BIOL-4212, BIOL-4252, BIOL-4270, BIOL-4370, BIOL-4570;

Honours Biology with the Life Sciences stream with thesis

First year	ten courses including BIOL-1101, BIOL-1111, CHEM-1100, CHEM-1110, MATH-1720 (or MATH-1760, or MATH-1250 or MATH-1260)
Second year	ten courses including BIOL-2101, BIOL-2111, BIOL-2142, CHEM-2300, BIOC-2010
Third and fourth years	twenty courses including BIOL-3022, BIOL-4904 or BIOM-4904*

* In satisfying the degree requirements for this stream, students must complete each of the following:

- 2 of: BIOL-2040, BIOL-2050, BIOL-2071, BIOL-2080, BIOL-2480;
- 2 of: BIOL-3212, BIOL-3250, BIOL-3281, BIOL-4212, BIOL-4252, BIOL-4270, BIOL-4370, BIOL-4570;

Honours Biology with the Animal Biology stream

First year	ten courses including BIOL-1101, BIOL-1111, CHEM-1100, CHEM-1110, MATH-1720 (or MATH-1760, or MATH-1250 or MATH-1260)
Second year	ten courses including BIOL-2101, BIOL-2111, BIOL-2142*
Third and fourth years	twenty courses including BIOL-3022, BIOL-3230, BIOL-4262*

* In satisfying the degree requirements for this stream, students must complete each of the following:
  - 2 of: BIOL-2040, BIOL-2050, BIOL-2480;
  - 2 of: BIOL-3201, BIOL-3212, BIOL-3241, BIOL-3250, BIOL-3261, BIOL-4252, BIOL-4270, BIOL-4450.

Honours Biology with the Animal Biology stream with thesis

First year	ten courses including BIOL-1101, BIOL-1111, CHEM-1100, CHEM-1110, MATH-1720 (or MATH-1760, or MATH-1250 or MATH-1260)
Second year	ten courses including BIOL-2101, BIOL-2111, BIOL-2142*
Third and fourth years	twenty courses including BIOL-3022, BIOL-3230, BIOL-4262, BIOL-4904 or BIOM-4904*

* In satisfying the degree requirements for this stream, students must complete each of the following:
  - 2 of: BIOL-2040, BIOL-2050, BIOL-2480;
  - 2 of: BIOL-3201, BIOL-3212, BIOL-3241, BIOL-3250, BIOL-3261, BIOL-4252, BIOL-4270, BIOL-4450.

Honours Biology with the Aquatic Biology stream

First year	ten courses including BIOL-1101, BIOL-1111, CHEM-1100, CHEM-1110, MATH-1720 (or MATH-1760, or MATH-1250 or MATH-1260)
Second year	ten courses including BIOL-2101, BIOL-2111, BIOL-2142*
Third and fourth years	twenty courses including BIOL-3022, BIOL-3241, BIOL-4241, BIOL-4280*

* In satisfying the degree requirements for this stream, students must complete each of the following:
  - 3 of: BIOL-3212, BIOL-3230, BIOL-3250, BIOL-4270;
  - 1 of: ESCI-2600, ESCI-3310, ESCI-4500;
  - 1 of: ESTU-1100, PHIL-2270, PHIL-3290, POLS-2120.

Honours Biology with the Aquatic Biology stream with thesis

First year	ten courses including BIOL-1101, BIOL-1111, CHEM-1100, CHEM-1110, MATH-1720 (or MATH-1760, or MATH-1250 or MATH-1260)
Second year	ten courses including BIOL-2101, BIOL-2111, BIOL-2142*
Third and fourth years	twenty courses including BIOL-3022, BIOL-3241, BIOL-4241, BIOL-4280, BIOL-4904*

* In satisfying the degree requirements for this stream, students must complete each of the following:
  - 3 of: BIOL-3212, BIOL-3230, BIOL-3250, BIOL-4270;
  - 1 of: ESCI-2600, ESCI-3310, ESCI-4500;
  - 1 of: ESTU-1100, PHIL-2270, PHIL-3290, POLS-2120.

C.2.3 Program Structure/Requirements and Attainment of Learning Outcomes (QAF section 2.1.2.6)

Describe how the structure and requirements of the revised program are sufficient to prepare students for successful attainment of the intended program-level learning outcomes and the associated undergraduate or graduate degree level expectations.

The review Honours Biology (with or without thesis) and the three new streams (with or without thesis) parallels the current, already rigorous and successful Honours Biological Sciences (with or without thesis) program delivered by the Department of Biology. All four programs prioritize providing students with opportunities to apply their learning in laboratories associated with many of the core courses they must complete as degree requirements. The tables below summarize how each course in each program supports learners in meeting each of the program-level learning outcomes.

Honours Biology:

Learning outcome category	Courses
A	BIOL-1101; BIOL-1111; BIOL-2101; BIOL-2111; BIOL-2142; BIOL-3022; additional eighteen BIOL/BIOM courses selected by learner
B, C, D	BIOL-1101; BIOL-1111; BIOL-2101; BIOL-2111; BIOL-2142; BIOL-3022; additional eighteen BIOL/BIOM courses selected by learner (with BIOM-2131 being strongly recommended); CHEM-1100; CHEM-1110; STAT-2910; MATH-1720 (or MATH-1760, or MATH-1250 or MATH-1260); four additional non-BIOL/BIOM science courses (with CHEM-2300 and BIOC-2010 being strongly recommended)
E, F, G, H, I	BIOL-1101; BIOL-1111; BIOL-2101; BIOL-2111; BIOL-2142; BIOL-3022; additional eighteen BIOL/BIOM courses selected by learner (with BIOM-2131 being strongly recommended); CHEM-1100; CHEM-1110; STAT-2910; MATH-1720 (or MATH-1760, or MATH-1250 or MATH-1260); four additional non-BIOL/BIOM science courses (with CHEM-2300 and BIOC-2010 being strongly recommended); four courses from Arts/Languages or Social Sciences with at least one from each; four courses from any area of study

Honours Biology with thesis:

Learning outcome category	Courses
A	BIOL-1101; BIOL-1111; BIOL-2101; BIOL-2111; BIOL-2142; BIOL-3022; BIOL-4904 or BIOM-4904; additional sixteen BIOL/BIOM courses selected by learner
B, C, D	BIOL-1101; BIOL-1111; BIOL-2101; BIOL-2111; BIOL-2142; BIOL-3022; BIOL-4904 or BIOM-4904; additional sixteen BIOL/BIOM courses selected by learner (with BIOM-2131 being strongly recommended); CHEM-1100; CHEM -1110; STAT-2910; MATH-1720 (or MATH-1760, or MATH-1250 or MATH-1260); four additional non-BIOL/BIOM science courses (with CHEM-2300 and BIOC-2010 being strongly recommended)
E, F, G, H, I	BIOL-1101; BIOL-1111; BIOL-2101; BIOL-2111; BIOL-2142; BIOL-3022; BIOL-4904 or BIOM-4904; additional sixteen BIOL/BIOM courses selected by learner (with BIOM-2131 being strongly recommended); CHEM-1100; CHEM -1110; STAT-2910; MATH-1720 (or MATH-1760, or MATH-1250 or MATH-1260); four additional non-BIOL/BIOM science courses (with CHEM-2300 and BIOC-2010 being strongly recommended); four courses from Arts/Languages or Social Sciences with at least one from each; four courses from any area of study

Honours Biology with Life Sciences stream:

Learning outcome category	Courses
A	BIOL-1101, BIOL-1111; BIOL-2101; BIOL-2111; BIOL-2142; BIOL-3022; additional twelve BIOL/BIOM courses selected by learner (two of BIOL-2040, BIOL-2050, BIOL-2071, BIOL-2080, BIOL-2480; two of BIOL-3212, BIOL-3250, BIOL-3281, BIOL-4212, BIOL-4252, BIOL-4270, BIOL-4370, BIOL-4570; eight additional BIOL/BIOM courses with at least five courses at the 3000 level or above, with BIOM-2131 being strongly recommended)
B, C, D	BIOL-1101; BIOL-1111; BIOL-2101; BIOL-2111; BIOL-2142; BIOL-3022; additional twelve BIOL/BIOM courses selected by learner (two of BIOL-2040, BIOL-2050, BIOL-2071, BIOL-2080, BIOL-2480; two of BIOL-3212, BIOL-3250, BIOL-3281, BIOL-4212, BIOL-4252, BIOL-4270, BIOL-4370, BIOL-4570; eight additional BIOL/BIOM courses with at least five courses at the 3000 level or above, with BIOM-2131 being strongly recommended); CHEM-1100; CHEM-1110; CHEM-2300; BIOC-

	2010; STAT-2910; MATH-1720 (or MATH-1760, or MATH-1250 or MATH-1260); two BIOC courses at the 3000 level or above
E, F, G, H, I	BIOL-1101; BIOL-1111; BIOL-2101; BIOL-2111; BIOL-2142; BIOL-3022; additional twelve BIOL/BIOM courses selected by learner (two of BIOL-2040, BIOL-2050, BIOL-2071, BIOL-2080, BIOL-2480; two of BIOL-3212, BIOL-3250, BIOL-3281, BIOL-4212, BIOL-4252, BIOL-4270, BIOL-4370, BIOL-4570; eight additional BIOL/BIOM courses with at least five courses at the 3000 level or above, with BIOM-2131 being strongly recommended); CHEM-1100; CHEM-1110; CHEM-2300; BIOC-2010; STAT-2910; MATH-1720 (or MATH-1760, or MATH-1250 or MATH-1260); two BIOC courses at the 3000 level or above; four courses from Arts/Languages or Social Sciences with at least one from each (with PSYC-1150 and PSYC-1160 being recommended); four courses from any area of study

Honours Biology with Life Sciences stream with thesis:

Learning outcome category	Courses
A	BIOL-1101; BIOL-1111; BIOL-2101; BIOL-2111; BIOL-2142; BIOL-3022; BIOL-4904 or BIOM-4904; additional ten BIOL/BIOM courses selected by learner (two of BIOL-2040, BIOL-2050, BIOL-2071, BIOL-2080, BIOL-2480; two of BIOL-3212, BIOL-3250, BIOL-3281, BIOL-4212, BIOL-4252, BIOL-4270, BIOL-4370, BIOL-4570; six additional BIOL/BIOM courses with at least three courses at the 3000 level or above, with BIOM-2131 being strongly recommended)
B, C, D	BIOL-1101; BIOL-1111; BIOL-2101; BIOL-2111; BIOL-2142; BIOL-3022; BIOL-4904 or BIOM-4904; additional ten BIOL/BIOM courses selected by learner (two of BIOL-2040, BIOL-2050, BIOL-2071, BIOL-2080, BIOL-2480; two of BIOL-3212, BIOL-3250, BIOL-3281, BIOL-4212, BIOL-4252, BIOL-4270, BIOL-4370, BIOL-4570; six additional BIOL/BIOM courses with at least three courses at the 3000 level or above, with BIOM-2131 being strongly recommended); CHEM-1100; CHEM -1110; CHEM-2300; BIOC-2010; STAT-2910; MATH-1720 (or MATH-1760, or MATH-1250 or MATH-1260); two BIOC courses at the 3000 level or above
E, F, G, H, I	BIOL-1101; BIOL-1111; BIOL-2101; BIOL-2111; BIOL-2142; BIOL-3022; BIOL-4904 or BIOM-4904; additional ten BIOL/BIOM courses selected by learner (two of BIOL-2040, BIOL-2050, BIOL-2071, BIOL-2080, BIOL-2480; two of BIOL-3212, BIOL-3250, BIOL-3281, BIOL-4212, BIOL-4252, BIOL-4270, BIOL-4370, BIOL-4570; six additional BIOL/BIOM courses with at least three courses at the 3000 level or above, with BIOM-2131 being strongly recommended); CHEM-1100; CHEM -1110; CHEM-2300; BIOC-2010; STAT-2910; MATH-1720 (or MATH-1760, or MATH-1250 or MATH-1260); two BIOC courses at the 3000 level or above; four courses from Arts/Languages or Social Sciences with at least one from each (with PSYC-1150 and PSYC-1160 being recommended); four courses from any area of study

Honours Biology with Animal Biology stream:

Learning outcome category	Courses
A	BIOL-1101; BIOL-1111; BIOL-2101; BIOL-2111; BIOL-2142; BIOL-3022; BIOL-3230; BIOL-4262; ten BIOL/BIOM courses selected by learner (two of BIOL-2040, BIOL-2050, BIOL-2480; two of BIOL-3201, BIOL-3212, BIOL-3241, BIOL-3250, BIOL-3261, BIOL-4252, BIOL-4270, BIOL-4450; six additional BIOL/BIOM courses with at least five courses at the 3000 level or above); ten additional Science courses with a maximum of six BIOL and/or BIOM courses (at least two of which must be at the 3000 level or above; CHEM-2300 and BIOC-2010 are strongly recommended)

B, C, D	BIOL-1101; BIOL-1111; BIOL-2101; BIOL-2111; BIOL-2142; BIOL-3022; BIOL-3230; BIOL-4262; ten BIOL/BIOM courses selected by learner (two of BIOL-2040, BIOL-2050, BIOL-2480; two of BIOL-3201, BIOL-3212, BIOL-3241, BIOL-3250, BIOL-3261, BIOL-4252, BIOL-4270, BIOL-4450; six additional BIOL/BIOM courses with at least five courses at the 3000 level or above); CHEM-1100; CHEM-1110; STAT-2910; MATH-1720 (or MATH-1760, or MATH-1250 or MATH-1260); ten additional Science courses with a maximum of six BIOL and/or BIOM courses (at least two of which must be at the 3000 level or above; CHEM-2300 and BIOC-2010 are strongly recommended)
E, F, G, H, I	BIOL-1101; BIOL-1111; BIOL-2101; BIOL-2111; BIOL-2142; BIOL-3022; BIOL-3230; BIOL-4262; ten BIOL/BIOM courses selected by learner (two of BIOL-2040, BIOL-2050, BIOL-2480; two of BIOL-3201, BIOL-3212, BIOL-3241, BIOL-3250, BIOL-3261, BIOL-4252, BIOL-4270, BIOL-4450; six additional BIOL/BIOM courses with at least five courses at the 3000 level or above); CHEM-1100; CHEM-1110; STAT-2910; MATH-1720 (or MATH-1760, or MATH-1250 or MATH-1260); ten additional Science courses with a maximum of six BIOL and/or BIOM courses (at least two of which must be at the 3000 level or above); four courses from Arts/Languages or Social Sciences with at least one from each area; four courses from any area of study

Honours Biology with Animal Biology stream with thesis:

Learning outcome category	Courses
A	BIOL-1101; BIOL-1111; BIOL-2101; BIOL-2111; BIOL-2142; BIOL-3022; BIOL-3230; BIOL-4262; BIOL-4904 or BIOM-4904; eight BIOL/BIOM courses selected by learner (two of BIOL-2040, BIOL-2050, BIOL-2480; two of BIOL-3201, BIOL-3212, BIOL-3241, BIOL-3250, BIOL-3261, BIOL-4252, BIOL-4270, BIOL-4450; four additional BIOL/BIOM courses with at least three courses at the 3000 level or above); ten additional Science courses with a maximum of six BIOL and/or BIOM courses (at least two of which must be at the 3000 level or above; CHEM-2300 and BIOC-2010 are strongly recommended)
B, C, D	BIOL-1101; BIOL-1111; BIOL-2101; BIOL-2111; BIOL-2142; BIOL-3022; BIOL-3230; BIOL-4262; BIOL-4904 or BIOM-4904; eight BIOL/BIOM courses selected by learner (two of BIOL-2040, BIOL-2050, BIOL-2480; two of BIOL-3201, BIOL-3212, BIOL-3241, BIOL-3250, BIOL-3261, BIOL-4252, BIOL-4270, BIOL-4450; four additional BIOL/BIOM courses with at least three courses at the 3000 level or above); ten additional Science courses with a maximum of six BIOL and/or BIOM courses (at least two of which must be at the 3000 level or above; CHEM-2300 and BIOC-2010 are strongly recommended); CHEM-1100; CHEM-1110; STAT-2910; MATH-1720 (or MATH-1760, or MATH-1250 or MATH-1260)
E, F, G, H, I	BIOL-1101; BIOL-1111; BIOL-2101; BIOL-2111; BIOL-2142; BIOL-3022; BIOL-3230; BIOL-4262; BIOL-4904 or BIOM-4904; eight BIOL/BIOM courses selected by learner (two of BIOL-2040, BIOL-2050, BIOL-2480; two of BIOL-3201, BIOL-3212, BIOL-3241, BIOL-3250, BIOL-3261, BIOL-4252, BIOL-4270, BIOL-4450; four additional BIOL/BIOM courses with at least three courses at the 3000 level or above); ten additional Science courses with a maximum of six BIOL and/or BIOM courses (at least two of which must be at the 3000 level or above; CHEM-2300 and BIOC-2010 are strongly recommended); CHEM-1100; CHEM-1110; STAT-2910; MATH-1720 (or MATH-1760, or MATH-1250 or MATH-1260); four courses from Arts/Languages or Social Sciences with at least one from each, and at least one from each area; four courses from any area of study

Honours Biology with Aquatic Biology stream:

Learning outcome category	Courses
A	BIOL-1101; BIOL-1111; BIOL-2101; BIOL-2111; BIOL-2142; BIOL-3022; BIOL-3241; BIOL-4241; BIOL-4280; nine BIOL courses, where at least five courses must be at the 3000 level or above, and including at least three courses from the following: BIOL-3212, BIOL-3230, BIOL-3250, and BIOL-4270; ten additional Science courses, at least two of which must be at the 3000 level or above, with a maximum of six BIOL and/or BIOM courses, and including at least one from the following: ESCI-2600, ESCI-3310, or ESCI-4500 (CHEM-2300 and BIOC-2010 are strongly recommended)
B, C, D	BIOL-1101; BIOL-1111; BIOL-2101; BIOL-2111; BIOL-2142; BIOL-3022; BIOL-3241; BIOL-4241; BIOL-4280; nine BIOL courses, where at least five courses must be at the 3000 level or above, and including at least three courses from the following: BIOL-3212, BIOL-3230, BIOL-3250, and BIOL-4270; ten additional Science courses, at least two of which must be at the 3000 level or above, with a maximum of six BIOL and/or BIOM courses, and including at least one from the following: ESCI-2600, ESCI-3310, or ESCI-4500 (CHEM-2300 and BIOC-2010 are strongly recommended); CHEM-1100; CHEM-1110; STAT-2910; MATH-1720 (or MATH-1760, or MATH-1250 or MATH-1260)
E, F, G, H, I	BIOL-1101; BIOL-1111; BIOL-2101; BIOL-2111; BIOL-2142; BIOL-3022; BIOL-3241; BIOL-4241; BIOL-4280; nine BIOL courses, where at least five courses must be at the 3000 level or above, and including at least three courses from the following: BIOL-3212, BIOL-3230, BIOL-3250, and BIOL-4270; ten additional Science courses, at least two of which must be at the 3000 level or above, with a maximum of six BIOL and/or BIOM courses, and including at least one from the following: ESCI-2600, ESCI-3310, or ESCI-4500 (CHEM-2300 and BIOC-2010 are strongly recommended); CHEM-1100; CHEM-1110; STAT-2910; MATH-1720 (or MATH-1760, or MATH-1250 or MATH-1260); four courses from Arts/Languages or Social Sciences with at least one from each area, and at least one from the following: ESTU-1100, PHIL-2270, PHIL-3290, or POLS-2120; four courses from any area of study

Honours Biology with Aquatic Biology stream with thesis:

Learning outcome category	Courses
A	BIOL-1101; BIOL-1111; BIOL-2101; BIOL-2111; BIOL-2142; BIOL-3022; BIOL-3241; BIOL-4241; BIOL-4280; seven BIOL courses, where at least three courses must be at the 3000 level or above, and including at least three courses from the following: BIOL-3212, BIOL-3230, BIOL-3250, and BIOL-4270; ten additional Science courses, at least two of which must be at the 3000 level or above, with a maximum of six BIOL and/or BIOM courses, and including at least one from the following: ESCI-2600, ESCI-3310, or ESCI-4500 (CHEM-2300 and BIOC-2010 are strongly recommended)
B, C, D	BIOL-1101; BIOL-1111; BIOL-2101; BIOL-2111; BIOL-2142; BIOL-3022; BIOL-3241; BIOL-4241; BIOL-4280; seven BIOL courses, where at least three courses must be at the 3000 level or above, and including at least three courses from the following: BIOL-3212, BIOL-3230, BIOL-3250, and BIOL-4270; ten additional Science courses, at least two of which must be at the 3000 level or above, with a maximum of six BIOL and/or BIOM courses, and including at least one from the following: ESCI-2600, ESCI-3310, or ESCI-4500 (CHEM-2300 and BIOC-2010 are strongly

	recommended); CHEM-1100; CHEM-1110; STAT-2910; MATH-1720 (or MATH-1760, or MATH-1250 or MATH-1260)
E, F, G, H, I	BIOL-1101; BIOL-1111; BIOL-2101; BIOL-2111; BIOL-2142; BIOL-3022; BIOL-3241; BIOL-4241; BIOL-4280; seven BIOL courses, where at least three courses must be at the 3000 level or above, and including at least three courses from the following: BIOL-3212, BIOL-3230, BIOL-3250, and BIOL-4270; ten additional Science courses, at least two of which must be at the 3000 level or above, with a maximum of six BIOL and/or BIOM courses, and including at least one from the following: ESCI-2600, ESCI-3310, or ESCI-4500 (CHEM-2300 and BIOC-2010 are strongly recommended); CHEM-1100; CHEM-1110; STAT-2910; MATH-1720 (or MATH-1760, or MATH-1250 or MATH-1260); four courses from Arts/Languages or Social Sciences with at least one from each area, and at least one from the following: ESTU-1100, PHIL-2270, PHIL-3290, or POLS-2120; four courses from any area of study

C.3.1 For Graduate Program ONLY (QAF sections 2.1.2.3; Senate Co-op Policy)

C.3.1.1 Normal Duration for Completion

Provide a clear rationale for program length that ensures that the revised program requirements can be reasonably completed within the proposed time period.

Not applicable

C.3.1.2 Program Research Requirements

For research-focused graduate programs, provide a clear indication of the nature and suitability of the major research requirements for completion of the revised program.

Not applicable

C.3.1.3 New or Changes to Fields in a Graduate Program (optional)

Where fields are contemplated, provide the following information:
The master's program comprises the following fields: ...[list, as applicable]
The PhD program comprises the following fields: ...[list, as applicable]

Not applicable

C.3.2 For All Program Proposals

C.3.2.1 New or Changes to Standing Required for Continuation in Program

Minimum average requirements for continuation in the program. Must conform to the regulations for standing required for continuation in the program as set out in Senate policy. Specify new or changes to standing required for continuation in the experiential learning option or co-op option of the revised program, where applicable.

Students completing the newly revised Honours Biology (with or without thesis), the new Honours Biology with the Life Sciences stream (with or without thesis), the new Honours Biology with the Animal Biology stream (with or without thesis), and the new Honours Biology with the Aquatic Biology stream (with or without thesis) will adhere to the **same requirements** for continuation in their program as those that currently exist for the Honours Biological Sciences program (with or without thesis). More specifically, all students regardless of program will require a cumulative average of 60%, and a major average of 70%.

C.3.2.2 New or Changes to Standing Required for Graduation

Minimum average requirement to graduate in the program. Must conform to the regulations for standing required for continuation in the program as set out in Senate policy. Specify new or changes to standing required for graduation in the experiential learning option or co-op option of the revised program, where applicable.

Students completing the newly revised Honours Biology (with or without thesis), the new Honours Biology with the Life Sciences stream (with or without thesis), the new Honours Biology with the Animal Biology stream (with or without

thesis), and the new Honours Biology with the Aquatic Biology stream (with or without thesis) will adhere to the **same requirements** for graduation as those that currently exist for the Honours Biological Sciences program (with or without thesis). More specifically, all students regardless of program will require a cumulative average of 60%, and a major average of 70%.

C.4 NEW OR CHANGES TO LEARNING OUTCOMES (Degree Level Expectations)(QAF section 2)
COMPLETE THIS TABLE FOR UNDERGRADUATE PROGRAMS

In the following table, provide the specific learning outcomes (degree level expectations) that constitute the overall goals of the Combined program or Concurrent offering (i.e., the intended skills and qualities of graduates of this program). Link each learning outcome to the Characteristics of a University of Windsor Graduate" by listing them in the appropriate rows. A learning outcome may link to more than one of the specified Characteristics of a University of Windsor Graduate. All University of Windsor programs should produce graduates able to demonstrate each of the nine characteristics. Program design must demonstrate how students acquire all these characteristics. All individual courses should contribute to the development of one or more of these traits: a program in its entirety must demonstrate how students meet all of these outcomes through the complete program of coursework. Proposers are strongly encouraged to contact the Centre for Teaching and Learning for assistance with the articulation of learning outcomes (degree level expectations).
***For Combined Programs and Concurrent Offerings:** The program learning outcomes would include the outcomes for the two standalone programs with a few additional outcomes to reflect the benefits of pursuing the two disciplines in an integrated manner. [For learning outcome A, the integration of knowledge can be within a program and between the two programs.]*
***For programs with an Experiential Learning or Co-op Option**: Include learning outcomes for the program with a few additional outcomes highlighted to reflect the benefits of pursuing the experiential learning/co-op option.*

Note: The three streams that have been created were designed to provide learners with the opportunity to specialize in a specific area of biology. However, these three streams build on the same core biology courses included in the Honours biology undergraduate program. As such, similarities between the learning outcomes for each stream and the Honours biology program are present. Differences have been highlighted using *italics*.

Honours Biology

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A UWindsor graduate will have the ability to demonstrate:	**COU-approved Undergraduate Degree Level Expectations**
A. Describe and integrate core biological concepts that include molecular biology, genetics, ecology, and evolution (also applies to B, C, D, I). Describe and apply the scientific method to the general biological sciences (also applies to B, C, H, I). Describe and integrate the relationship between biological structure and function at any level of the biological organization of life (molecular level to biosphere) (also applies to B, C, D, H, I).	A. the acquisition, application and integration of knowledge	1.Depth and Breadth of Knowledge 2.Knowledge of Methodologies 3. Application of Knowledge 5.Awareness of Limits of Knowledge

PROGRAM DEVELOPMENT COMMITTEE
MAJOR PROGRAM CHANGES
FORM B

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A UWindsor graduate will have the ability to demonstrate:	**COU-approved Undergraduate Degree Level Expectations**
B. Conduct experiments accurately and safely, while employing appropriate tools and procedures in both laboratory and field settings. Formulate and test hypotheses using appropriate methodologies (also applies to C). Locate, access, read and critically analyze relevant scientific literature to address specific problems in biology (also applies to C, D).	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)	1. Depth and Breadth of Knowledge 2. Knowledge of Methodologies 3. Application of Knowledge 5. Awareness of Limits Knowledge
C. Correctly analyze, interpret and integrate experimental data, assessing credibility and accuracy, and formulate conclusions, providing justification (also applies to D, F, H).	C. critical thinking and problem-solving skills	1. Depth and Breadth of Knowledge 2. Knowledge of Methodologies 3. Application of Knowledge 5. Awareness of Limits of Knowledge
D. Generate and interpret biological data using quantitative, qualitative and analytic methodologies and techniques (also applies to A, B, C). Write formal scientific papers and reports using accepted disciplinary norms and structures (e.g., with proper citations, references, etc.) (also applies to A, B, F). Use appropriate statistical analyses to accurately analyze and interpret numerical data and formulate a position (also applies to C).	D. literacy and numeracy skills	4. Communication Skills 5. Awareness of Limits of Knowledge
E. Integrate knowledge and commitment to sustainability through critical analysis of data (also applies to I). Evaluate the ethical and social implications of discovery and innovation in the biological sciences (also applies to I).	E. responsible behaviour to self, others and society	5. Awareness of Limits of Knowledge 6. Autonomy and Professional Capacity

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A UWindsor graduate will have the ability to demonstrate:	**COU-approved Undergraduate Degree Level Expectations**
F. Express biological complex concepts in written, graphic and oral form for a wide range of audiences (also applies to D).	F. interpersonal and communications skills	4. Communication Skills 6. Autonomy and Professional Capacity
G. Participate constructively and cooperatively in team and small group activities, demonstrating an ability to set goals and manage timelines. Consider diverse points of view and the contributions of others by applying personal and professional integrity.	G. teamwork, and personal and group leadership skills	4. Communication Skills 6. Autonomy and Professional Capacity
H. Predict future patterns based on current data given the rapidly changing nature of biology (also applies to A, B, C). Design innovative solutions to demonstrate scientific concepts in biology (also applies to A, B, C and I).	H. creativity and aesthetic appreciation	2. Knowledge of Methodologies 3. Application of Knowledge 6. Autonomy and Professional Capacity
I. Apply organizational, time management, problem-solving and mentoring skills to engage in self-directed learning and professional development activities.	I. the ability and desire for continuous learning	6. Autonomy and Professional Capacity

Honours biology with thesis

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A UWindsor graduate will have the ability to demonstrate:	**COU-approved Undergraduate Degree Level Expectations**
A. Describe and integrate core biological concepts that include molecular biology, genetics, ecology, and evolution (also applies to B, C, D, I). Describe and apply the scientific method to the general biological sciences (also applies to B, C, H, I).	A. the acquisition, application and integration of knowledge	1.Depth and Breadth of Knowledge 2.Knowledge of Methodologies 3. Application of Knowledge 5.Awareness of Limits of Knowledge

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Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A UWindsor graduate will have the ability to demonstrate:	**COU-approved Undergraduate Degree Level Expectations**
Describe and integrate the relationship between biological structure and function at any level of the biological organization of life (molecular level to biosphere) (also applies to B, C, D, H, I).		
B. Conduct experiments accurately and safely, while employing appropriate tools and procedures in both laboratory and field settings. Formulate and test hypotheses using appropriate methodologies (also applies to C). Locate, access, read and critically analyze relevant scientific literature to address specific problems in biology (also applies to C, D). ***Thesis:*** *Define and independently conduct a research investigation that is thoughtfully situated in extant literature in biology (also applies to A, C).*	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)	1. Depth and Breadth of Knowledge 2. Knowledge of Methodologies 3. Application of Knowledge 5. Awareness of Limits Knowledge
C. Correctly analyze, interpret and integrate experimental data, assessing credibility and accuracy, and formulate conclusions, providing justification (also applies to D, F, H).	C. critical thinking and problem-solving skills	1. Depth and Breadth of Knowledge 2. Knowledge of Methodologies 3. Application of Knowledge 5. Awareness of Limits of Knowledge
D. Generate and interpret biological data using quantitative, qualitative and analytic methodologies and techniques (also applies to A, B, C). Write formal scientific papers and reports using accepted disciplinary norms and structures (e.g., with proper citations, references, etc.) (also applies to A, B, F). Use appropriate statistical analyses to accurately analyze and interpret numerical data and formulate a position (also applies to C).	D. literacy and numeracy skills	4. Communication Skills 5. Awareness of Limits of Knowledge

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FORM B

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A UWindsor graduate will have the ability to demonstrate:	**COU-approved Undergraduate Degree Level Expectations**
E. Integrate knowledge and commitment to sustainability through critical analysis of data (also applies to I). Evaluate the ethical and social implications of discovery and innovation in the biological sciences (also applies to I).	E. responsible behaviour to self, others and society	5. Awareness of Limits of Knowledge 6. Autonomy and Professional Capacity
F. Express biological complex concepts in written, graphic and oral form for a wide range of audiences (also applies to D). Prepare an oral presentation following disciplinary norms to articulate and defend results and conclusions obtained by completing an independent research project (also applies to A, B, C, D, H).	F. interpersonal and communications skills	4. Communication Skills 6. Autonomy and Professional Capacity
G. Participate constructively and cooperatively in team and small group activities, demonstrating an ability to set goals and manage timelines. Consider diverse points of view and the contribution of others by applying personal and professional integrity.	G. teamwork, and personal and group leadership skills	4. Communication Skills 6. Autonomy and Professional Capacity
H. Predict future patterns based on present current data given the rapidly changing nature of biology (also applies to A, B, C). Design innovative solutions to demonstrate scientific concepts in biology (also applies to A, B, C and I).	H. creativity and aesthetic appreciation	2. Knowledge of Methodologies 3. Application of Knowledge 6. Autonomy and Professional Capacity
I. Apply organizational, time management, problem-solving and mentoring skills to engage in self-directed learning and professional development activities.	I. the ability and desire for continuous learning	6. Autonomy and Professional Capacity

PROGRAM DEVELOPMENT COMMITTEE
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FORM B

Honours biology with life sciences stream

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A UWindsor graduate will have the ability to demonstrate:	**COU-approved Undergraduate Degree Level Expectations**
A. Describe and integrate core biological concepts that include molecular biology, genetics, ecology, evolution, *and biochemistry to the life sciences* (also applies to B, C, D, I). Describe and apply the scientific method to *research in the life sciences and societal issues* (also applies to B, C, H, I). Describe and integrate the relationship between biological structure and function at any level of the biological organization of life (molecular level to biosphere) (also applies to B, C, D, H, I).	A. the acquisition, application and integration of knowledge	1.Depth and Breadth of Knowledge 2.Knowledge of Methodologies 3. Application of Knowledge 5.Awareness of Limits of Knowledge
B Conduct experiments accurately and safely, while employing appropriate tools and procedures in both laboratory and field settings *for the life sciences*. Formulate and test hypotheses using appropriate methodologies (also applies to C). Locate, access, read and critically analyze relevant scientific literature to address specific problems in *the life sciences* (also applies to C, D).	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)	1. Depth and Breadth of Knowledge 2. Knowledge of Methodologies 3. Application of Knowledge 5. Awareness of Limits Knowledge
C. Correctly analyze, interpret and integrate experimental data *in the life sciences*, assessing credibility and accuracy, and formulate conclusions, providing justification (also applies to D, F, H).	C. critical thinking and problem-solving skills	1. Depth and Breadth of Knowledge 2. Knowledge of Methodologies 3. Application of Knowledge 5. Awareness of Limits of Knowledge
D. Generate and interpret data *in the life sciences* using quantitative, qualitative and analytic methodologies and techniques (also applies to A, B, C). Write formal scientific papers and reports using accepted disciplinary norms and structures (e.g., with	D. literacy and numeracy skills	4. Communication Skills 5. Awareness of Limits of Knowledge

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* <u>At the end of this program, the successful student will know and be able to:</u>	**Characteristics of a University of Windsor Graduate** <u>A UWindsor graduate will have the ability to demonstrate:</u>	**COU-approved Undergraduate Degree Level Expectations**
proper citations, references, etc.) (also applies to A, B, F). Use appropriate statistical analyses to accurately analyze and interpret numerical data and formulate a position (also applies to C).		
E. Integrate knowledge and commitment to sustainability through critical analysis of data (also applies to I). Evaluate the ethical and social implications of discovery and innovation in the *life sciences* (also applies to I).	E. responsible behaviour to self, others and society	5. Awareness of Limits of Knowledge 6. Autonomy and Professional Capacity
F. Express biological complex concepts in written, graphic and oral form for a wide range of audiences (also applies to D).	F. interpersonal and communications skills	4. Communication Skills 6. Autonomy and Professional Capacity
G. Participate constructively and cooperatively in team and small group activities, demonstrating an ability to set goals and manage timelines. Consider diverse points of view and the contributions of others by applying personal and professional integrity.	G. teamwork, and personal and group leadership skills	4. Communication Skills 6. Autonomy and Professional Capacity
H. Predict future patterns based on current data given the rapidly changing nature of *the life sciences* (also applies to A, B, C). Design innovative solutions to demonstrate scientific concepts in *the life sciences* (also applies to A, B, C and I).	H. creativity and aesthetic appreciation	2. Knowledge of Methodologies 3. Application of Knowledge 6. Autonomy and Professional Capacity
I. Apply organizational, time management, problem-solving and mentoring skills to engage in self-directed learning and professional development activities.	I. the ability and desire for continuous learning	6. Autonomy and Professional Capacity

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FORM B

Honour biology with life sciences stream with thesis

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A UWindsor graduate will have the ability to demonstrate:	**COU-approved Undergraduate Degree Level Expectations**
A. Describe and integrate core biological concepts that include molecular biology, genetics, ecology, evolution, *and biochemistry to the life sciences* (also applies to B, C, D, I). Describe and apply the scientific method to *research in the life sciences and societal issues* (also applies to B, C, H, I). Describe and integrate the relationship between biological structure and function at any level of the biological organization of life (molecular level to biosphere) (also applies to B, C, D, H, I).	A. the acquisition, application and integration of knowledge	1.Depth and Breadth of Knowledge 2.Knowledge of Methodologies 3. Application of Knowledge 5.Awareness of Limits of Knowledge
B. Conduct experiments accurately and safely, while employing appropriate tools and procedures in both laboratory and field settings *for the life sciences*. Formulate and test hypotheses using appropriate methodologies (also applies to C). Locate, access, read and critically analyze relevant scientific literature to address specific problems in *the life sciences* (also applies to C, D). ***Thesis:*** *Define and independently conduct a research investigation that is thoughtfully situated in extant literature in the life sciences (also applies to A, C).*	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)	1. Depth and Breadth of Knowledge 2. Knowledge of Methodologies 3. Application of Knowledge 5. Awareness of Limits Knowledge
C. Correctly analyze, interpret and integrate experimental data *in the life sciences*, assessing credibility and accuracy, and formulate conclusions, providing justification (also applies to D, F, H).	C. critical thinking and problem-solving skills	1. Depth and Breadth of Knowledge 2. Knowledge of Methodologies 3. Application of Knowledge 5. Awareness of Limits of Knowledge
D. Generate and interpret data *in the life sciences* using quantitative, qualitative and analytic methodologies and techniques (also applies to A, B, C).	D. literacy and numeracy skills	4. Communication Skills 5. Awareness of Limits of Knowledge

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Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A UWindsor graduate will have the ability to demonstrate:	**COU-approved Undergraduate Degree Level Expectations**
Write formal scientific papers and reports using accepted disciplinary norms and structures (e.g., with proper citations, references, etc.) (also applies to A, B, F). Use appropriate statistical analyses to accurately analyze and interpret numerical data and formulate a position (also applies to C).		
E. Integrate knowledge and commitment to sustainability through critical analysis of data (also applies to I). Evaluate the ethical and social implications of discovery and innovation in the *life sciences* (also applies to I).	E. responsible behaviour to self, others and society	5. Awareness of Limits of Knowledge 6. Autonomy and Professional Capacity
F. Express biological complex concepts in written, graphic and oral form for a wide range of audiences (also applies to D). Prepare an oral presentation following disciplinary norms to articulate and defend results and conclusions obtained by completing an independent research project (also applies to A, B, C, D, H).	F. interpersonal and communications skills	4. Communication Skills 6. Autonomy and Professional Capacity
G. Participate constructively and cooperatively in team and small group activities, demonstrating an ability to set goals and manage timelines. Consider diverse points of view and the contributions of others by applying personal and professional integrity.	G. teamwork, and personal and group leadership skills	4. Communication Skills 6. Autonomy and Professional Capacity
H. Predict future patterns based on current data given the rapidly changing nature of *the life sciences* (also applies to A, B, C). Design innovative solutions to demonstrate scientific concepts in *the life sciences* (also applies to A, B, C and I).	H. creativity and aesthetic appreciation	2. Knowledge of Methodologies 3. Application of Knowledge 6. Autonomy and Professional Capacity

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A UWindsor graduate will have the ability to demonstrate:	**COU-approved Undergraduate Degree Level Expectations**
I. Apply organizational, time management, problem-solving and mentoring skills to engage in self-directed learning and professional development activities.	I. the ability and desire for continuous learning	6. Autonomy and Professional Capacity

Honours biology with animal biology stream

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A UWindsor graduate will have the ability to demonstrate:	**COU-approved Undergraduate Degree Level Expectations**
A. Describe and integrate core biological concepts that include molecular biology, genetics, ecology, and evolution *to animal biology* (also applies to B, C, D, I). Describe and apply the scientific method to *research in animal biology and societal issues* (also applies to B, C, H, I). Describe and integrate the relationship between biological structure and function at any level of the biological organization of life (molecular level to biosphere) (also applies to B, C, D, H, I).	A. the acquisition, application and integration of knowledge	1.Depth and Breadth of Knowledge 2.Knowledge of Methodologies 3. Application of Knowledge 5.Awareness of Limits of Knowledge
B. Conduct experiments accurately and safely, while employing appropriate tools and procedures in both laboratory and field settings *for animal biology*. Formulate and test hypotheses using appropriate methodologies (also applies to C). Locate, access, read and critically analyze relevant scientific literature to address specific problems in *animal biology* (also applies to C, D).	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)	1. Depth and Breadth of Knowledge 2. Knowledge of Methodologies 3. Application of Knowledge 5. Awareness of Limits Knowledge

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FORM B

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* <u>At the end of this program, the successful student will know and be able to:</u>	**Characteristics of a University of Windsor Graduate** <u>A UWindsor graduate will have the ability to demonstrate:</u>	**COU-approved Undergraduate Degree Level Expectations**
C. Correctly analyze, interpret and integrate experimental data *in animal biology*, assessing credibility and accuracy, and formulate conclusions, providing justification (also applies to D, F, H).	C. critical thinking and problem-solving skills	1. Depth and Breadth of Knowledge 2. Knowledge of Methodologies 3. Application of Knowledge 5. Awareness of Limits of Knowledge
D. Generate and interpret data *in animal biology* using quantitative, qualitative and analytic methodologies and techniques (also applies to A, B, C). Write formal scientific papers and reports using accepted disciplinary norms and structures (e.g., with proper citations, references, etc.) (also applies to A, B, F). Use appropriate statistical analyses to accurately analyze and interpret numerical data and formulate a position (also applies to C).	D. literacy and numeracy skills	4. Communication Skills 5. Awareness of Limits of Knowledge
E. Integrate knowledge and commitment to sustainability through critical analysis of data (also applies to I). Evaluate the ethical and social implications of discovery and innovation in *animal biology* (also applies to I).	E. responsible behaviour to self, others and society	6. Awareness of Limits of Knowledge 6. Autonomy and Professional Capacity
F. Express biological complex concepts in written, graphic and oral form for a wide range of audiences (also applies to D).	F. interpersonal and communications skills	4. Communication Skills 6. Autonomy and Professional Capacity
G. Participate constructively and cooperatively in team and small group activities, demonstrating an ability to set goals and manage timelines. Consider diverse points of view and the contributions of others by applying personal and professional integrity.	G. teamwork, and personal and group leadership skills	4. Communication Skills 6. Autonomy and Professional Capacity

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* <u>At the end of this program, the successful student will know and be able to:</u>	**Characteristics of a University of Windsor Graduate** <u>A UWindsor graduate will have the ability to demonstrate:</u>	**COU-approved Undergraduate Degree Level Expectations**
H. Predict future patterns based on current data given the rapidly changing nature of *animal biology* (also applies to A, B, C). Design innovative solutions to demonstrate scientific concepts in *animal biology* (also applies to A, B, C and I).	H. creativity and aesthetic appreciation	2. Knowledge of Methodologies 3. Application of Knowledge 6. Autonomy and Professional Capacity
I. Apply organizational, time management, problem-solving and mentoring skills to engage in self-directed learning and professional development activities.	I. the ability and desire for continuous learning	6. Autonomy and Professional Capacity

Honour Biology with animal biology stream with thesis

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* <u>At the end of this program, the successful student will know and be able to:</u>	**Characteristics of a University of Windsor Graduate** <u>A UWindsor graduate will have the ability to demonstrate:</u>	**COU-approved Undergraduate Degree Level Expectations**
A. Describe and integrate core biological concepts that include molecular biology, genetics, ecology, and evolution *to animal biology* (also applies to B, C, D, I). Describe and apply the scientific method to *research in animal biology and societal issues* (also applies to B, C, H, I). Describe and integrate the relationship between biological structure and function at any level of the biological organization of life (molecular level to biosphere) (also applies to B, C, D, H, I).	A. the acquisition, application and integration of knowledge	1.Depth and Breadth of Knowledge 2.Knowledge of Methodologies 3. Application of Knowledge 5.Awareness of Limits of Knowledge
B. Conduct experiments accurately and safely, while employing appropriate tools and procedures in both laboratory and field settings *for animal biology*.	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)	1. Depth and Breadth of Knowledge 2. Knowledge of Methodologies 3. Application of Knowledge 5. Awareness of Limits Knowledge

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Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A UWindsor graduate will have the ability to demonstrate:	**COU-approved Undergraduate Degree Level Expectations**
Formulate and test hypotheses using appropriate methodologies (also applies to C). Locate, access, read and critically analyze relevant scientific literature to address specific problems in *animal biology* (also applies to C, D). ***Thesis:*** *Define and independently conduct a research investigation that is thoughtfully situated in extant literature in animal biology (also applies to A, C).*		
C. Correctly analyze, interpret and integrate experimental data *in animal biology*, assessing credibility and accuracy, and formulate conclusions, providing justification (also applies to D, F, H).	C. critical thinking and problem-solving skills	1. Depth and Breadth of Knowledge 2. Knowledge of Methodologies 3. Application of Knowledge 5. Awareness of Limits of Knowledge
D. Generate and interpret data *in animal biology* using quantitative, qualitative and analytic methodologies and techniques (also applies to A, B, C). Write formal scientific papers and reports using accepted disciplinary norms and structures (e.g., with proper citations, references, etc.) (also applies to A, B, F). Use appropriate statistical analyses to accurately analyze and interpret numerical data and formulate a position (also applies to C).	D. literacy and numeracy skills	4. Communication Skills 5. Awareness of Limits of Knowledge
E. Integrate knowledge and commitment to sustainability through critical analysis of data (also applies to I). Evaluate the ethical and social implications of discovery and innovation in *animal biology* (also applies to I).	E. responsible behaviour to self, others and society	6. Awareness of Limits of Knowledge 6. Autonomy and Professional Capacity
F.	F. interpersonal and communications skills	4. Communication Skills 6. Autonomy and Professional Capacity

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Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A UWindsor graduate will have the ability to demonstrate:	**COU-approved Undergraduate Degree Level Expectations**
Express biological complex concepts in written, graphic and oral form for a wide range of audiences (also applies to D). Prepare an oral presentation following disciplinary norms to articulate and defend results and conclusions obtained by completing an independent research project (also applies to A, B, C, D, H).		
G. Participate constructively and cooperatively in team and small group activities, demonstrating an ability to set goals and manage timelines. Consider diverse points of view and the contributions of others by applying personal and professional integrity.	G. teamwork, and personal and group leadership skills	4. Communication Skills 6. Autonomy and Professional Capacity
H. Predict future patterns based on current data given the rapidly changing nature of *animal biology* (also applies to A, B, C). Design innovative solutions to demonstrate scientific concepts in *animal biology* (also applies to A, B, C and I).	H. creativity and aesthetic appreciation	2. Knowledge of Methodologies 3. Application of Knowledge 6. Autonomy and Professional Capacity
I. Apply organizational, time management, problem-solving and mentoring skills to engage in self-directed learning and professional development activities.	I. the ability and desire for continuous learning	6. Autonomy and Professional Capacity

PROGRAM DEVELOPMENT COMMITTEE
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FORM B

Honours biology with aquatic Biology stream

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* <u>At the end of this program, the successful student will know and be able to:</u>	**Characteristics of a University of Windsor Graduate** <u>A UWindsor graduate will have the ability to demonstrate:</u>	**COU-approved Undergraduate Degree Level Expectations**
A. Describe and apply core biological concepts that include molecular biology, genetics, ecology, and volution *to aquatic biology* (also applies to B, C, D, I). Describe and apply the scientific method to *research in aquatic biology and societal issues* (also applies to B, C, H, I). Describe and integrate the relationship between biological structure and function at any level of the biological organization of life (molecular level to biosphere) (also applies to B, C, D, H, I).	A. the acquisition, application and integration of knowledge	1.Depth and Breadth of Knowledge 2.Knowledge of Methodologies 3. Application of Knowledge 5.Awareness of Limits of Knowledge
B. Conduct experiments accurately and safely, while employing appropriate tools and procedures in both laboratory and field settings *for aquatic biology*. Formulate and test hypotheses using appropriate methodologies (also applies to C). Locate, access, read and critically analyze relevant scientific literature to address specific problems in *aquatic biology* (also applies to C, D).	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)	1. Depth and Breadth of Knowledge 2. Knowledge of Methodologies 3. Application of Knowledge 5. Awareness of Limits Knowledge
C. Correctly analyze, interpret and integrate experimental data *in aquatic biology*, assessing credibility and accuracy, and formulate conclusions, providing justification (also applies to D, F, H).	C. critical thinking and problem-solving skills	1. Depth and Breadth of Knowledge 2. Knowledge of Methodologies 3. Application of Knowledge 5. Awareness of Limits of Knowledge
D. Generate and interpret data *in aquatic biology* using quantitative, qualitative and analytic methodologies and techniques (also applies to A, B, C). Write formal scientific papers and reports using accepted disciplinary norms and structures (e.g., with proper citations, references, etc.) (also applies to A, B, F).	D. literacy and numeracy skills	4. Communication Skills 5. Awareness of Limits of Knowledge

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Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* <u>At the end of this program, the successful student will know and be able to:</u>	**Characteristics of a University of Windsor Graduate** <u>A UWindsor graduate will have the ability to demonstrate:</u>	**COU-approved Undergraduate Degree Level Expectations**
Use appropriate statistical analyses to accurately analyze and interpret numerical data and formulate a position (also applies to C).		
E. Integrate knowledge and commitment to sustainability through critical analysis of data (also applies to I). Evaluate the ethical and social implications of discovery and innovation in *aquatic biology* (also applies to I).	E. responsible behaviour to self, others and society	7. Awareness of Limits of Knowledge 6. Autonomy and Professional Capacity
F. Express biological complex concepts in written, graphic and oral form for a wide range of audiences (also applies to D).	F. interpersonal and communications skills	4. Communication Skills 6. Autonomy and Professional Capacity
G. Participate constructively and cooperatively in team and small group activities, demonstrating an ability to set goals and manage timelines. Consider diverse points of view and the contributions of others by applying personal and professional integrity.	G. teamwork, and personal and group leadership skills	4. Communication Skills 6. Autonomy and Professional Capacity
H. Predict future patterns based on current data given the rapidly changing nature of *aquatic biology* (also applies to A, B, C). Design innovative solutions to demonstrate scientific concepts in *aquatic biology* (also applies to A, B, C and I).	H. creativity and aesthetic appreciation	2. Knowledge of Methodologies 3. Application of Knowledge 6. Autonomy and Professional Capacity
I. Apply organizational, time management, problem-solving and mentoring skills to engage in self-directed learning and professional development activities.	I. the ability and desire for continuous learning	6. Autonomy and Professional Capacity

PROGRAM DEVELOPMENT COMMITTEE
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FORM B

Honour biology with aquatic biology stream with thesis

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* <u>At the end of this program, the successful student will know and be able to:</u>	**Characteristics of a University of Windsor Graduate** <u>A UWindsor graduate will have the ability to demonstrate:</u>	**COU-approved Undergraduate Degree Level Expectations**
A. Describe and integrate core biological concepts that include molecular biology, genetics, ecology, and evolution *to aquatic biology* (also applies to B, C, D, I). Describe and apply the scientific method to *research in aquatic biology and societal issues* (also applies to B, C, H, I). Describe and integrate the relationship between biological structure and function at any level of the biological organization of life (molecular level to biosphere) (also applies to B, C, D, H, I).	A. the acquisition, application and integration of knowledge	1.Depth and Breadth of Knowledge 2.Knowledge of Methodologies 3. Application of Knowledge 5.Awareness of Limits of Knowledge
B. Conduct experiments accurately and safely, while employing appropriate tools and procedures in both laboratory and field settings *for aquatic biology*. Formulate and test hypotheses using appropriate methodologies (also applies to C). Locate, access, read and critically analyze relevant scientific literature to address specific problems in *aquatic biology* (also applies to C, D). ***Thesis:*** *Define and independently conduct a research investigation that is thoughtfully situated in extant literature in aquatic biology (also applies to A, C).*	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)	1. Depth and Breadth of Knowledge 2. Knowledge of Methodologies 3. Application of Knowledge 5. Awareness of Limits Knowledge
C. Correctly analyze, interpret and integrate experimental data *in aquatic biology*, assessing credibility and accuracy, and formulate conclusions, providing justification (also applies to D, F, H).	C. critical thinking and problem-solving skills	1. Depth and Breadth of Knowledge 2. Knowledge of Methodologies 3. Application of Knowledge 5. Awareness of Limits of Knowledge
D. Generate and interpret data *in aquatic biology* using quantitative, qualitative and analytic methodologies and techniques (also applies to A, B, C).	D. literacy and numeracy skills	4. Communication Skills 5. Awareness of Limits of Knowledge

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Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* <u>At the end of this program, the successful student will know and be able to:</u>	**Characteristics of a University of Windsor Graduate** <u>A UWindsor graduate will have the ability to demonstrate:</u>	**COU-approved Undergraduate Degree Level Expectations**
Write formal scientific papers and reports using accepted disciplinary norms and structures (e.g., with proper citations, references, etc.) (also applies to A, B, F). Use appropriate statistical analyses to accurately analyze and interpret numerical data and formulate a position (also applies to C).		
E. Integrate knowledge and commitment to sustainability through critical analysis of data (also applies to I). Evaluate the ethical and social implications of discovery and innovation in *aquatic biology* (also applies to I).	E. responsible behaviour to self, others and society	7. Awareness of Limits of Knowledge 6. Autonomy and Professional Capacity
F. Express biological complex concepts in written, graphic and oral form for a wide range of audiences (also applies to D). Prepare an oral presentation following disciplinary norms to articulate and defend results and conclusions obtained by completing an independent research project (also applies to A, B, C, D, H).	F. interpersonal and communications skills	4. Communication Skills 6. Autonomy and Professional Capacity
G. Participate constructively and cooperatively in team and small group activities, demonstrating an ability to set goals and manage timelines. Consider diverse points of view and the contributions of others by applying personal and professional integrity.	G. teamwork, and personal and group leadership skills	4. Communication Skills 6. Autonomy and Professional Capacity
H. Predict future patterns based on current data given the rapidly changing nature of *aquatic biology* (also applies to A, B, C). Design innovative solutions to demonstrate scientific concepts in *aquatic biology* (also applies to A, B, C and I).	H. creativity and aesthetic appreciation	2. Knowledge of Methodologies 3. Application of Knowledge 6. Autonomy and Professional Capacity

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A UWindsor graduate will have the ability to demonstrate:	**COU-approved Undergraduate Degree Level Expectations**
I. Apply organizational, time management, problem-solving and mentoring skills to engage in self-directed learning and professional development activities.	I. the ability and desire for continuous learning	6. Autonomy and Professional Capacity

C.4.3 Mode of Delivery (QAF section 2.1.2.2)

Demonstrate that the proposed modes of delivery are appropriate to facilitate students' successful attainment of the new or revised program learning outcomes. Discuss online vs. face-to-face (e.g., lecture, seminar, tutorial, lab) modes of delivery, as well as specialized approaches intended to facilitate the acquisition of specific skills, knowledge, and attitudes.

Courses primarily rely on face-to-face course modalities, and modes of delivery may vary according to the instructor of record. Most courses at the 1000 and 2000 levels include a laboratory or tutorial component, and these components are designed to facilitate the acquisition of skills, knowledge, and attitudes critical to supporting students in successfully meeting the program learning outcomes. Additional pedagogical approaches and learning activities included in all BIOL courses across all levels include: standard lectures with embedded active learning activities, flipped classrooms, team-based learning, case-based learning, student-led presentations, student-led infographic design, statistical analyses, database mining, and field work.

D. MONITORING AND EVALUATION (QAF section 2.1.2.4)

Describe and explain the appropriateness of the proposed methods of assessing student achievement given the new or revised intended learning outcomes and degree level expectations.

Since no new courses are being introduced, the revised Honours Biology (with or without thesis), and each of the three streams will continue to depend on the current assessment methods in use within all existing courses. Current assessment methods in these courses include oral and/or written examinations (consisting of multiple-choice questions, short answer questions, and/or long answer questions), papers (e.g., research papers, literature reviews, and/or reflection papers), research proposals, infographics, presentations, laboratory reports, assignments, field work, and/or laboratory work. To ensure that students can successfully progress through their programs and show mastery of learning outcomes, required core courses are carefully scaffolded. The additional required courses included in each program will provide learners with further opportunities to reinforce, practice, apply, and integrate these skills.

D.1 Plan for Documenting and Demonstrating Program Quality and Student Performance (QAF section 2.1.2.4)

Describe the appropriateness of the plans to monitor and assess:
- *the overall quality of the revised program;*
- *whether the revised program is achieving in practice its proposed objectives;*
- *whether its students are achieving the program-level learning outcomes;*
- *the perceived student workload and student experience; and*
- *how the resulting information will be documented and subsequently used to inform continuous program improvement.*

To assess student achievement given the revised learning outcomes and degree level expectations, we will:

- Create a curriculum map and monitor student achievement in all required BIOL courses at the end of each academic year by comparing grades with historical averages. The departmental curriculum committee will review student

achievement data annually at the end of each academic year and propose any changes if required. The results of this review will be presented at a departmental council meeting for discussion and planning. If needed, new departmental curriculum retreats will be organized to address any concerns.

- Continue to meet every two weeks with student representatives from the Biology Students' Union during the Fall and Winter semesters to seek feedback and record any concerns on perceived student workload and student experience.

E. NEW OR REVISIONS TO EXPERIENTIAL LEARNING/CO-OP COMPONENT ONLY (Senate Co-op Policy)

[Complete this section ONLY if the program change includes new or revisions to the experiential learning/co-op component involving paid or unpaid placements.]

E.1 Experiential Learning Component and Nature of Experience (Ministry section 2)

Describe the new or revised experiential learning component and the nature of the experience (field placement, required professional practice, service-learning, internship, etc.)

Not applicable

E.2 Knowledge and Skills Brought to the Workplace

Provide a description of the knowledge and skills that students will be bringing to the workplace/placement based on the revised curriculum.

Not applicable

E.3 Evidence of Availability of Placements (Ministry section 2)

*Provide evidence of the availability of **sufficient** good quality positions both inside and outside the Windsor area for the new or revised co-op/experiential learning option (including names and contact information of potential employers, written statements or surveys from potential employers; and employer feedback concerning the hiring of graduates). Provide a summary of the types of positions that would be suitable at each level of work-term.*
How will these placements/opportunities be developed? [NB: For co-op programs, the majority of Ontario placements should qualify for the Co-op Education tax credit. See Policy on Co-op Programs for more details.]

Not applicable

E.4 Supervision of Placements (QAF section 2.1.2.6)

If required, explain the provision of supervision of new or revised experiential learning opportunities.

Not applicable

E.5 Fees Associated with Experiential Learning Component

Provide information on the fees associated with the new or revised experiential learning component, if applicable. NB: all proposed fees must be approved as part of the University's operating budget, via the Ancillary Fee Committee.

Not applicable

E.6 AAU Council Approval of New or Revised Co-op Component

Please obtain signatures for the following statement for new/revised co-op programs.

Not applicable

E.7 Guidelines for the Establishment of New/Revised Co-op Programs: CHECKLIST

Final Overview:
Please complete this checklist to ensure that the Senate-approved guidelines for the establishment of a new co-op program have been addressed.

Not applicable

PROGRAM DEVELOPMENT COMMITTEE
MAJOR PROGRAM CHANGES
FORM B
APPENDIX A – BUDGET SUMMARY SHEET

Contact the Office of Quality Assurance for assistance in completing this form.
Tuition Fee and Funding Level (Program Weight) Assessed by Ministry (sections 4&5)

Projections of Enrolment, Expenditures and Revenues (enrolments over 5 years)						
Year	**1**	**2**	**3**	**4**	**5**	**Total**
Revenue						
Tuition income*	$2,715,000 (480 + 15)	$2,740,000 (485 + 15)	$2,765,000 (490 + 15)	$2,790,000 (495 + 15)	$2,815,000 (500 + 15)	$13,825,000
Potential Provincial funding**	$2,400,000 (480)	$2,425,000 (485)	$2,450,000 (490)	$2,475,000 (495)	$2,500,000 (500)	**$12,250,000**
Other sources of funding *(please list)*						
Total Revenue	**$5,115,000**	**$5,165,000**	**$5,215,000**	**$5,240,000**	**$5,315,000**	**$26,075,000**
Expenses						
Additional Faculty member	N/A	N/A	N/A	N/A	N/A	N/A
Additional Staff/Technician	N/A	N/A	N/A	N/A	N/A	N/A
GA/TA***	$585,250	$585,250	$585,250	$585,250	$585,250	$585,250
External Examiners *(for graduate programs)*	N/A	N/A	N/A	N/A	N/A	N/A
Library Resources	N/A	N/A	N/A	N/A	N/A	N/A
New Facilities/Equipment	N/A	N/A	N/A	N/A	N/A	N/A
Facilities/Equipment Maintenance	N/A	N/A	N/A	N/A	N/A	N/A
Technology/CTL resources	N/A	N/A	N/A	N/A	N/A	N/A
Other expenses *(please list)*						
Total Expenses						$585,250
Net Income						**$25,489,750**

*Estimate $5,000.00 per full-time equivalent domestic undergraduate student; $21,000.00 per full-time equivalent international undergraduate student.

**Estimate $5,000.00 per full-time equivalent domestic undergraduate student; $21,000.00 per full-time equivalent international undergraduate student.

***Estimate $6,410.00 per GA allocation and $2,415.00 per TA allocation.

University of Windsor
Program Development Committee

*5.4: **Interdisciplinary Arts and Science – Minor Program Changes (Form C)**

Item for: **Approval**

Forwarded by: **Faculty of Arts, Humanites and Social Sciencse**

MOTION: That the degree requirements for the Bachelor of Interdisciplinary Arts and Science program be changed in accordance with the program/course change forms.^

^Subject to approval of the expenditures required.

Rationale/Approvals:
- The changes have been approved by the Faculty of Arts, Humanites and Social Sciences Council (April 9, 2025).
- *See attached.*

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

TITLE OF PROGRAM(S)/CERTIFICATE(S):	**Bachelor of Interdisciplinary Arts & Science**
DEPARTMENT(S)/SCHOOL(S):	**FAHSS (Dean's Office)**
FACULTY(IES):	**FAHSS**

Proposed change(s) effective as of* [Fall, Winter, Spring]: **(subject to timely and clear submission)*	Fall 2026

Does the minor program change include new courses?:

____ Yes [All new course proposals must be submitted on PDC Form Ds and submitted for approval with the minor program change proposal (PDC Form C)]

_x___ No If yes, list all new courses:

A.1 PROGRAM REQUIREMENT CHANGES

Please provide the current program requirements and the proposed new program requirements by cutting and pasting from the current undergraduate or graduate web calendar (www.uwindsor.ca/secretariat/calendars) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining. Example: Degree requirements: WXYZ-1000, ~~WXYZ-1010~~, WXYZ-1100, WXYZ-2100, WXYZ-3100, WXYZ-4100, plus three additional courses at the **3000-level or** 4000-level.

Honours Bachelor of Interdisciplinary Arts and Science (IAS)

Degree Requirements
Total courses: forty.
(a) ARSC-1000; one of PHIL-2210, **PHIL 2250, PHIL 2270 or PHIL 2280**; ~~PHIL-2610 or PHIL-2620, MATH-1720 (or MATH-1760) and MATH-1730 if major or minor concentration is Math, Physics or Biochemistry.)~~; STAT-2910 or SOSC-2500 (Science majors must take STAT-2910); **two of** ARSC-3010, ARSC-3100 **or VSAR 3860**; **two of** ARSC-4100, **ARSC-4210 or GART-4000**; ARSC-4990~~, ARSC-4210~~ (ARSC-4990 may be replaced by any 6 credit fourth year Honours Thesis/Research courses, subject to enrolment restrictions).
~~(b) One course from GRST-1100, HIST-1130, HIST-1140, PHIL-1100, POLS-2510, POLS-2520, INCS-2020, INCS-2030, LING-2200.~~
~~(c) Four courses (any two of the following pairs): ECON-1100 and ECON-1110, BIOL-1111 and BIOL-1101,CHEM-1100 and CHEM-1110, COMP-1400 and COMP-1410, ESCI-1111 and ESCI-1100, MATH-1720 and MATH-1730, PHYS-1400 and PHYS-1410, PHYS-1300 and PHYS-1310.~~
(b) ~~(d)~~ Major Concentration (12): maximum of two 1000-level courses in the major subject, and at least four 3000-level or 4000-level courses in the major subject.
(c) ~~(e)~~ Minor Concentration (6): maximum of two 1000-level courses in the minor subject; at least one 3000-levelor 4000-level course in the minor subject.
(d) ~~(g)~~ one course with Indigenous content, perspectives, or materials (see Office of the Dean of the Faculty of Arts, Humanities, and Social Sciences for complete list.)
(e) ~~(h)~~ At least 14 courses must be taken in each of the Faculty of Arts, Humanities and Social Sciences and the Faculty of Science.
(f) ~~(i)~~ Any remaining courses to bring the total course number to 40 may be from any area of study.

To continue in the program, and to receive the Honours IAS degree, students must maintain an Honours 70% cumulative average and major average.
When a requirement in the Major or Minor Concentration is taken as part of the core IAS program course requirements, another course must be selected from within the area of concentration and substituted with the approval of the Dean of Faculty of Arts, Humanities and Social Sciences. Similarly, when a requirement in the Major

Concentration is taken as part of the course requirements in the Minor Concentration, another course must be selected from within the area of Major Concentration and substituted with the approval of the Dean of Faculty of Arts, Humanities, and Social Sciences.

IAS students who have successfully completed a fourth-year thesis/research project, in lieu of ARSC-4990, will have the "with thesis" designation added to their transcript and diploma.

Courses used to calculate the major average are: courses listed under (d) and numbered ARSC-XXXX.

A.2 MINOR COURSE CHANGES REQUIRING ADDITIONAL RESOURCES OR AFFECTING DEGREE REQUIREMENTS

*If this is a minor course and calendar change (usually noted on a Form E) requiring additional resources or affecting degree requirements, please provide the current course information and the proposed new course information by cutting and pasting from the current undergraduate or graduate web calendar and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with **bolding** and underlining. Examples of minor course changes include: deleting courses, course description changes, pre/anti/co- requisite changes, contact hour/lab requirement changes, course title changes, renumbering courses, and/or cross-listing courses. Minor course calendar changes, which do not require additional resources or do not affect degree requirements, should be submitted on a **Form E.***

N/A

B. RATIONALE

Please provide a rationale for the proposed change(s).

These changes overall aim to:

1. address IQAP reviewers' recommendations to widen the audience of the program to students beyond science-focused students who are interested in the arts but also arts-focused students who are interested in the sciences and those whose interests fracture this disciplinary binary
2. address IQAP reveiwers' recommendations to simplify the program structure to make it more manageable for current students, who often have to stay beyond 4 years/40 courses to complete all of their degree requirements
3. align requirements with program learning outcomes
4. give students more options to meet their program focus and career goals, and to help them to progress through their degrees in a timely fashion
5. support program sustainability and future growth

Program requirements in Philosophy (under "a", choice of) have been altered to include ethics-focused courses with an interdisciplinary purview. These options better align with the BIAS program learning outcomes and with student interest. Philosophy has been consulted and approves this change.

MATH-1720, MATH-1760 and MATH 1730 have been removed as core program requirements (under "a", choice of) in response to IQAP recommendation to widen the program's appeal to students beyond science-focused students who are interested in the arts but also arts-focused students who are interested in the sciences and those whose interests fracture this disciplinary binary. Students who require MATH courses for their major or minor concentrations (e.g. major concentrations in Math) will still have the requirement(s) listed under their individual program (listed in the calendar under that program, e.g. Mathematics and Statistics > Major Concentration in IAS, and on their degree audit).

VSAR-3860 Bioart: Contemporary Art and the Life Sciences has been added as an option for a 3rd year ARSC credit in the core program requirements (under "a") to give students more options and support their timely progress through their degree. VSAR-3860 is a popular course amongst BIAS students due to its focus on arts and sciences and aligns

with program learning outcomes; its instructor, Dr. Jennifer Willet, supervises many BIAS students and welcomes its listing as a requirement as she is growing the course.

GART-4000 Mentorship and Learning has been added as an option for a 4th year ARSC credit in the core program requirements (under "a") to give students more options and support their timely progress through their degree. GART-4000 has previously been used as a substitution in this category as it allows BIAS majors to mentor first-year students in ARSC-1000 and provides a suitable interdisciplinary capstone for the program.

Degree requirements in category b ("one of") have been removed to offer students more room to take electives and progress through their degree in a timely manner. The current listing here is a random assembly of Social Sciences courses that do not necessarily reflect overall program learning outcomes or student interest.

The first-year science pairings listed in the degree requirements under category b are already covered in students' major or minor concentration requirements so removing them here will eliminate this redundancy and the confusion it often causes, while offering students more room to take electives and supporting their timely progress through their degree.

C. RESOURCES

C.1 Resources In Support of the Revised Program and Resource Implications for Other Campus Units or Programs (QAF section 2.1.2.6)

Describe, in general terms, all faculty and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the revised program. Please do not name specific individuals in this section. Describe the impact of the planned utilization of existing human, physical and financial resources (within and outside the unit) on other existing programs in the department or at the university. Provide an assessment of the reliance of the revised program on existing resources from other campus units and include evidence that there are adequate resources available and committed to the revised program to sustain the quality of scholarship produced by undergraduate students as well as graduate students' scholarship and research activities. Consider, for example:
faculty resources (within and outside the unit), existing courses (within and outside the unit), equipment or facilities outside the proposer's control, external resources requiring maintenance or upgrading using external resources, staff support, library, teaching and learning support, information technology support, laboratory access, student support services, space, equipment, facilities, GA/TA

The changes outlined above do not necessitate new resources.

C.1.1 Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program (QAF section 2.1.2.6)

Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the revised program and the associate plans to ensure the sustainability of the revised program and quality of the student experience.

The changes outlined above will support the sustainability of the program by allowing more flexibility in rotating core courses (ARSC-) and using courses taught by permanent faculty in FAHSS (VSAR-3860 and GART-400) to meet core program requirements, thus reducing the reliance on Adjunct, Limited-term, and Sessional faculty.

C.2 Graduate Faculty Qualifications and Supervisory Loads (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Explain how supervisory loads will be distributed, and describe the qualifications and appointment status of faculty who will provide instruction and supervision in the revised program.

N/A

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

C.3 Financial Assistance for Graduate Students (where appropriate) (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Where appropriate to the revised program, provide evidence that financial assistance for graduate students will be sufficient to ensure adequate quality and numbers of students.

N/A

C.4 Anticipated New Resources (QAF sections 2.1.2.6)

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the revised program.*

N/A

C.5 Planned Reallocation of Resources and Cost-Savings

Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the revised program. (e.g., streamlining existing programs and courses, deleting courses, etc.)

N/A

C.6 Additional Resources Required – Resources Requested (QAF section 2.1.2.6f)

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to run the revised program. If not applicable, write n/a.*

Faculty:	N/A
Staff:	N/A
GA/TAs:	N/A

C.6.1 Additional Institutional Resources and Services Required by all Affected Areas or Departments (QAF section 2.1.2.6f)

*Describe all **additional institutional resources and services** required by all affected areas or departments to run the revised program, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance. If not applicable, write n/a.*

Library Resources and Services:	N/A
Teaching and Learning Support:	N/A
Student Support Services:	N/A
Space and Facilities:	N/A
Equipment (and Maintenance):	N/A

D.1 Form History *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

Date of Modification	Approval Body Modifying	Reason for Modification

University of Windsor
Program Development Committee

*5.5 **Biomedical Science – New Course Proposal (Form D)**

Item for: **Approval**

Forwarded by: **Faculty of Science**

MOTION: That the following courses be approved:^
BIOM-1000. Biomedical Science Impacts on Society

^Subject to approval of the expenditures required.

Rationale/Approvals:

- This new course proposal has been approved by the Biomedical Science Council and the Science Program Development Committee (SPDC) (as delegated by the Faculty of Science Coordinating Council) (April 14, 2026).
- *See attached.*

PROGRAM DEVELOPMENT COMMITTEE
NEW COURSE PROPOSALS
FORM D

TITLE OF PROGRAM(S)/CERTIFICATE(S):	**Biomedical Sciences**
DEPARTMENT(S)/SCHOOL(S):	**Biomedical Sciences**
FACULTY(IES):	**Sciences**

Proposed change(s) effective as of* [Fall, Winter, Spring]: **(subject to timely and clear submission)*	Fall 2026, Undergraduate Calendar

A. NEW COURSE PROFILE

Course # and Title: BIOM-1000. Biomedical Science Impacts on Society

A.1 Calendar Description

Calendar descriptions should be written in the third person and should provide a general outline of the course material. Where appropriate, examples of topics or themes, which might be covered in the course, should also be provided.

Biomedical Science has a profound and transformative impact on society by acting as the foundation for modern healthcare, driving medical innovation, and improving public health outcomes. Topics will include vaccines, genetic engineering, human genomics and genetically modified organisms. Additional current topics in Biomedical Science will be discussed. May not be used for credit as a Science Course in any Faculty of Science program. (Antirequisite: BIOL-1101, BIOM-1003.) (2 lecture hours a week.)

A.2 Experiential Learning Categories

Does the course include experiential learning? Check all that apply.
For definitions go to: https://www.uwindsor.ca/cces/1423/experiential-learning-definitions

- ☐ applied research
- ☐ capstone
- ☐ clinic
- ☐ co-op
- ☐ community service learning
- ☐ creative performance or exhibit (*for visual and performing arts*)
- ☐ entrepreneurship
- ☐ field experience or site visit
- ☐ labs
- ☒ No experiential learning in this course
- ☐ field work
- ☐ industry/community consulting project
- ☐ interactive simulations
- ☐ internship – full-time
- ☐ internship – part-time
- ☐ professional practicum
- ☐ research project
- ☐ study abroad

PROGRAM DEVELOPMENT COMMITTEE
NEW COURSE PROPOSALS
FORM D

A.3 Other Course Information

Please complete the following tables.

Credit weight	Total contact hours	Delivery format				Breakdown of contact hours/week			
		In-class	e-learning	Distance	Other flexible learning delivery *[please specify]*	Lecture	Lab/ Tutorial	Online	Co-op/ practicum/ experiential learning
3	24	24	0	0	0	2	0	0	0

Pre-requisites	Co-requisites	Anti-requisites	Cross-listed with:	Required course?	Replacing old course*** *[provide old course number]*

******Replacing Old Course: this does not mean that the former course will be deleted from the calendar. If it is to be deleted, a Form E must be completed.***

Will students be able to obtain credit for the new course and the course(s) that it is replacing?	N/A

B. RATIONALE

B.1 Course Goal(s)

Please provide a statement about the purpose of the course within the program of study or as an option.

Science literacy in our society is critically important so that people can understand and make rationale decisions on how science impacts their every day lives. Any area that has tremendous impacts on everyone's lives is Biomedical Sciences. Technologies that can affect and impact human health are vast and are rapidly changing. The goals of this course are to educate and expose non-major Life Science students to the latest advances in Biomedical Science technologies and how they can impact their lives. Technologies such as genetic engineering, vaccine discovery and production, personalized medicine and human genomics will be highlighted. Additional current topics will be chosen that are relevant and applicable to student's lives. The major goal is to have students complete the course with a better and more rational understanding of these technologies so that they can make educated decisions in the future.

B.2 Indigenous (First Nations, Métis, or Inuit) Content, Perspectives, or Material

The University of Windsor is committed to building and sustaining stronger, more meaningful inclusive partnerships with Indigenous students, scholars, and communities. Indigenization of curriculum takes place in a larger context, including a requirement to respond to the four Calls to Action in education of the Truth and Reconciliation Report (2015) (page 1), the unique legal requirements of the Constitution Act 1982 (Sections 25, 35), the provincial legal requirements of the Ontario Human Rights Code, 1990, and provincial legislation Bill Pr36 (1967).

*In developing this new course, **how** has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*

Please consider these prompt questions and additional Resources including disciplinary examples:

- *What **process** has your department/Faculty used to consider Indigenization?*
- ***How** have you considered the importance or relevance to the course/program?*
- *How has your department or faculty approached raising awareness for Indigenous knowledges in your area?*
- *What do the TRC and University Principles documents suggest relevant to your course?*

- *What have other similar courses/programs done that might be relevant to your course/program?*
- *In what ways could your course/program have flexibility to include new ways of learning, or content for Indigenous approaches or knowledges?*
- *What is your awareness of the history or background to approaches you are considering, such as the land acknowledgement? How have you developed your awareness?*
- *Which literatures, sources, or Indigenous Knowledge Holders have you consulted? (Please confirm you have permission to share any names, it may be helpful to have the person confirm the text if you will be submitting their name)*
- *Are you engaging in critical analysis of Settler Colonialism and/or Decolonization?*
- *Have you included the information in the other relevant areas in the PDC form (such as learning outcomes) or in the course syllabus where appropriate?*

The Department of Biomedical Sciences is committed to decolonizing and Indigenizing our teaching and research practices. We recognize that many of our courses and practices do not yet incorporate Indigenous knowledges or ways of knowing, and that we have much to learn and re-learn, and much work to do to successfully meet our commitment. We strive to Indigenize Biomedical Sciences curriculum by integrating Indigenous perspectives, knowledge systems, and cultural practices into the educational framework. These are some strategies we are trying to implement for our Biomedical Sciences courses and programs:

1. **Incorporate Indigenous Health Issues**: Include topics related to Indigenous health disparities, traditional medicine, Indigenous health knowledge and community health practices into the curriculum and individual courses where applicable. As an example, BIOM-3750 (Cancer Undergraduate Research Education) has a module that students have to complete for grades. Each student will complete the Cancer Care Ontario Indigenous Relationship and Cultural Awareness Courses. The courses to complete are: 1. First Nations, Inuit and Métis Culture, Colonization and the Determinants of Health and 2. The Need for Cultural Competence in Healthcare.
2. **Guest Lectures and Workshops**: Invite Indigenous scholars and practitioners to share their knowledge and experiences with students in our courses.
3. **Research Opportunities**: Encourage students to engage in research that addresses Indigenous health issues, ensuring that the research is community-informed and ethically conducted. In collaboration with our partner (the We-Spark Health Institute), grants have been awarded that have centered on Indigenous peoples and to address the huge health disparities between Indigenous and non-Indigenous peoples. This disparity has its roots in colonization. As revealed by the Truth and Reconciliation and Murdered and Missing women's reports much of the history of Indigenous peoples in Canada was minimized or erased. This negatively impacted the health and lives of many Indigenous peoples as traditions were stripped away and families torn apart. Addressing this huge health disparity, requires Indigenous peoples, experts in the field and healthcare providers to examine the evidence and create dialogue to improve the understanding of healthcare need. A recent grant awarded to Dr. Vikesh Maraj is studying how to achieve long-term effectiveness of nutrition counselling for Indigenous older adults with type 2 Diabetes in remote Southwestern Ontario with a culturally safe nutrition plan**.**
4. **Curriculum Review and Development**: Regularly assess and update the curriculum to ensure it remains relevant and inclusive of Indigenous perspectives. Jaimie Kechego has provided us with important insight into our curriculum changes (e.g. our Biomedical Sciences (Interdisciplinary Health Sciences program)) which has an area of concentration centered on Indigenous health as part of the curriculum. We anticipate future collaborations to expand these types of offerings and integration of new ideas.
5. **Interdisciplinary Approaches**: Collaborate with other Faculties such as Nursing, Human Kinetics and FASSH, to provide a broader understanding of Indigenous health and wellness.
6. **Support for Indigenous Students**: Create a supportive environment for Indigenous students, including mentorship programs and resources tailored to their needs.
7. **Evaluation and Feedback**: Implement mechanisms for continuous feedback from Indigenous communities and students to improve our curriculum and teaching practices.

With these strategies in mind, our Biomedical Sciences department can create a more inclusive and holistic educational experience that respects and values Indigenous knowledge and perspectives. The Faculty of Science has recently welcomed Professor Clint Jacobs, a recognized Indigenous Knowledge Holder as an expert in Indigenous-centered relationships to develop community-based initiatives in research, teaching and capacity development. As for faculty participation in this process, Dr. Anna Kozarova has taken the 'Pulling Together- Foundations series' taught by Jaimie Kechego which educated in part, the role of colonization and how it continues to affect the Indigenous Peoples of Canada and defines the relationship between indigenous and non-indigenous people today. Another of our faculty members (Dr. Dora Cavallo-Medved) along with Dr. Isabelle Barrette-Ng and Clint Jacobs (Integrative Biology) and Dr. Phil Dutton (Associate Dean of Science) is a co-PI on a grant that is focused on studying the Indigenization of curriculum across the Faculty of Science. We strongly encourage our faculty to engage in these types of initiatives/courses/workshops to better incorporate indigenous ways of knowing into their courses.

Although we are proud of the work currently in progress, we realize that there is much more to do, and we are committed to learning, unlearning and re-learning. This specific course with its focus on methods in the study of nervous systems does not have specific Indigenous content in the Learning Outcomes. Rather than implementing Indigenous learning outcomes immediately into all our courses, we are committing to increasing our knowledge and understanding of the importance of Indigenizing all Biomedical Sciences curriculum, not just one course. Through this journey, we will identify Indigenous material and perspectives that are particularly relevant to our students and will expand on this question in future forms with our intents and actions.

References:

1. Truth and Reconciliation Commission of Canada. "Truth and Reconciliation Commission of Canada: Calls to Action." 2015. https://ehprnh2mwo3.exactdn.com/wp-content/uploads/2021/01/Calls_to_Action_English2.pdf
2. Universities Canada. "Universities Canada principles on Indigenous education." June 29, 2015. https://www.univcan.ca/media-room/media-releases/universities-canada-principles-on-indigenous-education/

B.3 LEARNING OUTCOMES (QAF section 2)

Please complete the following table. State the specific learning outcomes that make up the goal of the course (what will students know and be able to do at the end of this course?) and link the learning outcomes to the Characteristics of a University of Windsor Graduate outlined in "To Greater Heights" by listing them in the appropriate rows. Please note that a learning outcome may link to more than one of the specified Characteristics of a University of Windsor Graduate, and that a single course might not touch on each of the Characteristics. ***If a specific learning outcome is not applicable for the course, please enter N/A or not applicable.*** *Information on learning outcomes is appended to this form (Appendix A). Proposers are also strongly encouraged to contact the Centre for Teaching and Learning for assistance with the articulation of learning outcomes.*

Course Learning Outcomes *This is a sentence completion exercise.* At the end of this course, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A U of Windsor graduate will have the ability to demonstrate:
A. Recall, select and apply concepts of biomedical science which relate to every day life and real world contexts.	A. the acquisition, application and integration of knowledge
B. Analyze and recall biomedical based data in genetics, molecular biology, microbiology and biotechnology	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)

Course Learning Outcomes *This is a sentence completion exercise.* At the end of this course, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A U of Windsor graduate will have the ability to demonstrate:
C. Collect, process, interpret and present biological data using appropriate graphical, numeric and computational techniques.	C. critical thinking and problem-solving skills
D. N/A	D. literacy and numeracy skills
E. Discuss and debate ideas and issues in biology and science in a respectful way.	E. responsible behaviour to self, others and society
F. Participate in group discussions as needed, providing opinions and ideas and responding to questions from one's peers.	F. interpersonal and communications skills
G. N/A	G. teamwork, and personal and group leadership skills
H. Identify the scientific knowledge, history and creativity that goes into major advances in the various fields of biomedical science.	H. creativity and aesthetic appreciation
I. Recognize unresolved issues or gaps in our knowledge and explain the value in working to address them and their impact on our society.	I. the ability and desire for continuous learning

B.4 Demand for Course

Please provide as much information on projected enrolment as possible.

Projected enrolment levels for the first 5 years of the new course.	Year 1	Year 2	Year 3	Year 4	Year 5
	50	100	100	100	100

B.4.1 Impact of New Course on Enrolment in Existing Courses

What will be the impact of offering the new course on enrolments in existing courses in the program or Department?

N/A

C. RESOURCES

C.1 Resources In Support of the Revised Program and Resource Implications for Other Campus Units or Programs (QAF section 2.1.2.6)

Describe, in general terms, all faculty and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the revised program. Please do not name specific individuals in this section. Describe the impact of the planned utilization of existing human, physical and financial resources (within and outside the unit) on other existing programs in the department or at the university. Provide an assessment of the reliance of the revised program on existing resources from other campus units and include evidence that there are adequate resources available and committed to the revised program to sustain the quality of scholarship produced by undergraduate students as well as graduate students' scholarship and research activities. Consider, for example: faculty resources (within and outside the unit), existing courses (within and outside the unit), equipment or facilities outside the proposer's control, external resources requiring maintenance or upgrading using external resources, staff support, library, teaching and learning support, information technology support, laboratory access, student support services, space, equipment, facilities, GA/TA

The Department of Biomedical Sciences has 13 faculty members with expertise in Biomedical Sciences. These faculty members are qualified to teach BIOM-1000. Current administrative support will be adequate for this course.

C.1.1 Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program (QAF section 2.1.2.6)

Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the revised program and the associate plans to ensure the sustainability of the revised program and quality of the student experience.

No Adjunct, Limited-term, and Sessional Faculty are required, as existing faculty members in the Department of Biomedical Sciences are capable and available to teach this course.

C.2 Graduate Faculty Qualifications and Supervisory Loads (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Explain how supervisory loads will be distributed, and describe the qualifications and appointment status of faculty who will provide instruction and supervision in the revised program.

N/A

C.3 Financial Assistance for Graduate Students (where appropriate) (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Where appropriate to the revised program, provide evidence that financial assistance for graduate students will be sufficient to ensure adequate quality and numbers of students.

N/A

C.4 Anticipated New Resources (QAF sections 2.1.2.6)

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the revised program.*

N/A

C.5 Planned Reallocation of Resources and Cost-Savings

Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the revised program. (e.g., streamlining existing programs and courses, deleting courses, etc.)

N/A

C.6 Additional Resources Required – Resources Requested (QAF section 2.1.2.6f)

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to run the revised program. If not applicable, write n/a.*

Faculty:	None
Staff:	None
GA/TAs:	None

C.6.1 Additional Institutional Resources and Services Required by all Affected Areas or Departments (QAF section 2.1.2.6f)

*Describe all **additional institutional resources and services** required by all affected areas or departments to run the revised program, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance. If not applicable, write n/a.*

PROGRAM DEVELOPMENT COMMITTEE
NEW COURSE PROPOSALS
FORM D

Library Resources and Services:	N/A
Teaching and Learning Support:	N/A
Student Support Services:	N/A
Space and Facilities:	N/A
Equipment (and Maintenance):	N/A

D.1 Form History *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

Date of Modification	Approval Body Modifying	Reason for Modification

University of Windsor
Program Development Committee

*5.6 **Computer Science – New Course Proposal (Form D)**

Item for: **Approval**

Forwarded by: **Faculty of Science**

MOTION: That the following courses be approved:^
COMP-2717. Artificial Intelligence: Practice and Ethics for Common Users

^Subject to approval of the expenditures required.

Rationale/Approvals:

- This new course proposal has been approved by the School of Computer Science Council and the Science Program Development Committee (SPDC) (as delegated by the Faculty of Science Coordinating Council) (April 14, 2026).
- *See attached.*

PROGRAM DEVELOPMENT COMMITTEE
NEW COURSE PROPOSALS
FORM D

TITLE OF PROGRAM(S)/CERTIFICATE(S):	**Bachelor of Computer Science (General)** **Bachelor of Computer Science (Honours)** **Bachelor of Computer Science (Honours) Applied Computing** **Bachelor of Science (Honours Computer Science Software Engineering Specialization)** **Bachelor of Information Technology (Honours)**
DEPARTMENT(S)/SCHOOL(S):	**Computer Science**
FACULTY(IES):	**Science**

Proposed change(s) effective as of* [Fall, Winter, Spring]: **(subject to timely and clear submission)*	Fall 2026, Undergraduate Calendar

A. NEW COURSE PROFILE

Course # and Title: COMP-2717: Artificial Intelligence: Practice and Ethics for Common Users

A.1 Calendar Description

Calendar descriptions should be written in the third person and should provide a general outline of the course material. Where appropriate, examples of topics or themes, which might be covered in the course, should also be provided.

Given the ubiquitous use of Artificial Intelligence (AI) in everyday applications either personal or commercial, students will be provided a foundational understanding of the history and evolution of AI, from classical reasoning processes to data driven generative models, addressing the individual, social, and economic implications. Students will be introduced to sample practical applications from various domains to enable them to understand how to use, build or customize simple applications, including aspects of prompt engineering. Privacy and security surrounding the ethical use of AI will be addressed. (Prerequisites: Must have completed semester 4 of studies). (3 lecture hours per week).

A.2 Experiential Learning Categories

Does the course include experiential learning? Check all that apply.
For definitions go to: https://www.uwindsor.ca/cces/1423/experiential-learning-definitions

- ☐ applied research
- ☐ capstone
- ☐ clinic
- ☐ co-op
- ☐ community service learning
- ☐ creative performance or exhibit (*for visual and performing arts*)
- ☐ entrepreneurship
- ☐ field experience or site visit
- ☐ field work
- ☐ industry/community consulting project
- ☐ interactive simulations
- ☐ internship – full-time
- ☐ internship – part-time
- ☐ professional practicum
- ☐ research project
- ☐ study abroad
- ☒ No experiential learning in this course

PROGRAM DEVELOPMENT COMMITTEE
NEW COURSE PROPOSALS
FORM D

A.3 Other Course Information

Please complete the following tables.

Credit weight	Total contact hours	Delivery format				Breakdown of contact hours/week			
		In-class	e-learning	Distance	Other flexible learning delivery *[please specify]*	Lecture	Lab/ Tutorial	Online	Co-op/ practicum/ experiential learning
3	36	x				3			

Pre-requisites	Co-requisites	Anti-requisites	Cross-listed with:	Required course?	Replacing old course*** *[provide old course number]*
Must have completed semester 4 of their program					

******Replacing Old Course: this does not mean that the former course will be deleted from the calendar. If it is to be deleted, a Form E must be completed.***

Will students be able to obtain credit for the new course and the course(s) that it is replacing?	N/A

B. RATIONALE

B.1 Course Goal(s)

Please provide a statement about the purpose of the course within the program of study or as an option.

In response to growing demand and the strategic importance of Artificial Intelligence (AI), the School intends to propose the development of an applied AI certificate program. This initiative will allow a student from any discipline or major to gain structured and recognized expertise in AI. The proposed course, COMP-2717, is designed to be a core course in the upcoming Certificate in Applied Artificial Intelligence and will serve as a foundational stepping stone. It will provide students with a conceptual overview of how AI systems work, along with essential underlying principles. It will prepare students for more advanced and applied AI courses that will form part of the future certificate pathway using existing currently available resources.

The School of Computer Science currently offers a specialization in Artificial Intelligence within the Bachelor of Computer Science (Honours) program. However, this specialization is not available to students enrolled in other programs offered by the School. Given the rapidly growing interest in AI across disciplines, there is a clear need to move beyond a program-specific specialization and instead develop a Certificate in Applied Artificial Intelligence that would be accessible to a broader range of Computer Science students. This course will also become part of this certificate as well. In addition, students who are not enrolled in the certificate program will be permitted to take this course as a general elective to students in any discipline.

B.2 Indigenous (First Nations, Métis, or Inuit) Content, Perspectives, or Material

The University of Windsor is committed to building and sustaining stronger, more meaningful inclusive partnerships with Indigenous students, scholars, and communities. Indigenization of curriculum takes place in a larger context, including a requirement to respond to the four Calls to Action in education of the Truth and Reconciliation Report (2015) (page 1), the unique legal requirements of the Constitution Act 1982 (Sections 25, 35), the provincial legal requirements of the Ontario Human Rights Code, 1990, and provincial legislation Bill Pr36

*(1967). In developing this new course, **how** has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*
Please consider these prompt questions and additional Resources including disciplinary examples:

- *What **process** has your department/Faculty used to consider Indigenization?*
- ***How** have you considered the importance or relevance to the course/program?*
- *How has your department or faculty approached raising awareness for Indigenous knowledges in your area?*
- *What do the TRC and University Principles documents suggest relevant to your course?*
- *What have other similar courses/programs done that might be relevant to your course/program?*
- *In what ways could your course/program have flexibility to include new ways of learning, or content for Indigenous approaches or knowledges?*
- *What is your awareness of the history or background to approaches you are considering, such as the land acknowledgement? How have you developed your awareness?*
- *Which literatures, sources, or Indigenous Knowledge Holders have you consulted? (Please confirm you have permission to share any names, it may be helpful to have the person confirm the text if you will be submitting their name)*
- *Are you engaging in critical analysis of Settler Colonialism and/or Decolonization?*
- *Have you included the information in the other relevant areas in the PDC form (such as learning outcomes) or in the course syllabus where appropriate?*

The School of Computer Science offers COMP-3057(Cyber Ethics) and has made it mandatory across all of its programs. This course not only examines the ethical issues surrounding the cyber space but also introduces students with concepts that are important for Indigenous communities and Indigenous data sovereignty. Beginning with the Winter 2026 academic calendar, the School has designated COMP-3507 as a required course for all programs to help foster a more inclusive and holistic educational experience—one that respects and values Indigenous knowledge systems and perspectives.

This new course COMP-2717 (Artificial Intelligence: Practice and Ethics for Common Users) could be used to critically examine real-world controversies in AI which could frame discussion through Indigenous worldviews and perspectives on how technology affects communities, land, and data sovereignty (i.e., environmental impacts of AI to data colonialism,etc). The School of Computer Science recognizes that meaningful progress requires ongoing commitment. And remains dedicated to learning, unlearning, and re-learning as part of this journey. Although the course learning outcomes do not currently include explicit Indigenous-specific outcomes, relevant materials and perspectives can be identified and further expanded to better serve our students and strengthen the course's inclusivity.

B.3 LEARNING OUTCOMES (QAF section 2)

Please complete the following table. State the specific learning outcomes that make up the goal of the course (what will students know and be able to do at the end of this course?) and link the learning outcomes to the Characteristics of a University of Windsor Graduate outlined in "To Greater Heights" by listing them in the appropriate rows.

*Please note that a learning outcome may link to more than one of the specified Characteristics of a University of Windsor Graduate, and that a single course might not touch on each of the Characteristics. **If a specific learning outcome is not applicable for the course, please enter N/A or not applicable.***

Information on learning outcomes is appended to this form (Appendix A). Proposers are also strongly encouraged to contact the Centre for Teaching and Learning for assistance with the articulation of learning outcomes.

PROGRAM DEVELOPMENT COMMITTEE
NEW COURSE PROPOSALS
FORM D

Course Learning Outcomes *This is a sentence completion exercise.* At the end of this course, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A U of Windsor graduate will have the ability to demonstrate:
Identify and describe common AI applications encountered in everyday life. Use AI tools and reflect on their appropriate use in academic and professional settings.	A. the acquisition, application and integration of knowledge
	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
Critically evaluate capabilities, limitations, and risks of AI systems.	C. critical thinking and problem-solving skills
Explain fundamental AI concepts in clear, non-technical terms.	D. literacy and numeracy skills
Recognize ethical issues related to bias, fairness, privacy, transparency, and accountability in AI. Apply ethical frameworks and policy guidelines to real-world AI case studies.	E. responsible behaviour to self, others and society
Communicate informed perspectives on the societal impact of AI in written and oral forms.	F. interpersonal and communications skills
	G. teamwork, and personal and group leadership skills
	H. creativity and aesthetic appreciation
Identify and describe the importance of AI systems in everyday life.	I. the ability and desire for continuous learning

B.4 Demand for Course

Please provide as much information on projected enrolment as possible.

Projected enrolment levels for the first 5 years of the new course.	Year 1	Year 2	Year 3	Year 4	Year 5
	60	120	150	300	300

B.4.1 Impact of New Course on Enrolment in Existing Courses

What will be the impact of offering the new course on enrolments in existing courses in the program or Department?

The creation of the new course will relieve pressure on some of the other Computer Science courses students choose to take as a general elective.

C. RESOURCES

PROGRAM DEVELOPMENT COMMITTEE
NEW COURSE PROPOSALS
FORM D

C.1 Resources In Support of the Revised Program and Resource Implications for Other Campus Units or Programs (QAF section 2.1.2.6)

Describe, in general terms, all faculty and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the revised program. Please do not name specific individuals in this section.

Describe the impact of the planned utilization of existing human, physical and financial resources (within and outside the unit) on other existing programs in the department or at the university.

Provide an assessment of the reliance of the revised program on existing resources from other campus units and include evidence that there are adequate resources available and committed to the revised program to sustain the quality of scholarship produced by undergraduate students as well as graduate students' scholarship and research activities. Consider, for example: faculty resources (within and outside the unit), existing courses (within and outside the unit), equipment or facilities outside the proposer's control, external resources requiring maintenance or upgrading using external resources, staff support, library, teaching and learning support, information technology support, laboratory access, student support services, space, equipment, facilities, GA/TA

The School of Computer Science has seven faculty members with expertise in the area of Artificial Intelligence. All these faculty members are qualified to teach this course. The School will collaborate with the University's Institutional Advisor on Artificial Intelligence to support this course for possible content review. Current administrative support will be adequate for this course.

C.1.1 Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program (QAF section 2.1.2.6)

Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the revised program and the associate plans to ensure the sustainability of the revised program and quality of the student experience.

Seven of current faculty members in the School of Computer Science can teach this course. No Adjunct, Limited-term, and Sessional Faculty are required.

C.2 Graduate Faculty Qualifications and Supervisory Loads (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Explain how supervisory loads will be distributed, and describe the qualifications and appointment status of faculty who will provide instruction and supervision in the revised program.

N/A

C.3 Financial Assistance for Graduate Students (where appropriate) (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Where appropriate to the revised program, provide evidence that financial assistance for graduate students will be sufficient to ensure adequate quality and numbers of students.

N/A

C.4 Anticipated New Resources (QAF sections 2.1.2.6)

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the revised program.*

N/A

C.5 Planned Reallocation of Resources and Cost-Savings

PROGRAM DEVELOPMENT COMMITTEE
NEW COURSE PROPOSALS
FORM D

Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the revised program. (e.g., streamlining existing programs and courses, deleting courses, etc.)

Reusing server and computing lab resources currently available as part of the AI specialization.

PROGRAM DEVELOPMENT COMMITTEE
NEW COURSE PROPOSALS
FORM D

C.6 Additional Resources Required – Resources Requested (QAF section 2.1.2.6f)

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to run the revised program.If not applicable, write n/a.*

Faculty:	None
Staff:	None
GA/TAs:	2 GAs for marking assessments.

Further GA support will be needed as the course enrolment increases.

C.6.1 Additional Institutional Resources and Services Required by all Affected Areas or Departments (QAF section 2.1.2.6f)

*Describe all **additional institutional resources and services** required by all affected areas or departments to run the revised program, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance. If not applicable, write n/a.*

Library Resources and Services:	N/A
Teaching and Learning Support:	N/A
Student Support Services:	N/A
Space and Facilities:	N/A
Equipment (and Maintenance):	N/A

D.1 Form History *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

Date of Modification	Approval Body Modifying	Reason for Modification

University of Windsor
Program Development Committee

*5.7: **Civil and Environmental Engineering – New Course Proposal (Form D)**

Item for: **Approval**

Forwarded by: **Faculty of Engineering**

MOTION: That the following course be approved:^
CIVL-8010. Project Planning and Control

^Subject to approval of the expenditures required.

Rationale/Approvals:

- The new course has been approved by the Faculty of Civil and Environmental Engineering Council and the Faculty of Engineering Coordinating Council and the Faculty of Graduate Studies Council (April 28, 2026)
- *See attached.*

PROGRAM DEVELOPMENT COMMITTEE
NEW COURSE PROPOSALS
FORM D

TITLE OF PROGRAM(S)/CERTIFICATE(S):	**MEng/MASc/PhD Civil Engineering**
DEPARTMENT(S)/SCHOOL(S):	**Civil and Environmental Engineering**
FACULTY(IES):	**Engineering**

Proposed change(s) effective as of* [Fall, Winter, Spring]: **(subject to timely and clear submission)*	Fall 2026

A. NEW COURSE PROFILE

Course # and Title: CIVL- 8010. Project Planning and Control

A.1 Calendar Description

Calendar descriptions should be written in the third person and should provide a general outline of the course material. Where appropriate, examples of topics or themes, which might be covered in the course, should also be provided.

Practical and theoretical applications of project planning and control techniques in engineering projects. Understand advanced project management practices (e.g., earned value analysis, financial risk management), decision-making methods (e.g., Analytic hierarchy process method (AHP), decision trees, Bayesian Belied Networks) and modeling techniques (e.g., Monte Carlo Simulation). Interpret and provide critical feedback on project planning and control techniques. (This is an experiential learning course.)

A.2 Experiential Learning Categories

Does the course include experiential learning? Check all that apply.
For definitions go to: https://www.uwindsor.ca/cces/1423/experiential-learning-definitions

- ☐ applied research
- ☐ capstone
- ☐ clinic
- ☐ co-op
- ☐ community service learning
- ☐ creative performance or exhibit (*for visual and performing arts*)
- ☐ entrepreneurship
- ☐ field experience or site visit
- ☐ labs
- ☐ No experiential learning in this course
- ☐ field work
- ☐ industry/community consulting project
- ☒ interactive simulations
- ☐ internship – full-time
- ☐ internship – part-time
- ☒ professional practicum
- ☐ research project
- ☐ study abroad

A.3 Other Course Information

Please complete the following tables.

Credit weight	Total contact hours	Breakdown of contact hours/week				
		Lecture	Lab/ Tutorial	Online	Co-op/practicum/ experiential learning	Other
3.0	36	X				Explain:

PROGRAM DEVELOPMENT COMMITTEE
NEW COURSE PROPOSALS
FORM D

Course Modality (Delivery format)							
In-person	**Fully Online - Asynchronous**	**Fully Online - Synchronous**	**Remote asynchronous online**	**Remote synchronous online**	**Hybrid**	**Hyflex**	**Bimodal**
X							

Pre-requisites	**Co-requisites**	**Anti-requisites**	**Cross-Career (ug/grad) or Cross-listed with (ug/ug or grad/grad):**	**Required course?**	**Replacing old course*** ** *[provide old course number]*
N/A				No	CIVL-8900 (Section 2)

******Replacing Old Course: this does not mean that the former course will be deleted from the calendar. If it is to be deleted, a Form E must be completed.***

Will students be able to obtain credit for the new course and the course(s) that it is replacing?	Not if taken under special topics umbrella CIVL-8900 (Section 2)

Is the new course a required course in one or more programs?

____ Yes [A minor program change proposal (PDC Form C) or major program change proposal (PDC Form B) must be submitted with the new course proposal (PDC Form D)]

__X__ No

If yes, list all programs for which this course will be required: N/A

B. RATIONALE

B.1 Course Goal(s)

Please provide a statement about the purpose of the course within the program of study or as an option.

The objective of this course is to introduce several topics in planning and controlling engineering and technical projects to analyze and provide rational solutions to a range of problems encountered in engineering and related management decision-making process to improve and optimize the project management process. This course focuses on selected advanced topics of project management that are not covered under GENG-8020. This course has been currently offered for the last several years as a special topics course, CIVL-8900-2.

B.2 Indigenous (First Nations, Métis, or Inuit) Content, Perspectives, or Material

*The University of Windsor is committed to building and sustaining stronger, more meaningful inclusive partnerships with Indigenous students, scholars, and communities. Indigenization of curriculum takes place in a larger context, including a requirement to respond to the four Calls to Action in education of the Truth and Reconciliation Report (2015) (page 1), the unique legal requirements of the Constitution Act 1982 (Sections 25, 35), the provincial legal requirements of the Ontario Human Rights Code, 1990, and provincial legislation Bill Pr36 (1967). In developing this new course, **how** has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*

Please consider these prompt questions and additional Resources including disciplinary examples:

- *What **process** has your department/Faculty used to consider Indigenization?*
- ***How** have you considered the importance or relevance to the course/program?*
- *How has your department or faculty approached raising awareness for Indigenous knowledges in your area?*
- *What do the TRC and University Principles documents suggest relevant to your course?*
- *What have other similar courses/programs done that might be relevant to your course/program?*

- *In what ways could your course/program have flexibility to include new ways of learning, or content for Indigenous approaches or knowledges?*
- *What is your awareness of the history or background to approaches you are considering, such as the land acknowledgement? How have you developed your awareness?*
- *Which literatures, sources, or Indigenous Knowledge Holders have you consulted? (Please confirm you have permission to share any names, it may be helpful to have the person confirm the text if you will be submitting their name)*
- *Are you engaging in critical analysis of Settler Colonialism and/or Decolonization?*
- *Have you included the information in the other relevant areas in the PDC form (such as learning outcomes) or in the course syllabus where appropriate?*

1. What process has your department/Faculty used to consider Indigenization?

The process the Faculty of Engineering has taken has been to create presentations that are provided to students in courses that are common to all BASc programs in each year of study. These presentations discuss residential schools, Truth and Reconciliation, and colonialism. Following these presentations, students are assigned a writing assignment to reflect upon the information and discuss its relevance to them and/or the engineering profession. This approach has been taken to reinforce the fact that these issues are important to the engineering profession, regardless of discipline, as discussed below. This process was undertaken by the Associate Dean Academic, in communication with the Indigenization Learning Specialist within the Centre for Teaching and Learning.

At the undergraduate level GENG-1101 (Engineering 1) provides a presentation about residential schools, Truth and Reconciliation, and colonialism and assigns a reflection assignment for the first-year program, which is common to all engineering students. GENG-2101 (Engineering 2) provides a project in which students consider an engineering-focused issue facing an Indigenous community. GENG-3130 (Engineering Economics) includes a presentation on Indigenous issues, and students complete a related assignment. Capstone Design courses in the final year incorporate the Seventh Generation Principle into the decision-making process, encouraging design teams to consider the impacts of their design choices and materials on the next seven generations. This is a concept that is introduced in the first-year course GENG-1201 (Cornerstone Design). At the graduate level the course GENG-8000 (Engineering Technical Communications), aims to also examine equity, diversity, inclusion, and decolonization related topics, specifically Canada's interactions with its Indigenous peoples and broader societal and cultural issues to highlight and bring awareness to the impact of transportation on these populations

Dr. Edwin Tam, the Head of Civil and Environmental Engineering is involved in a national initiative addressing the Indigenization of civil engineering education through the *Canadian Society for Civil Engineering*, which is actively working to guide how Indigenous knowledge systems, ethical responsibilities, and community-engaged approaches are integrated into engineering curricula. At the graduate level, this work is understood as a continuation and deepening of foundational undergraduate learning, with emphasis on advanced critical engagement, application to complex engineering contexts, and reflection on the societal and territorial dimensions of infrastructure development. The next national forum, scheduled for June 2026, will further inform how these priorities are translated into curricular practice across Canadian institutions.

2. How have you considered the importance or relevance to the course/program?

Engineering design is a topic that is part of the curricula throughout students' four years of study. A much-overlooked aspect of engineering design has historically been considering the environmental and social impacts of designs. This has contributed to the most pressing global issue: climate change. The Engineering profession can learn from Indigenous ways of knowing, especially the appreciation that our current activities will impact, as IP believe, the next seven generations.

As well, Indigenization is relevant when we discuss ethics and equity issues within the profession and Canadian society. "Ethics and Equity" is one of 12 Graduate Attributes to be demonstrated by students graduating from an accredited Engineering program. Within this context, students are made aware of their responsibility to act equitably and

ethically in their actions with their community, colleagues, clients, and society. The most important requirement within the Professional Engineers Ontario (PEO) Code of Ethics is to “regard the practitioner’s duty to public welfare as paramount” [1]. This duty lends itself to discussing respect for and collaboration with Indigenous communities when developing infrastructure and processes.

3. How has your department or faculty approached raising awareness for Indigenous knowledges in your area?

This is an area of weakness within the Faculty of Engineering. The initial process was created by the Associate Dean, Academic, without much involvement by faculty members. However, changes are being made to raise awareness. Through the Faculty's former Equity, Diversity and Inclusion Advisor, faculty members have been made aware of relevant presentations and workshops, e.g., events that were held on and around Orange Shirt Day as well as slides for instructors to use in their classes to provide information about Orange Shirt Day. The Faculty of Engineering Curriculum Committee has identified Indigenous knowledge as a topic that should be more thoroughly covered within all B.A.Sc. curricula. Previously, the Associate Dean, Academic, and the Undergraduate Programs Coordinator have enrolled in the short course "Pulling Together: A Guide for Curriculum Developers." All the instructors in the Faculty were also encouraged to attend the workshops to raise awareness. As part of each program's continuous improvement process, communications and discussions suggesting instructors to consider if, and how, their courses can include Indigenous content have occurred.

4. What do the TRC and University Principles documents suggest relevant to your course?

The process that the Faculty of Engineering is taking (described in the answer to question 1) affirms the spirit of the TRC Call to Action item 62(i), to create a "curriculum on residential schools, Treaties, and Aboriginal peoples' historical and contemporary contributions to Canada" [2]. As well, the University Principles document states that focus should be placed on learning outcomes. This is an activity that the Faculty has been working to implement for over a decade. Furthermore, the Faculty's current process of presenting information on residential schools, Truth and Reconciliation, and colonialism aligns with the principle "Recognize the importance of providing greater exposure and knowledge for non-Indigenous students on the realities, histories, cultures and beliefs of Indigenous people in Canada" [3]. Finally, the ELEVATE program provides funding and collaborative opportunities for Indigenous students in Engineering, which aligns with the principle of committing to "develop opportunities for Indigenous students" [3].

5. What have other similar courses/programs done that might be relevant to your course/program?

The Faculty of Engineering began by developing and implementing our own approach. We then began to explore what other engineering programs are doing across Canada. A grant was received on February 7, 2023, to fund research into the current practices within engineering programs across Canada. The research produced some recommendations that were part of two additional phases of work planned for the project. However, this work was being led by the Equity, Diversity, and Inclusion Advisor for the Faculty of Engineering. They left the University at the end of May 2024 and the position has not been filled.

6. In what ways could your course/program have flexibility to include new ways of learning, or content for Indigenous approaches or knowledges?

The answers to questions 1 and 2 have identified specific areas of the programs that are most relevant for the inclusion of Indigenous approaches or knowledge, i.e., in considering the environmental and social impacts of product and process designs, and when we discuss “ethics and equity” and respect for others, our community, and “regard the practitioner’s duty to public welfare as paramount” [1].

7. What is your awareness of the history or background to approaches you are considering, such as the land acknowledgement? How have you developed your awareness?

As a whole, the Faculty's awareness is limited. Some faculty members are better informed than others, but this is another area of weakness. The former Equity, Diversity and Inclusion Advisor in Engineering, who left us recently, had begun providing relevant resources and workshops to faculty members. Indigenous issues are part of these materials. For example, slides were prepared and provided to all instructors to include in our classes to make students aware of Orange Shirt Day, what it is and why it is important, and to advertise events that occurred on Orange Shirt Day.

8. Which literatures, sources, or Indigenous Knowledge Holders have you consulted? (Please confirm you have permission to share any names, it may be helpful to have the person con-firm the text if you will be submitting their name)

We have met with the Indigenization Learning Specialist, Jaimie Kechego, to review our process and the presentations that are provided to students. This has been an iterative process; we have been learning and improving as the process develops, and we will continue to make changes as we learn. We have met with Mr. Cory Jones, the President of Neegan Burnside, an Indigenous-owned engineering and environmental consulting company. Mr. Jones has provided a lecture to fourth-year students about his experiences in delivering infrastructure to Canadian Indigenous communities. As well, the Faculty of Engineering invited Mr. Randy Herrmann, Director of the Engineering Access Program at the University of Manitoba, to provide a workshop about enabling Indigenous students' success in engineering.

PEO has recently published an issue of its official publication, Engineering Dimensions, about Indigenous engineering firms, Indigenizing engineering, and Indigenous pathways to engineering. This literature provides an Ontario-based foundation for our research into the current state of the profession and approaches taken by other institutions.

In 2025, the Canadian Society for Civil Engineering (CSCE) embarked on a 1-year project to address Indigenizing the Civil Engineering Curriculum. The project is on going, and the first year results will be reviewed and shared in mid-2026. All Heads and Chairs of civil engineering departments across Canada participate as part of the CSCE, including the current head of our Civil and Environmental Engineering Department here at UWindsor.

9. Are you engaging in critical analysis of Settler Colonialism and/or Decolonization? Have you included the information in the other relevant areas in the PDC form (such as learning outcomes) or in the course syllabus where appropriate?

No, we have not performed this critical analysis. Much more learning needs to occur for those within the Faculty who are developing the curricula to better understand what decolonization looks like within engineering. This is a project that will begin with educating ourselves; the Associate Dean, Academic, and the Undergraduate Programs Coordinator took the six-week course "Pulling Together: A Guide for Curriculum Developers" offered by the University of Windsor and taught by Jaimie Kechego. Faculty members have been encouraged to also participate in similar workshops and courses.

10. Have you included the information in the other relevant areas in the PDC form (such as learning outcomes) or in the course syllabus where appropriate?

As noted above, this is included in the syllabi in the following ways: GENG-1101 Engineering 1 is the first-year course that provides a presentation about residential schools, Truth and Reconciliation, and colonialism and assigns a reflection assignment for the first-year program, which is common to all engineering students. GENG-2101 Engineering 2 is the second-year course that provides a project in which students consider an engineering-focused issue facing an Indigenous community. GENG-3130 Engineering Economics is the third-year course that provides a presentation about Indigenous issues and students complete an assignment. Capstone Design is the fourth-year course that incorporates the Seventh Generation Principle into the decision-making process for design teams to consider the impacts of their design choices and materials on the next seven generations. This is a concept that is introduced in the first-year course GENG-1201 Cornerstone Design.

References

1. Government of Ontario. "R.R.O. 1990, Regulation 941: GENERAL under Professional Engineers Act, R.S.O. 1990, c. P28." January 1, 2023. https://www.ontario.ca/laws/regulation/900941
2. Truth and Reconciliation Commission of Canada. "Truth and Reconciliation Commission of Canada: Calls to Action." 2015. https://ehprnh2mwo3.exactdn.com/wp-content/uploads/2021/01/Calls_to_Action_English2.pdf
3. Universities Canada. "Universities Canada principles on Indigenous education." June 29, 2015. https://www.univcan.ca/media-room/media-releases/universities-canada-principles-on-indigenous-education/

PROGRAM DEVELOPMENT COMMITTEE
NEW COURSE PROPOSALS
FORM D

B.3 LEARNING OUTCOMES (QAF section 2)

Please complete the following table. State the specific learning outcomes that make up the goal of the course (what will students know and be able to do at the end of this course?) and link the learning outcomes to the Characteristics of a University of Windsor Graduate outlined in "To Greater Heights" by listing them in the appropriate rows. Please note that a learning outcome may link to more than one of the specified Characteristics of a University of Windsor Graduate, and that a single course might not touch on each of the Characteristics. ***If a specific learning outcome is not applicable for the course, please enter N/A or not applicable.*** *Information on learning outcomes is appended to this form (Appendix A). Proposers are also strongly encouraged to contact the Centre for Teaching and Learning for assistance with the articulation of learning outcomes.*

CIVL-8010. Project Planning and Control

Course Learning Outcomes *This is a sentence completion exercise.* At the end of this course, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A U of Windsor graduate will have the ability to demonstrate:
A. Apply planning and controlling engineering and technical practices to solve real world problems.	A. the acquisition, application and integration of knowledge
B. Use data collection and analysis to identify potential issues in projects. Locate, synthesize, and communicate findings from peer reviewed research	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C. Analyze engineering projects and propose controls to mitigate potential risks. Apply multi-criteria decision making in project planning using the AHP method.	C. critical thinking and problem-solving skills
D. Identify uncertainties associated with engineering projects and model the project performance. Analyze financial risk mitigation measures to select the optimal solution.	D. literacy and numeracy skills
E. Articulate engineer's responsibilities as a responsible citizen.	E. responsible behaviour to self, others and society
F. Research topics in project planning and control and prepare technical papers. (Also applicable to I)	F. interpersonal and communications skills
G. Collaborate with peers to solve complex problems	G. teamwork, and personal and group leadership skills
H. Collaborate with peers to solve complex problems.	H. creativity and aesthetic appreciation
I.	I. the ability and desire for continuous learning

PROGRAM DEVELOPMENT COMMITTEE
NEW COURSE PROPOSALS
FORM D

B.4 Demand for Course

Please provide as much information on projected enrolment as possible.

Projected enrolment levels for the first 5 years of the new course.	Year 1	Year 2	Year 3	Year 4	Year 5
	40	40	40	40	40

B.4.1 Impact of New Course on Enrolment in Existing Courses

What will be the impact of offering the new course on enrolments in existing courses in the program or Department?

This course will provide knowledge on project management techniques that are practically important when practising as an engineer. This course will be relevant to Civil and Environmental Engineering graduate students. Given its successful run for the last several years as a special topics course, is being developed into its own independent course. The existing former special topics course has been well attended and fills a need for additional project management expertise. There is no anticipated detrimental impact on enrolments overall.

C. RESOURCES

C.1 Resources In Support of the Revised Program and Resource Implications for Other Campus Units or Programs (QAF section 2.1.2.6)

Describe, in general terms, all faculty and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the revised program. Please do not name specific individuals in this section. Describe the impact of the planned utilization of existing human, physical and financial resources (within and outside the unit) on other existing programs in the department or at the university. Provide an assessment of the reliance of the revised program on existing resources from other campus units and include evidence that there are adequate resources available and committed to the revised program to sustain the quality of scholarship produced by undergraduate students as well as graduate students' scholarship and research activities. Consider, for example: faculty resources (within and outside the unit), existing courses (within and outside the unit), equipment or facilities outside the proposer's control, external resources requiring maintenance or upgrading using external resources, staff support, library, teaching and learning support, information technology support, laboratory access, student support services, space, equipment, facilities, GA/TA

Yes. Will be taught by a professor who has taught the existing special topics course Project Planning and Control at University of Windsor and the University of British Columbia. There will be some Library, LMS, equipment for some in-class demonstrations.

C.1.1 Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program (QAF section 2.1.2.6)

Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the revised program and the associate plans to ensure the sustainability of the revised program and quality of the student experience.

N/A

C.2 Graduate Faculty Qualifications and Supervisory Loads (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Explain how supervisory loads will be distributed, and describe the qualifications and appointment status of faculty who will provide instruction and supervision in the revised program.

N/A

PROGRAM DEVELOPMENT COMMITTEE
NEW COURSE PROPOSALS
FORM D

C.3 Financial Assistance for Graduate Students (where appropriate) (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Where appropriate to the revised program, provide evidence that financial assistance for graduate students will be sufficient to ensure adequate quality and numbers of students.

N/A

C.4 Anticipated New Resources (QAF sections 2.1.2.6)

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the revised program.*

N/A

C.5 Planned Reallocation of Resources and Cost-Savings

Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the revised program. (e.g., streamlining existing programs and courses, deleting courses, etc.)

N/A

C.6 Additional Resources Required – Resources Requested (QAF section 2.1.2.6f)

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to run the revised program. If not applicable, write n/a.*

Faculty:	N/A
Staff:	N/A
GA/TAs:	1 GA

C.6.1 Additional Institutional Resources and Services Required by all Affected Areas or Departments (QAF section 2.1.2.6f)

*Describe all **additional institutional resources and services** required by all affected areas or departments to run the revised program, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance. If not applicable, write n/a.*

Library Resources and Services:	N/A
Teaching and Learning Support:	N/A
Student Support Services:	N/A
Space and Facilities:	N/A
Equipment (and Maintenance):	N/A

D.1 Form History *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

Date of Modification	Approval Body Modifying	Reason for Modification

University of Windsor
Program Development Committee

*5.8 **Science – New Course Proposal (Form D)**

Item for: **Approval**

Forwarded by: **Faculty of Science**

MOTION: That the following courses be approved:^
SCIE-2700. Perspectives in Science

^Subject to approval of the expenditures required.

Rationale/Approvals:

- This new course proposal has been approved by the Science Program Development Committee (SPDC) (as delegated by the Faculty of Science Coordinating Council) (April 14, 2026).
- *See attached.*

PROGRAM DEVELOPMENT COMMITTEE
NEW COURSE PROPOSALS
FORM D

TITLE OF PROGRAM(S)/CERTIFICATE(S):	**Science**
DEPARTMENT(S)/SCHOOL(S):	**Faculty of Science**
FACULTY(IES):	**Faculty of Science**

Proposed change(s) effective as of* [Fall, Winter, Spring]: **(subject to timely and clear submission)*	Fall 2026, Undergraduate Calendar

A. NEW COURSE PROFILE

Course # and Title: SCIE-2700. Perspectives in Science

A.1 Calendar Description

Calendar descriptions should be written in the third person and should provide a general outline of the course material. Where appropriate, examples of topics or themes, which might be covered in the course, should also be provided.

Participants will explore the interrelationships of science and society and will develop the ability to compare scientific facts, public opinion, and personal beliefs. Activities may include group discussions, forums with guest speakers, written and verbal critical analysis, and other activities that foster scientific and cultural literacy. (3 credit hours per week, exact format may vary depending on the topic and instructor).(Open to both science and non-science students)

A.2 Experiential Learning Categories

Does the course include experiential learning? Check all that apply.
For definitions go to: https://www.uwindsor.ca/cces/1423/experiential-learning-definitions

- ☐ applied research
- ☐ capstone
- ☐ clinic
- ☐ co-op
- ☐ community service learning
- ☐ creative performance or exhibit (*for visual and performing arts*)
- ☐ entrepreneurship
- ☐ field experience or site visit
- ☐ labs
- ☒ No experiential learning in this course
- ☐ field work
- ☐ industry/community consulting project
- ☐ interactive simulations
- ☐ internship – full-time
- ☐ internship – part-time
- ☐ professional practicum
- ☐ research project
- ☐ study abroad

A.3 Other Course Information

Please complete the following tables.

Credit weight	Total contact hours	Breakdown of contact hours/week				
		Lecture	Lab/ Tutorial	Online	Co-op/practicum/ experiential learning	Other
3	36	3				Depending on the instructor, course delivery might be variable. It is possible to be all lecture, but could be tutorial, group discussion, even perhaps excursions to field locations.

PROGRAM DEVELOPMENT COMMITTEE
NEW COURSE PROPOSALS
FORM D

Course Modality (Delivery format)							
In-person	**Fully Online - Asynchronous**	**Fully Online - Synchronous**	**Remote asynchronous online**	**Remote synchronous online**	**Hybrid**	**Hyflex**	**Bimodal**
x							

Pre-requisites	**Co-requisites**	**Anti-requisites**	**Cross-Career (ug/grad) or Cross-listed with (ug/ug or grad/grad):**	**Required course?**	**Replacing old course*** ***[provide old course number]***

******Replacing Old Course: this does not mean that the former course will be deleted from the calendar. If it is to be deleted, a Form E must be completed.***

Will students be able to obtain credit for the new course and the course(s) that it is replacing?	N/A

Is the new course a required course in one or more programs?

_____ Yes [A minor program change proposal (PDC Form C) or major program change proposal (PDC Form B) must be submitted with the new course proposal (PDC Form D)]

__x__ No. [If yes, list all programs for which this course will be required: N/A]

B. RATIONALE

B.1 Course Goal(s)

Please provide a statement about the purpose of the course within the program of study or as an option.

The course SCIE-2700 *Science in Perspectives* is a junior level course designed to complement the senior level special topics, SCIE-3700. The course is being developed to address the need for junior level special topics courses within the curriculum. This course could be used by any areas within the Faculty of Science who would like to offer a course that is not at the senior level. The course provides flexibility to offer junior-level special topics, including those taught by visiting researchers to give students exposure to unique topics at the introductory level.

B.2 Indigenous (First Nations, Métis, or Inuit) Content, Perspectives, or Material

*The University of Windsor is committed to building and sustaining stronger, more meaningful inclusive partnerships with Indigenous students, scholars, and communities. Indigenization of curriculum takes place in a larger context, including a requirement to respond to the four Calls to Action in education of the Truth and Reconciliation Report (2015) (page 1), the unique legal requirements of the Constitution Act 1982 (Sections 25, 35), the provincial legal requirements of the Ontario Human Rights Code, 1990, and provincial legislation Bill Pr36 (1967). In developing this new course, **how** has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*

Please consider these prompt questions and additional Resources including disciplinary examples:

- *What **process** has your department/Faculty used to consider Indigenization?*
- ***How** have you considered the importance or relevance to the course/program?*
- *How has your department or faculty approached raising awareness for Indigenous knowledges in your area?*
- *What do the TRC and University Principles documents suggest relevant to your course?*
- *What have other similar courses/programs done that might be relevant to your course/program?*
- *In what ways could your course/program have flexibility to include new ways of learning, or content for Indigenous approaches or knowledges?*

- *What is your awareness of the history or background to approaches you are considering, such as the land acknowledgement? How have you developed your awareness?*
- *Which literatures, sources, or Indigenous Knowledge Holders have you consulted? (Please confirm you have permission to share any names, it may be helpful to have the person confirm the text if you will be submitting their name)*
- *Are you engaging in critical analysis of Settler Colonialism and/or Decolonization?*
- *Have you included the information in the other relevant areas in the PDC form (such as learning outcomes) or in the course syllabus where appropriate?*

The Faculty has been working to increase awareness of Indigenous knowledge systems and emphasize their importance and relevance of Indigenous knowledge and perspectives across all programs. Efforts are being made within departments and program areas, and the topic of indigenization is discussed regularly in the Science Program Development committee, where the chair in encourages meaningful and authentic efforts to bringing awareness of Indigenous knowledge and perspectives. There is potential that this course could be used to recruit an Indigenous instructor to help the faculty of science share and develop Indigenous perspectives. The Indigenous community will be consulted for advice on a specific topics that could be shared.

B.3 LEARNING OUTCOMES (QAF section 2)

Please complete the following table. State the specific learning outcomes that make up the goal of the course (what will students know and be able to do at the end of this course?) and link the learning outcomes to the Characteristics of a University of Windsor Graduate outlined in "To Greater Heights" by listing them in the appropriate rows. Please note that a learning outcome may link to more than one of the specified Characteristics of a University of Windsor Graduate, and that a single course might not touch on each of the Characteristics. ***If a specific learning outcome is not applicable for the course, please enter N/A or not applicable.****Information on learning outcomes is appended to this form (Appendix A). Proposers are also strongly encouraged to contact the Centre for Teaching and Learning for assistance with the articulation of learning outcomes.*

Course Learning Outcomes *This is a sentence completion exercise.* At the end of this course, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A U of Windsor graduate will have the ability to demonstrate:
A. Discuss the scientific method and apply scientific arguments to scientific and societal issues to draw rational conclusions based on scientific facts and personal beliefs.	A. the acquisition, application and integration of knowledge
B. Define problems based on information provided on the topic of investigation. Apply introductory research skills to investigate and contextualize provided data using relevant sources and identify evidence-based conclusions.	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C. Identify and explain the difference between scientific fact and personal belief on a topic of investigation.	C. critical thinking and problem-solving skills
D.	D. literacy and numeracy skills
E.	E. responsible behaviour to self, others and society

Course Learning Outcomes *This is a sentence completion exercise.* At the end of this course, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A U of Windsor graduate will have the ability to demonstrate:
F. Discuss topics of scientific or societal interest with others.	F. interpersonal and communications skills
G.	G. teamwork, and personal and group leadership skills
H. Identify and discuss how creativity applies to the scientific method applied in a societal context.	H. creativity and aesthetic appreciation
I. Reflect on the specific topic of investigation and describe its relevance to personal, academic, or societal goals.	I. the ability and desire for continuous learning

B.4 Demand for Course

Please provide as much information on projected enrolment as possible.

Projected enrolment levels for the first 5 years of the new course.	Year 1	Year 2	Year 3	Year 4	Year 5
	10	15	20	30	30

B.4.1 Impact of New Course on Enrolment in Existing Courses

What will be the impact of offering the new course on enrolments in existing courses in the program or Department?

C. RESOURCES

C.1 Resources In Support of the Revised Program and Resource Implications for Other Campus Units or Programs (QAF section 2.1.2.6)

Describe, in general terms, all faculty and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the revised program. Please do not name specific individuals in this section. Describe the impact of the planned utilization of existing human, physical and financial resources (within and outside the unit) on other existing programs in the department or at the university. Provide an assessment of the reliance of the revised program on existing resources from other campus units and include evidence that there are adequate resources available and committed to the revised program to sustain the quality of scholarship produced by undergraduate students as well as graduate students' scholarship and research activities. Consider, for example: faculty resources (within and outside the unit), existing courses (within and outside the unit), equipment or facilities outside the proposer's control, external resources requiring maintenance or upgrading using external resources, staff support, library, teaching and learning support, information technology support, laboratory access, student support services, space, equipment, facilities, GA/TA

N/A

C.1.1 Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program (QAF section 2.1.2.6)

Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the revised program and the associate plans to ensure the sustainability of the revised program and quality of the student experience.

Course may be offered by full time faculty with who have a special topic of interest to a wide audience. Successful uptake by students may lead to development of new courses. Opportunities for special topics of a more short-term basis due to the presence of a visiting researcher or industrial partner might rely on sessional appointments.

C.2 Graduate Faculty Qualifications and Supervisory Loads (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Explain how supervisory loads will be distributed, and describe the qualifications and appointment status of faculty who will provide instruction and supervision in the revised program.

N/A

C.3 Financial Assistance for Graduate Students (where appropriate) (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Where appropriate to the revised program, provide evidence that financial assistance for graduate students will be sufficient to ensure adequate quality and numbers of students.

N/A

C.4 Anticipated New Resources (QAF sections 2.1.2.6)

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the revised program.*

N/A

C.5 Planned Reallocation of Resources and Cost-Savings

Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the revised program. (e.g., streamlining existing programs and courses, deleting courses, etc.)

N/A

C.6 Additional Resources Required – Resources Requested (QAF section 2.1.2.6f)

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to run the revised program. If not applicable, write n/a.*

Faculty:	regular teaching load assignment
Staff:	N/A
GA/TAs:	N/A

C.6.1 Additional Institutional Resources and Services Required by all Affected Areas or Departments (QAF section 2.1.2.6f)

*Describe all **additional institutional resources and services** required by all affected areas or departments to run the revised program, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance. If not applicable, write n/a.*

Library Resources and Services:	N/A
Teaching and Learning Support:	N/A
Student Support Services:	N/A
Space and Facilities:	N/A
Equipment (and Maintenance):	N/A

PROGRAM DEVELOPMENT COMMITTEE
NEW COURSE PROPOSALS
FORM D

D.1 Form History *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

Date of Modification	Approval Body Modifying	Reason for Modification

University of Windsor
Program Development Committee

*5.9: **Economics – Minor Program Changes (Form C)**

Item for: **Approval**

Forwarded by: **Faculty of Science**

MOTION: That the degree requirements for the Certificate in Economic Analysis and Policy be changed in accordance with the program/course change forms.^

^Subject to approval of the expenditures required.

Rationale/Approvals:

- The proposed changes have been approved by the Department of Economics Council and the Science Program Development Committee (SPDC) (as delegated by the Faculty of Science Coordinating Council (April 14, 2026)
- After completing the required core courses for the Certificate in Economic Analysis and Policy, students may selecting additional courses in either Applied Policy Fields or Public Policy and Government.
- *See attached.*

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

TITLE OF PROGRAM(S)/CERTIFICATE(S):	**Certificate in Economic Analysis and Policy**
DEPARTMENT(S)/SCHOOL(S):	**Economics**
FACULTY(IES):	**Science**

Proposed change(s) effective as of* [Fall, Winter, Spring]: **(subject to timely and clear submission)*	Fall 2026, Undergraduate Calendar

Does the minor program change include new courses?:

____ Yes [All new course proposals must be submitted on PDC Form Ds and submitted for approval with the minor program change proposal (PDC Form C)]

__X__ No If yes, list all new courses:

A.1 PROGRAM REQUIREMENT CHANGES

Please provide the current program requirements and the proposed new program requirements by cutting and pasting from the current undergraduate or graduate web calendar (www.uwindsor.ca/secretariat/calendars) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining. Example: Degree requirements: WXYZ-1000, ~~WXYZ-1010~~, WXYZ-1100, WXYZ-2100, WXYZ-3100, WXYZ-4100, plus three additional courses at the **3000-level or** 4000-level.

Certificate in Economic Analysis and Policy

The Certificate in Economic Analysis and Policy provides students with training in the application of economic tools to the analysis of public policy and government decision-making. The certificate introduces students to core economic principles through intermediate microeconomics and macroeconomics, and then allows them to apply these analytical tools to real-world policy issues. Through coursework in areas such as public finance, environmental policy, international trade, health economics, and regulation, students develop the ability to evaluate policy proposals, analyze economic trade-offs, and understand how institutions and markets interact in shaping economic outcomes.

The certificate is open to students from any undergraduate degree program who are interested in developing policy analysis skills grounded in economic reasoning. After completing the required core courses, students may tailor their certificate by selecting additional courses organized around thematic pathways in Applied Policy Fields and Public Policy and Government, including relevant offerings in both Economics and Political Science. The certificate complements a wide range of degree programs and prepares students for careers in government, public service, policy analysis, business, and related fields.

Admission Requirements

Open only to students currently enrolled in a degree program and in good academic standing in their program.

Degree requirements

Total courses: 8

Required courses: (4 courses)

ECON-1100 Introduction to Economics I
ECON-1110. Introduction to Economics II
ECON-2210. Intermediate Microeconomics I
ECON-2310. Intermediate Macroeconomics I

- ~~ECON-3100 Environmental and Resource Economics~~
- ~~ECON-4600. Cost-Benefit Analysis/Excel application in Economics~~

~~Take 4 Additional Courses:~~
~~ECON-2900. Health Economics~~
~~ECON-3850. Public Sector Economics: Expenditure~~
~~ECON-3730. International Economics: Trade Theory and Policy~~
~~ECON-4160. Urban and Regional Economics~~
~~ECON-4860. Public Sector Economics: Finance (prerequisite is 2220)~~
~~ECON-3310. The Economics of Legal Procedures, Crime and Punishment~~
~~ECON-4300. Economic Analysis of Law~~
~~ECON-3530. Labour Institutions~~
~~POLS-3540. Political Problems of Economic Development~~
~~POLS-3550. Political Economy of International Trade~~
~~POLS-2120. Environmental Policy and Politics~~

Additional Courses (4 courses)
Courses are organized into thematic pathways to guide students in tailoring the certificate to their interests. Students are required to complete one pathway - either Applied Policy Fields or Public Policy and Government.

Applied Policy Fields
These courses apply economic analysis to specific sectors and policy domains.

Economics (ECON)
ECON-2900. Health Economics
ECON-3100. Environmental and Resource Economics
ECON-3350 . Money and Banking
ECON-3410 . Economic Growth and Development Theory
ECON-3730. International Economics: Trade Theory and Policy
ECON-3740. International Economics: Exchange Rates and Balance of Payments
ECON-4600. Cost-Benefit Analysis
ECON-4070. Senior Research Workshop
ECON-4160. Urban and Regional Economics

Political Science (POLS)
POLS-2120. Environmental Policy and Politics
POLS-3540. Political Problems of Economic Development
POLS-3550. Political Economy of International Trade

Public Policy and Government
These courses focus on government decision-making, taxation, public finance, regulation, and institutional policy processes.

Economics (ECON)
ECON-2900. Health Economics
ECON-3310. Economics of Legal Procedures, Crime, and Punishment
ECON-3410. Economic Growth and Development Theory
ECON-3850. Public Sector Economics: Expenditure
ECON-4600. Cost-Benefit Analysis
ECON-4070. Senior Research Workshop

ECON-4160. Urban and Regional Economics
ECON-4300. Economic Analysis of Law
ECON-4860. Public Sector Economics: Finance

Political Science (POLS)
POLS-2010. Current Issues in Canadian Politics
POLS-2200. Introduction to Public Administration
POLS-2210. Canadian Public Administration and Policy

~~While this certificate program is designed for economics students, it is available to any student with an interest in economic analysis for public policy who has available electives. However, students in degree programs outside of economics will likely be required to take additional courses beyond what is included in their degree program.~~

A.2 MINOR COURSE CHANGES REQUIRING ADDITIONAL RESOURCES OR AFFECTING DEGREE REQUIREMENTS

*If this is a minor course and calendar change (usually noted on a Form E) requiring additional resources or affecting degree requirements, please provide the current course information and the proposed new course information by cutting and pasting from the current undergraduate or graduate web calendar and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with **bolding** and underlining.*

*Examples of minor course changes include: deleting courses, course description changes, pre/anti/co- requisite changes, contact hour/lab requirement changes, course title changes, renumbering courses, and/or cross-listing courses. Minor course calendar changes, which do not require additional resources or do not affect degree requirements, should be submitted on a **Form E.***

N/A

B. RATIONALE

Please provide a rationale for the proposed change(s).

The revisions to the Certificate in Economic Analysis and Policy reorganize the certificate's required courses to better align with the core sequence used in the Economics major and Minor in Economics. It formalizes and organizes existing courses into a coherent program focused on the application of economic analysis to public policy and government decision-making. By combining core economic theory with applied courses in areas such as public finance, environmental policy, international trade, and regulation, the certificate provides students with a structured pathway to develop policy analysis skills grounded in economic reasoning.

The certificate also brings together relevant offerings from Economics and Political Science, allowing students to tailor their studies toward applied policy fields or public policy and government. This structure strengthens interdisciplinary opportunities while preparing students for careers in policy analysis, public service, and related fields.

We have consulted with Department of Political Science and they are supportive of additional courses being included in the Certificate in Economic Analysis and Policy.

C. RESOURCES

C.1 Resources In Support of the Revised Program and Resource Implications for Other Campus Units or Programs (QAF section 2.1.2.6)

Describe, in general terms, all faculty and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the revised program. Please do not name specific individuals in this section. Describe the impact of the planned utilization of existing human, physical and financial resources (within and outside the unit) on other existing programs in the department or at the university.

Provide an assessment of the reliance of the revised program on existing resources from other campus units and include evidence that there are adequate resources available and committed to the revised program to sustain the quality of scholarship produced by undergraduate students as well as graduate students' scholarship and research activities. Consider, for example: faculty resources (within and outside the unit), existing courses (within and outside the unit), equipment or facilities outside the proposer's control, external resources requiring maintenance or upgrading using external resources, staff support, library, teaching and learning support, information technology support, laboratory access, student support services, space, equipment, facilities, GA/TA

The revised certificate can be implemented within current resources and is expected to operate in a sustainable manner while maintaining the quality of instruction and student support. The Department of Economics has sufficient faculty, administrative, and support resources to deliver the revised Certificate in Economic Analysis and Policy. Most required courses, including introductory and intermediate theory, are already part of the regular teaching rotation. The revisions primarily reorganize and sequence existing offerings rather than introducing significant new instructional demands. The certificate will continue to rely on existing university infrastructure, including library resources, computer labs, advising services, and IT support.

C.1.1 Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program (QAF section 2.1.2.6)

Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the revised program and the associate plans to ensure the sustainability of the revised program and quality of the student experience.

The Department of Economics does not anticipate reliance on Adjunct, Limited-term, or Sessional faculty to deliver the revised program.

C.2 Graduate Faculty Qualifications and Supervisory Loads (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Explain how supervisory loads will be distributed, and describe the qualifications and appointment status of faculty who will provide instruction and supervision in the revised program.

N/A

C.3 Financial Assistance for Graduate Students (where appropriate) (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Where appropriate to the revised program, provide evidence that financial assistance for graduate students will be sufficient to ensure adequate quality and numbers of students.

N/A

C.4 Anticipated New Resources (QAF sections 2.1.2.6)

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the revised program.*

N/A

C.5 Planned Reallocation of Resources and Cost-Savings

Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the revised program. (e.g., streamlining existing programs and courses, deleting courses, etc.)

The revised certificate improves efficiency by focusing core and elective offerings on key courses and clarifying course sequencing. This allows faculty effort to be concentrated where it is most effective, supports more sustainable scheduling, and simplifies advising and administration. No negative impacts on other units are anticipated.

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

C.6 Additional Resources Required – Resources Requested (QAF section 2.1.2.6f)

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to run the revised program. If not applicable, write n/a.*

Faculty:	N/A
Staff:	N/A
GA/TAs:	N/A

C.6.1 Additional Institutional Resources and Services Required by all Affected Areas or Departments (QAF section 2.1.2.6f)

*Describe all **additional institutional resources and services** required by all affected areas or departments to run the revised program, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance. If not applicable, write n/a.*

Library Resources and Services:	N/A
Teaching and Learning Support:	N/A
Student Support Services:	N/A
Space and Facilities:	N/A
Equipment (and Maintenance):	N/A

D.1 Form History *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

Date of Modification	Approval Body Modifying	Reason for Modification

I. Indigenous (First Nations, Métis, or Inuit) Content, Perspectives, or Material

*The University of Windsor is committed to building and sustaining stronger, more meaningful inclusive partnerships with Indigenous students, scholars, and communities. Indigenization of curriculum takes place in a larger context, including a requirement to respond to the four Calls to Action in education of the Truth and Reconciliation Report (2015) (page 1), the unique legal requirements of the Constitution Act 1982 (Sections 25, 35), the provincial legal requirements of the Ontario Human Rights Code, 1990, and provincial legislation Bill Pr36 (1967). In revising this program, **how** has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*
Please consider these prompt questions and additional Resources including disciplinary examples:

- *What **process** has your department/Faculty used to consider Indigenization?*
- ***How** have you considered the importance or relevance to the course/program?*
- *How has your department or faculty approached raising awareness for Indigenous knowledges in your area?*
- *What do the TRC and University Principles documents suggest relevant to your course?*
- *What have other similar courses/programs done that might be relevant to your course/program?*
- *In what ways could your course/program have flexibility to include new ways of learning, or content for Indigenous approaches or knowledges?*
- *What is your awareness of the history or background to approaches you are considering, such as the land acknowledgement? How have you developed your awareness?*
- *Which literatures, sources, or Indigenous Knowledge Holders have you consulted? (Please confirm you have permission to share any names, it may be helpful to have the person confirm the text if you will be submitting their name)*

- *Are you engaging in critical analysis of Settler Colonialism and/or Decolonization?*
- *Have you included the information in the other relevant areas in the PDC form such as learning outcomes and/or in the syllabus where appropriate?*

The Department of Economics is committed to advancing the Indigenization of its curriculum in a thoughtful and discipline-appropriate manner. The Department of Economics recognizes that traditional economics curricula have historically been centered on Western market-based frameworks while giving limited attention to Indigenous economic systems, values, and ways of knowing. Led by Dr. Sang-Chul Suh (Professor, Department of Economics) and as part of an ongoing process of learning, reflection, and curriculum development, the Department of Economics has engaged in discussions with Jaimie Kechego (Learning Specialist, Indigenization) and reviewed relevant materials on Indigenous and market-based economic perspectives. As for faculty participation in this process, Dr. Sang-Chul Suh, Dr. Jay Rhee, and Dr. Marcelo Arbex have taken the 'Pulling Together- Foundations series' taught by Jaimie Kechego. This series examines the role of colonization and how it continues to affect the Indigenous Peoples of Canada and defines the relationship between Indigenous and non-Indigenous people today. We strongly encourage our faculty to engage in these types of initiatives/courses/workshops to better incorporate Indigenous ways of knowing into their courses.

A key component of this approach is the integration of Indigenous economic perspectives into ECON 1100 – Principles of Economics I (microeconomics), a required course for all Economics programs and a foundational course taken by a large and diverse student population. Introducing Indigenous perspectives at the introductory level ensures that all Economics students are exposed early to alternative economic worldviews and to critical reflection on the assumptions underlying standard economic models.

In ECON 1100/1110 instructors use the *Principles of Microeconomics (Canadian Edition)* and *Principles of Macroeconomics (Canadian Edition)*, by Kevin Milligan; Philip Oreopoulos; Betsey Stevenson; Justin Wolfers. We were recently informed by the publisher that the authors will add indigenous examples throughout the 2nd edition of the textbooks. For example, examples featuring the Innu People, Head-Smashed-In Buffalo Jump and the skills of the Plains peoples, gains from trade, and discussions about indigenous property rights will be incorporated. Dr. Chen (ECON 1100 Leading Instructor) is in contact with the publisher for more information and updates.

Drawing on materials such as *Indigenous Economics* (Addendum I) and *Indigenous Economics vs. Market Economics (*Addendum II), both prepared by Dr. Suh in consultation with Jaimie Kechego and Russell Nahdee – see references below, students in ECON 1100 will be introduced to Indigenous economic principles including interconnectedness, reciprocity, collective responsibility, sustainability, and long-term (intergenerational) decision-making. These perspectives are presented in contrast to core features of market economics such as individualism, profit maximization, private ownership, and short-term efficiency. Students may engage with these materials through assigned readings, videos (see reference below), guided discussion, and short written or reflective exercises that encourage comparison between Indigenous and mainstream economic frameworks (see Addendum III - ECON 1100 – Principles of Economics I course outline (draft) – Fall/2026)

The department's approach to Indigenization in Economics includes the following strategies:

1. **Incorporation of Indigenous Economic Perspectives**
   Where appropriate, courses - particularly foundational courses such as ECON 1100 - include discussion of Indigenous economic systems and values to highlight how economic behaviour, resource use, and decision-making are shaped by culture, history, and institutions.
   - Concrete Next Step: Engage in discussion and prepare materials to introduce Indigenous content into ECON 1110 – Principles of Economics II (Fall/2027), which focus on macroeconomic concepts and policy.
2. **Classroom Discussion and Critical Reflection**
   Students are encouraged to engage critically with Indigenous and market-based economic models, reflecting

on the limits of standard economic assumptions and the implications of colonization for economic institutions and outcomes.

- Concrete Next Step: In ECON 1100 (starting in the Fall/2026), dedicate a structured class discussion or tutorial segment to compare Indigenous and market-based economic frameworks, supported by guided discussion questions or a short-written reflection. Where feasible, the department will invite Indigenous community members to participate through guest talks to support student learning and discussion.

3. **Use of Disciplinary-Relevant Materials**
   Indigenous content is introduced through economics-relevant materials that focus on economic organization, sustainability, distribution, and decision-making, rather than as add-on or stand-alone content.
   - Concrete Next Step: Commit to ongoing review and updating of course materials, including relevant readings, multimedia resources, and economics-focused case examples, informed where appropriate by dialogue with Indigenous community members and Jaimie Kechego (Learning Specialist, Indigenization).
4. **Curriculum Review and Development**
   The department views Indigenization as an ongoing process and will continue to review and refine course content to identify additional opportunities for meaningful and appropriate integration across the curriculum.
   - Concrete Next Step: Beyond the introduction of Indigenous content in first-year Economics courses, the Department of Economics plans to develop (Winter/2027) a dedicated second-year ECON course in Indigenous Economics, with particular focus on Canada. Development of this course will take place in consultation and ongoing dialogue with Jaimie Kechego (Learning Specialist, Indigenization) and Indigenous community members. It will examine Indigenous economic systems emphasizing community, sustainability, and relationships, as well as Indigenous-led enterprises, land and resource stewardship, governance, and economic reconciliation in contrast to Western economic models.
5. **Faculty Awareness and Development**
   Economics faculty has engaged and will continue to engage in learning opportunities related to Indigenization, including workshops and discussions facilitated by Indigenous learning specialists, and are encouraged to continue building capacity to incorporate Indigenous perspectives responsibly.
   - Concrete Next Step: Encourage faculty to further educate themselves about Indigenous histories, economic perspectives, and ways of knowing, and to participate in workshops, training sessions, and related professional development activities offered by the University of Windsor.
6. **Interdisciplinary Awareness**
   The department recognizes that Indigenous economic perspectives intersect with fields such as sustainability, governance, public policy, and social justice, creating opportunities for interdisciplinary dialogue within the social sciences.
   - Concrete Next Step: Where appropriate, highlight connections between Indigenous economic perspectives and related themes in other social science disciplines through examples, readings, or discussion in Economics courses.
7. **Student Engagement and Inclusivity**
   Introducing Indigenous perspectives in required Economics courses helps foster an inclusive learning environment and supports student awareness of diverse economic experiences and ways of knowing.
   - Concrete Next Step: Encourage students to attend workshops, training sessions, and related learning opportunities offered by the University of Windsor that promote awareness of Indigenous perspectives and ways of knowing.

While not all Economics courses include explicit Indigenous learning outcomes, the department's strategy emphasizes early exposure, critical engagement, and gradual expansion of Indigenous perspectives throughout the

curriculum. This approach aligns with the Truth and Reconciliation Commission's Calls to Action related to education and with the University of Windsor's principles on Indigenous education, while remaining appropriate to the disciplinary context of Economics.

References:

1. Indigenous Economics – Prepared by Dr. Sang-Chul Suh, Department of Economics, University of Windsor (2025).
2. Indigenous vs Market Economics – Prepared by Dr. Sang-Chul Suh, Department of Economics, University of Windsor (2025).
3. Video Indigenous vs Market Economics – Prepared by Dr. Sang-Chul Suh and Gavin Bayn, Economics major student, Department of Economics, University of Windsor (2025)
4. Truth and Reconciliation Commission of Canada. "Truth and Reconciliation Commission of Canada: Calls to Action." 2015. https://ehprnh2mwo3.exactdn.com/wp-content/uploads/2021/01/Calls_to_Action_English2.pdf
5. Universities Canada. "Universities Canada principles on Indigenous education." June 29, 2015. https://www.univcan.ca/media-room/media-releases/universities-canada-principles-on-indigenous-education/

LEARNING OUTCOMES

Certificate in Economic Analysis and Policy

Learning outcomes were last updated June 11, 2021. These are revised learning outcomes.

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A UWindsor graduate will have the ability to demonstrate:	**COU-approved Undergraduate Degree Level Expectations**
Apply economic theory to analyze social problems and evaluate alternative public policy choices. (Also applies to C.)	A. the acquisition, application and integration of knowledge	1.Depth and Breadth of Knowledge 2.Knowledge of Methodologies 3. Application of Knowledge 5.Awareness of Limits of Knowledge
Use economic analysis to communicate to a lay audience the importance of public policy debates on topics such as environmental protection and globalization. (Also applies to A, D, E.)	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)	1. Depth and Breadth of Knowledge 2. Knowledge of Methodologies 3. Application of Knowledge 5. Awareness of Limits Knowledge
Apply **empirical and quantitative** tools ~~of cost-benefit analysis~~ to activities of both the government sector and private sector. (Also applies to D.)	C. critical thinking and problem-solving skills	1. Depth and Breadth of Knowledge 2. Knowledge of Methodologies 3. Application of Knowledge 5. Awareness of Limits of Knowledge

PROGRAM DEVELOPMENT COMMITTEE
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FORM C

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A UWindsor graduate will have the ability to demonstrate:	**COU-approved Undergraduate Degree Level Expectations**
	D. literacy and numeracy skills	4.Communication Skills 5. Awareness of Limits of Knowledge
Advocate for evidence-based economics solutions to a range of social and environmental issues. (Also applies to G.)	E. responsible behaviour to self, others and society	5. Awareness of Limits of Knowledge 6. Autonomy and Professional Capacity
Effectively communicate economic analysis of public policy to a range of audiences. (Also applies to D.)	F. interpersonal and communications skills	4. Communication Skills 6. Autonomy and Professional Capacity
	G. teamwork, and personal and group leadership skills	4. Communication Skills 6. Autonomy and Professional Capacity
Formulate recommendations relevant to public policy formation. (Also applies to E, G.)	H. creativity and aesthetic appreciation	2. Knowledge of Methodologies 3. Application of Knowledge 6. Autonomy and Professional Capacity
Monitor and identify advances in economic knowledge and theory.	I. the ability and desire for continuous learning	6. Autonomy and Professional Capacity

University of Windsor
Program Development Committee

*5.10: **Economics – Minor Program Changes (Form C)**

Item for: **Approval**

Forwarded by: **Faculty of Science**

MOTION: That the requirements for the Certificate in Quantitative Economics be changed in accordance with the program/course change forms.^

^Subject to approval of the expenditures required.

Rationale/Approvals:

- The proposed changes have been approved by the Department of Economics Council and the Science Program Development Committee (SPDC) (as delegated by the Faculty of Science Coordinating Council) (April 14, 2026)
- *See attached.*

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

TITLE OF PROGRAM(S)/CERTIFICATE(S):	**Certificate in Quantitative Economics**
DEPARTMENT(S)/SCHOOL(S):	**Economics**
FACULTY(IES):	**Science**

Proposed change(s) effective as of* [Fall, Winter, Spring]: **(subject to timely and clear submission)*	Fall 2026, Undergraduate Calendar

Does the minor program change include new courses?:

__X__ Yes [All new course proposals must be submitted on PDC Form Ds and submitted for approval with the minor program change proposal (PDC Form C)]

____ No [If yes, list all new courses: ECON-3140. Financial Econometrics]

A.1 PROGRAM REQUIREMENT CHANGES

Please provide the current program requirements and the proposed new program requirements by cutting and pasting from the current undergraduate or graduate web calendar (www.uwindsor.ca/secretariat/calendars) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining. Example: Degree requirements: WXYZ-1000, ~~WXYZ-1010~~, WXYZ-1100, WXYZ-2100, WXYZ-3100, WXYZ-4100, plus three additional courses at the **3000-level or** 4000-level.

Certificate in Quantitative Economics

The Certificate in Quantitative Economics provides students with training in the mathematical, statistical, and computational tools used in modern economic analysis. The certificate builds a strong foundation in core economic theory through intermediate microeconomics and macroeconomics, combined with mathematical economics. Students then deepen their analytical skills through coursework in econometrics, financial econometrics, data analysis, and programming.

Open to students in any undergraduate degree program, the certificate is particularly well suited for students interested in quantitative analysis and data-driven decision-making, including those in economics, mathematics, computer science, business, and related fields. By combining economic theory with statistical and computational tools, the certificate prepares students for careers in data analysis, finance, consulting, and policy research, as well as for graduate study in economics and related disciplines.

Admission Requirements

Open only to students currently enrolled in a degree program and in good academic standing in their program.

Degree requirements

Total courses: 8

Required courses: (5 courses)

- ECON-1100. Introduction to Economics I
- **ECON-1110. Introduction to Economics II**
- ECON-2120. Intermediate Statistical Methods (or STAT-2950 Introduction to Statistics)
- **ECON-2210. Intermediate Microeconomics I**
- **ECON-2310. Intermediate Macroeconomics I**
- ~~ECON-3060. Mathematical Economics I~~
- ~~ECON-3130. Introduction to Econometric Methods I~~

- ~~ECON-4600. Cost-Benefit Analysis/Excel application in Economics~~

Take 3 Additional Courses:

Economics (ECON)

- **ECON-3060. Mathematical Economics**
- **ECON-3130. Introduction to Econometric Methods I**
- **ECON-3140. Financial Econometrics**
- **ECON-3800. Game Theory**
- **ECON-4060. Mathematical Economics II**
- **ECON-4070. Senior Research Workshop**
- **ECON-4600. Cost-Benefit Analysis**
- ECON-4140. Introduction to Econometric Method II
- ~~ECON-3850. Public Sector Economics: Expenditure~~
- ~~ECON-4860. Public Sector Economics: Finance~~
- ~~ECON-3730. International Economics: Trade Theory and Policy~~
- ~~ECON-3740. International Economics: Exchange Rates and Balance of Payments~~

Computer Science (COMP)

- ~~COMP-1400. Introduction to Algorithms and Programming I (COMP-1400. is a prerequisite and thus should be taken before enrolling in COMP-1410~~
- ~~COMP-1410. Introduction to Algorithms and Programming II~~
- COMP-2067. Programming for Beginners
- **COMP-2087. Programming for Beginners II**
- **COMP-2717. Artificial Intelligence: Practice and Ethics for Common Users**

Odette School of Business (FINA, MKTG, MSCI)

- FINA-2700. Business Finance I
- MKTG-3370. Quantitative Analysis for Marketing Decisions
- MSCI-1000. Introduction to Business Data Analysis

~~While this certificate program is designed for economics students, it is available to any student with an interest in quantitative economics who has available electives (particularly mathematics, computer science, and business students). However, students in degree programs outside of science will likely be required to take additional courses beyond what is included in their degree program~~.

A.2 MINOR COURSE CHANGES REQUIRING ADDITIONAL RESOURCES OR AFFECTING DEGREE REQUIREMENTS

*If this is a minor course and calendar change (usually noted on a Form E) requiring additional resources or affecting degree requirements, please provide the current course information and the proposed new course information by cutting and pasting from the current undergraduate or graduate web calendar and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with **bolding** and underlining.*

*Examples of minor course changes include: deleting courses, course description changes, pre/anti/co- requisite changes, contact hour/lab requirement changes, course title changes, renumbering courses, and/or cross-listing courses. Minor course calendar changes, which do not require additional resources or do not affect degree requirements, should be submitted on a **Form E.***

N/A

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

B. RATIONALE

Please provide a rationale for the proposed change(s).

The revisions to the Certificate in Quantitative Economics reorganize the certificate's required courses to better align with the core sequence used in the Economics major and Minor in Economics. The required courses emphasize the foundational economic theory sequence (intermediate microeconomics and macroeconomics) together with statistics, ensuring that students entering the certificate have a consistent analytical background.

The elective list has also been refined to focus more clearly on quantitative training by emphasizing mathematical economics, econometrics, empirical analysis, and programming, while removing courses that are less directly related to quantitative methods. These changes strengthen the certificate's goal of providing students with rigorous training in the analytical tools used in modern economic and data-driven analysis.

C. RESOURCES

C.1 Resources In Support of the Revised Program and Resource Implications for Other Campus Units or Programs (QAF section 2.1.2.6)

Describe, in general terms, all faculty and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the revised program. Please do not name specific individuals in this section. Describe the impact of the planned utilization of existing human, physical and financial resources (within and outside the unit) on other existing programs in the department or at the university. Provide an assessment of the reliance of the revised program on existing resources from other campus units and include evidence that there are adequate resources available and committed to the revised program to sustain the quality of scholarship produced by undergraduate students as well as graduate students' scholarship and research activities. Consider, for example: faculty resources (within and outside the unit), existing courses (within and outside the unit), equipment or facilities outside the proposer's control, external resources requiring maintenance or upgrading using external resources, staff support, library, teaching and learning support, information technology support, laboratory access, student support services, space, equipment, facilities, GA/TA

The revised certificate can be implemented within current resources and is expected to operate in a sustainable manner while maintaining the quality of instruction and student support. The Department of Economics has sufficient faculty, administrative, and support resources to deliver the revised Certificate in Quantitative Economics. Most required courses, including introductory and intermediate theory, are already part of the regular teaching rotation. The revisions primarily reorganize and sequence existing offerings rather than introducing significant new instructional demands.

The addition of ECON-3140 will be accommodated through existing teaching capacity and modest adjustments to elective offerings. The certificate will continue to rely on existing university infrastructure, including library resources, computer labs, advising services, and IT support.

C.1.1 Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program (QAF section 2.1.2.6)

Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the revised program and the associate plans to ensure the sustainability of the revised program and quality of the student experience.

The Department of Economics does not anticipate reliance on Adjunct, Limited-term, or Sessional faculty to deliver the revised program.

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

C.2 Graduate Faculty Qualifications and Supervisory Loads (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Explain how supervisory loads will be distributed, and describe the qualifications and appointment status of faculty who will provide instruction and supervision in the revised program.

N/A

C.3 Financial Assistance for Graduate Students (where appropriate) (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Where appropriate to the revised program, provide evidence that financial assistance for graduate students will be sufficient to ensure adequate quality and numbers of students.

N/A

C.4 Anticipated New Resources (QAF sections 2.1.2.6)

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the revised program.*

N/A

C.5 Planned Reallocation of Resources and Cost-Savings

Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the revised program. (e.g., streamlining existing programs and courses, deleting courses, etc.)

The revised certificate improves efficiency by focusing core and elective offerings on key quantitative courses and clarifying course sequencing. This allows faculty effort to be concentrated where it is most effective, supports more sustainable scheduling, and simplifies advising and administration. No negative impacts on other units are anticipated.

C.6 Additional Resources Required – Resources Requested (QAF section 2.1.2.6f)

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to run the revised program. If not applicable, write n/a.*

Faculty:	N/A
Staff:	N/A
GA/TAs:	N/A

C.6.1 Additional Institutional Resources and Services Required by all Affected Areas or Departments (QAF section 2.1.2.6f)

*Describe all **additional institutional resources and services** required by all affected areas or departments to run the revised program, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance. If not applicable, write n/a.*

Library Resources and Services:	N/A
Teaching and Learning Support:	N/A
Student Support Services:	N/A
Space and Facilities:	N/A
Equipment (and Maintenance):	N/A

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

D.1 Form History *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

Date of Modification	Approval Body Modifying	Reason for Modification

I.Indigenous (First Nations, Métis, or Inuit) Content, Perspectives, or Material

The University of Windsor is committed to building and sustaining stronger, more meaningful inclusive partnerships with Indigenous students, scholars, and communities. Indigenization of curriculum takes place in a larger context, including a requirement to respond to the four Calls to Action in education of the Truth and Reconciliation Report (2015) (page 1), the unique legal requirements of the Constitution Act 1982 (Sections 25, 35), the provincial legal requirements of the Ontario Human Rights Code, 1990, and provincial legislation Bill Pr36 (1967).

*In revising this program, **how** has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*

Please consider these prompt questions and additional Resources including disciplinary examples:

- *What **process** has your department/Faculty used to consider Indigenization?*
- ***How** have you considered the importance or relevance to the course/program?*
- *How has your department or faculty approached raising awareness for Indigenous knowledges in your area?*
- *What do the TRC and University Principles documents suggest relevant to your course?*
- *What have other similar courses/programs done that might be relevant to your course/program?*
- *In what ways could your course/program have flexibility to include new ways of learning, or content for Indigenous approaches or knowledges?*
- *What is your awareness of the history or background to approaches you are considering, such as the land acknowledgement? How have you developed your awareness?*
- *Which literatures, sources, or Indigenous Knowledge Holders have you consulted? (Please confirm you have permission to share any names, it may be helpful to have the person confirm the text if you will be submitting their name)*
- *Are you engaging in critical analysis of Settler Colonialism and/or Decolonization?*
- *Have you included the information in the other relevant areas in the PDC form such as learning outcomes and/or in the syllabus where appropriate?*

The Department of Economics is committed to advancing the Indigenization of its curriculum in a thoughtful and discipline-appropriate manner. The Department of Economics recognizes that traditional economics curricula have historically been centered on Western market-based frameworks while giving limited attention to Indigenous economic systems, values, and ways of knowing. Led by Dr. Sang-Chul Suh (Professor, Department of Economics) and as part of an ongoing process of learning, reflection, and curriculum development, the Department of Economics has engaged in discussions with Jaimie Kechego (Learning Specialist, Indigenization) and reviewed relevant materials on Indigenous and market-based economic perspectives. As for faculty participation in this process, Dr. Sang-Chul Suh, Dr. Jay Rhee, and Dr. Marcelo Arbex have taken the 'Pulling Together- Foundations series' taught by Jaimie Kechego. This series examines the role of colonization and how it continues to affect the Indigenous Peoples of Canada and defines the relationship between Indigenous and non-Indigenous people today. We strongly encourage our faculty to engage in these types of initiatives/courses/workshops to better incorporate Indigenous ways of knowing into their courses.

A key component of this approach is the integration of Indigenous economic perspectives into ECON 1100 – Principles of Economics I (microeconomics), a required course for all Economics programs and a foundational course taken by a large and diverse student population. Introducing Indigenous perspectives at the introductory level ensures that all

Economics students are exposed early to alternative economic worldviews and to critical reflection on the assumptions underlying standard economic models.

In ECON 1100/1110 instructors use the *Principles of Microeconomics (Canadian Edition)* and *Principles of Macroeconomics (Canadian Edition)*, by Kevin Milligan; Philip Oreopoulos; Betsey Stevenson; Justin Wolfers. We were recently informed by the publisher that the authors will add indigenous examples throughout the 2nd edition of the textbooks. For example, examples featuring the Innu People, Head-Smashed-In Buffalo Jump and the skills of the Plains peoples, gains from trade, and discussions about indigenous property rights will be incorporated. Dr. Chen (ECON 1100 Leading Instructor) is in contact with the publisher for more information and updates.

Drawing on materials such as *Indigenous Economics* (Addendum I) and *Indigenous Economics vs. Market Economics (*Addendum II), both prepared by Dr. Suh in consultation with Jaimie Kechego and Russell Nahdee – see references below, students in ECON 1100 will be introduced to Indigenous economic principles including interconnectedness, reciprocity, collective responsibility, sustainability, and long-term (intergenerational) decision-making. These perspectives are presented in contrast to core features of market economics such as individualism, profit maximization, private ownership, and short-term efficiency. Students may engage with these materials through assigned readings, videos (see reference below), guided discussion, and short written or reflective exercises that encourage comparison between Indigenous and mainstream economic frameworks (see Addendum III - ECON 1100 – Principles of Economics I course outline (draft) – Fall/2026)

The department's approach to Indigenization in Economics includes the following strategies:

1. **Incorporation of Indigenous Economic Perspectives**
   Where appropriate, courses - particularly foundational courses such as ECON 1100 - include discussion of Indigenous economic systems and values to highlight how economic behaviour, resource use, and decision-making are shaped by culture, history, and institutions.
   - Concrete Next Step: Engage in discussion and prepare materials to introduce Indigenous content into ECON 1110 – Principles of Economics II (Fall/2027), which focus on macroeconomic concepts and policy.

   Classroom Discussion and Critical Reflection
2. Students are encouraged to engage critically with Indigenous and market-based economic models, reflecting on the limits of standard economic assumptions and the implications of colonization for economic institutions and outcomes.
   - Concrete Next Step: In ECON 1100 (starting in the Fall/2026), dedicate a structured class discussion or tutorial segment to compare Indigenous and market-based economic frameworks, supported by guided discussion questions or a short-written reflection. Where feasible, the department will invite Indigenous community members to participate through guest talks to support student learning and discussion.

   Use of Disciplinary-Relevant Materials
3. Indigenous content is introduced through economics-relevant materials that focus on economic organization, sustainability, distribution, and decision-making, rather than as add-on or stand-alone content.
   - Concrete Next Step: Commit to ongoing review and updating of course materials, including relevant readings, multimedia resources, and economics-focused case examples, informed where appropriate by dialogue with Indigenous community members and Jaimie Kechego (Learning Specialist, Indigenization).

   Curriculum Review and Development
4. The department views Indigenization as an ongoing process and will continue to review and refine course content to identify additional opportunities for meaningful and appropriate integration across the curriculum.

- Concrete Next Step: Beyond the introduction of Indigenous content in first-year Economics courses, the Department of Economics plans to develop (Winter/2027) a dedicated second-year ECON course in Indigenous Economics, with particular focus on Canada. Development of this course will take place in consultation and ongoing dialogue with Jaimie Kechego (Learning Specialist, Indigenization) and Indigenous community members. It will examine Indigenous economic systems emphasizing community, sustainability, and relationships, as well as Indigenous-led enterprises, land and resource stewardship, governance, and economic reconciliation in contrast to Western economic models.

Faculty Awareness and Development

5. Economics faculty has engaged and will continue to engage in learning opportunities related to Indigenization, including workshops and discussions facilitated by Indigenous learning specialists, and are encouraged to continue building capacity to incorporate Indigenous perspectives responsibly.
    - Concrete Next Step: Encourage faculty to further educate themselves about Indigenous histories, economic perspectives, and ways of knowing, and to participate in workshops, training sessions, and related professional development activities offered by the University of Windsor.

Interdisciplinary Awareness

6. The department recognizes that Indigenous economic perspectives intersect with fields such as sustainability, governance, public policy, and social justice, creating opportunities for interdisciplinary dialogue within the social sciences.
    - Concrete Next Step: Where appropriate, highlight connections between Indigenous economic perspectives and related themes in other social science disciplines through examples, readings, or discussion in Economics courses.

Student Engagement and Inclusivity

7. Introducing Indigenous perspectives in required Economics courses helps foster an inclusive learning environment and supports student awareness of diverse economic experiences and ways of knowing.
    - Concrete Next Step: Encourage students to attend workshops, training sessions, and related learning opportunities offered by the University of Windsor that promote awareness of Indigenous perspectives and ways of knowing.

While not all Economics courses include explicit Indigenous learning outcomes, the department's strategy emphasizes early exposure, critical engagement, and gradual expansion of Indigenous perspectives throughout the curriculum. This approach aligns with the Truth and Reconciliation Commission's Calls to Action related to education and with the University of Windsor's principles on Indigenous education, while remaining appropriate to the disciplinary context of Economics.

References:

1. Indigenous Economics – Prepared by Dr. Sang-Chul Suh, Department of Economics, University of Windsor (2025).
2. Indigenous vs Market Economics – Prepared by Dr. Sang-Chul Suh, Department of Economics, University of Windsor (2025).
3. Video Indigenous vs Market Economics – Prepared by Dr. Sang-Chul Suh and Gavin Bayn, Economics major student, Department of Economics, University of Windsor (2025)
4. Truth and Reconciliation Commission of Canada. "Truth and Reconciliation Commission of Canada: Calls to Action." 2015. https://ehprnh2mwo3.exactdn.com/wp-content/uploads/2021/01/Calls_to_Action_English2.pdf
5. Universities Canada. "Universities Canada principles on Indigenous education." June 29, 2015. https://www.univcan.ca/media-room/media-releases/universities-canada-principles-on-indigenous-education/

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

LEARNING OUTCOMES

Certificate in Quantitative Economics

Learning outcomes were last updated June 11, 2021. These are revised learning outcomes.

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A UWindsor graduate will have the ability to demonstrate:	**COU-approved Undergraduate Degree Level Expectations**
A. Explain economic concepts, problems, and solutions	A. the acquisition, application and integration of knowledge	1.Depth and Breadth of Knowledge 2.Knowledge of Methodologies 3. Application of Knowledge 5.Awareness of Limits of Knowledge
B. Collect and integrate information from a variety of sources, assessing its meaning, accuracy, and timeliness. **(Also applies to C, D.)**	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)	1. Depth and Breadth of Knowledge 2. Knowledge of Methodologies 3. Application of Knowledge 5. Awareness of Limits Knowledge
C. Identify, compile, interpret, and analyze ~~quantitative~~ economic data by expressing relationships between concepts through graphs, **quantitative and computational methods**, statistical or econometric analysis. (Also applies to D.)	C. critical thinking and problem-solving skills	1. Depth and Breadth of Knowledge 2. Knowledge of Methodologies 3. Application of Knowledge 5. Awareness of Limits of Knowledge
D.	D. literacy and numeracy skills	4.Communication Skills 5. Awareness of Limits of Knowledge
E. Evaluate the bias and variance of possible measurement and estimation procedures. (Also applies to D.)	E. responsible behaviour to self, others and society	5. Awareness of Limits of Knowledge 6. Autonomy and Professional Capacity
F. Communicate the results of quantitative economics problems using written, spoken, numerical, and visual formats to a range of audience. (Also applies to D.)	F. interpersonal and communications skills	4. Communication Skills 6. Autonomy and Professional Capacity
G. Use evidence-informed approaches when applying quantitative methods to solve economic problems.(Also applies to E.)	G. teamwork, and personal and group leadership skills	4. Communication Skills 6. Autonomy and Professional Capacity
H. Identify and apply innovative techniques for the processing of large datasets and computer programming of complex economic problems. (Also applies to A, C, I.)	H. creativity and aesthetic appreciation	2. Knowledge of Methodologies 3. Application of Knowledge 6. Autonomy and Professional Capacity

PROGRAM DEVELOPMENT COMMITTEE
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Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A UWindsor graduate will have the ability to demonstrate:	**COU-approved Undergraduate Degree Level Expectations**
I.	I. the ability and desire for continuous learning	6. Autonomy and Professional Capacity

University of Windsor
Program Development Committee

*5.11: **Economics – Minor Program Changes (Form C)**

Item for: **Approval**

Forwarded by: **Faculty of Science**

MOTION: That the degree requirements for the Bachelor of Science Honours Economics be changed in accordance with the program/course change forms.^

^Subject to approval of the expenditures required.

Rationale/Approvals:

- The proposed changes have been approved by the Department of Economics Council and the Science Program Development Committee (SPDC) (as delegated by the Faculty of Science Coordinating Council) (April 14 2026).
- *See attached.*

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

TITLE OF PROGRAM(S)/CERTIFICATE(S):	**Bachelor of Science Honours Economics**
DEPARTMENT(S)/SCHOOL(S):	**Economics**
FACULTY(IES):	**Science**

Proposed change(s) effective as of* [Fall, Winter, Spring]: **(subject to timely and clear submission)*	Fall 2026, Undergraduate Calendar

Does the minor program change include new courses?:

__X__ Yes[All new course proposals must be submitted on PDC Form Ds and submitted for approval with the minor program change proposal (PDC Form C)]

____ No

If yes, list all new courses: ECON 1060 – Quantitative Methods in Economics I

A.1 PROGRAM REQUIREMENT CHANGES

Please provide the current program requirements and the proposed new program requirements by cutting and pasting from the current undergraduate or graduate web calendar (www.uwindsor.ca/secretariat/calendars) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining.

Example: Degree requirements: WXYZ-1000, ~~WXYZ-1010~~, WXYZ-1100, WXYZ-2100, WXYZ-3100, WXYZ-4100, plus three additional courses at the **3000-level or** 4000-level.

Bachelor of Science Honours Economics

Degree Requirements

Total courses: forty.

a. **ECON-1060,** ECON-1100, ECON-1110, ECON-2120 (or STAT-2950), ECON-2210, ECON-2220, ECON-2310, ECON-2320, ECON-3060, ECON-3130, ~~ECON-4060~~, **ECON-4070**, ~~ECON-4140,~~ ECON-4230, ECON-4330, , ~~ECON-4240,~~ ~~ECON-4340~~, and **seven** ~~five~~ Economics elective courses at the 3XXX or 4XXX level.
b. COMP-1047, **COMP-2067,** MATH-1020, MATH-1250 (or MATH-1260), MATH-1720 (or MATH-1760), MATH-1730, STAT-2920, plus one additional course (2XXX-level or higher) from the Department of Mathematics and Statistics **or from the School of Computer Science**.
c. An additional 12 courses, a maximum of which two may be Economics courses.

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

A.2 MINOR COURSE CHANGES REQUIRING ADDITIONAL RESOURCES OR AFFECTING DEGREE REQUIREMENTS

*If this is a minor course and calendar change (usually noted on a Form E) requiring additional resources or affecting degree requirements, please provide the current course information and the proposed new course information by cutting and pasting from the current undergraduate or graduate web calendar and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with **bolding** and underlining. Examples of minor course changes include: deleting courses, course description changes, pre/anti/co- requisite changes, contact hour/lab requirement changes, course title changes, renumbering courses, and/or cross-listing courses. Minor course calendar changes, which do not require additional resources or do not affect degree requirements, should be submitted on a **Form E.***

N/A

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

B. RATIONALE

Please provide a rationale for the proposed change(s).

The proposed revisions to the BSc Honours in Economics modernize the program by strengthening its analytical and quantitative foundations while maintaining its role as the Department's key honours-level degree. The revised program builds on the BA General and BA Hounors by providing a more rigorous and structured pathway for students seeking deeper training in economic theory, empirical analysis, and applied policy work.

A central objective of the revision is to improve coherence and progression within the curriculum. The introduction of ECON 1060 strengthens the first-year foundation and supports the transition from high school to university-level economic reasoning. The introduction of ECON 1060 further supports student success by bridging potential gaps between high-school and university-level quantitative methods and mathematical preparation.

The revised program also strengthens students' analytical and data skills through the inclusion of COMP 2067, alongside STAT 2920. These additions reflect the increasing importance of computational methods, data analysis, and empirical work in economics. The program maintains a balanced approach, providing strong quantitative training while remaining accessible to students who may not pursue the more mathematically intensive BSc Honours program.

ECON 4070 is introduced to strengthen students' independent research and presentation skills. The course provides structured guidance for students to design, conduct, and communicate economic research, preparing them for graduate study or analytical roles in professional settings.

Following the IQAP Review, *Recommendation #2: Consider removing the course requirements for Advanced Microeconomics II and Advanced Macroeconomics II from the Honours BS and M1 programs*, the courses ECON 4240 and ECON 4340 are no longer required for the BSc Honours program. For consistency, ECON 4060 and ECON 4140 are also removed as required courses. These changes will allow for a more flexible set of course offerings, including more applied courses, and will reduce the theoretical emphasis of the program.

The revised structure also supports clearer pathways within the Department's programs. Alignment of core and supporting requirements, including a common first-year sequence (ECON 1060, ECON 1100, ECON 1110), facilitates student mobility across programs, including transitions from the BA General into BA Honours or BSc Honours, allowing students to adjust their academic trajectory as their interests and preparation evolve.

Learning outcomes with minor changes were included. Learning outcomes will be reviewed in the context of curriculum mapping planned for Summer 2026.

C. RESOURCES

C.1 Resources In Support of the Revised Program and Resource Implications for Other Campus Units or Programs (QAF section 2.1.2.6)

Describe, in general terms, all faculty and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the revised program. Please do <u>not</u> name specific individuals in this section. Describe the impact of the planned utilization of existing human, physical and financial resources (within and outside the unit) on other existing programs in the department or at the university. Provide an assessment of the reliance of the revised program on existing resources from <u>other</u> campus units and include evidence that there are adequate resources available and committed to the revised program to sustain the quality of scholarship produced by undergraduate students as well as graduate students' scholarship and research activities. Consider, for example: faculty resources (within and outside the unit), existing courses (within and outside the unit), equipment or facilities outside the proposer's control, external resources requiring maintenance or upgrading using external resources, staff support, library, teaching and learning support, information technology support, laboratory access, student support services, space, equipment, facilities, GA/TA

The revised program can be implemented within current resources and is expected to operate in a sustainable manner while maintaining the quality of instruction and student support. The Department of Economics has sufficient faculty, administrative, and support resources to deliver the revised BSc Honours Economics program. Most required courses, including introductory and intermediate theory, are already part of the regular teaching rotation. The revisions primarily reorganize and sequence existing offerings rather than introducing significant new instructional demands.

The addition of ECON 1060 and ECON 4070 will be accommodated through existing teaching capacity and modest adjustments to elective offerings. The program will continue to rely on existing university infrastructure, including library resources, computer labs, advising services, and IT support. Required supporting courses in Computer Science and Statistics (COMP 1047, COMP 2067, MATH 1020, 1250, 1720, 1730, STAT 2920) will be delivered in coordination with the respective departments, with no anticipated additional resource requirements.

C.1.1 Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program (QAF section 2.1.2.6)

Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the revised program and the associate plans to ensure the sustainability of the revised program and quality of the student experience.

The Department of Economics does not anticipate reliance on Adjunct, Limited-term, or Sessional faculty to deliver the revised program.

C.2 Graduate Faculty Qualifications and Supervisory Loads (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Explain how supervisory loads will be distributed, and describe the qualifications and appointment status of faculty who will provide instruction and supervision in the revised program.

N/A

C.3 Financial Assistance for Graduate Students (where appropriate) (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Where appropriate to the revised program, provide evidence that financial assistance for graduate students will be sufficient to ensure adequate quality and numbers of students.

N/A

C.4 Anticipated New Resources (QAF sections 2.1.2.6)

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the revised program.*

N/A

C.5 Planned Reallocation of Resources and Cost-Savings

Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the revised program. (e.g., streamlining existing programs and courses, deleting courses, etc.)

The revised curriculum creates opportunities for internal reallocation and improved efficiency. A more focused set of core and elective offerings allows faculty effort to be concentrated in key courses, while clearer sequencing reduces duplication and supports more sustainable scheduling. Improved alignment across courses also facilitates advising and reduces administrative demands. These changes are consistent with the form's expectation of identifying efficiencies through program restructuring. No negative impacts on other units are anticipated.

PROGRAM DEVELOPMENT COMMITTEE
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FORM C

C.6 Additional Resources Required – Resources Requested (QAF section 2.1.2.6f)

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to run the revised program. If not applicable, write n/a.*

Faculty:	N/A
Staff:	See below*
GA/TAs:	N/A

*No additional faculty or GA/TA resources are required to deliver the revised BSc Honours Economics program. However, the Department of Economics currently shares its Administrative Secretary position (50% in Economics and 50% in another department). Given the size and complexity of the Economics programs, and the proposed revisions to the BSc Honours Economics program, the department anticipates the need for a full-time, fully dedicated Administrative Secretary to adequately support students and program administration.

This need is consistent with the most recent IQAP Review report, which stated:

> *Recommendation #9: The Secretary to the Head should be a full-time position to adequately support Economics students. Response: We strongly agree with the reviewers' assessment that the current level of administrative support is inadequate for a department of our size and complexity.*

The request for a full-time Administrative Secretary aligns with this recommendation and reflects the administrative demands associated with supporting undergraduate program delivery.

C.6.1 Additional Institutional Resources and Services Required by all Affected Areas or Departments (QAF section 2.1.2.6f)

*Describe all **additional institutional resources and services** required by all affected areas or departments to run the revised program, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance. If not applicable, write n/a.*

Library Resources and Services:	N/A
Teaching and Learning Support:	N/A
Student Support Services:	N/A
Space and Facilities:	N/A
Equipment (and Maintenance):	N/A

D.1 Form History *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

Date of Modification	Approval Body Modifying	Reason for Modification

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

LEARNING OUTCOMES

Bachelor of Science Honours Economics

Learning outcomes were last updated May 26, 2017. These are revised learning outcomes.

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A UWindsor graduate will have the ability to demonstrate:	**COU-approved Undergraduate Degree Level Expectations**
Explain economic concepts, problems and solutions at a deeper level. Integrate knowledge of economics with statistics in order to estimate **and quantify** economic models. ~~Demonstrate proficiency in analyzing economic models using calculus and algebra.~~ **Proficiently analyze economic models using calculus and algebra.**	A. the acquisition, application and integration of knowledge	1.Depth and Breadth of Knowledge 2.Knowledge of Methodologies 3. Application of Knowledge 5.Awareness of Limits of Knowledge
Describe suitable econometric **and quantitative** methods to address real world economic problems. Retrieve and evaluate data from a wide range of public data sources. Use statistical **and quantitative software** packages ~~in analyzing data~~ to analyze and interpret economic data.	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)	1. Depth and Breadth of Knowledge 2. Knowledge of Methodologies 3. Application of Knowledge 5. Awareness of Limits Knowledge
Compare the impacts of assumptions on theoretical models and ~~estimate~~ **quantify** their effects on its conclusions. Apply economic analysis to everyday problems in real world situations. Describe current economic events and evaluate specific policy proposals.	C. critical thinking and problem-solving skills	1. Depth and Breadth of Knowledge 2. Knowledge of Methodologies 3. Application of Knowledge 5. Awareness of Limits of Knowledge
Solve economic problems using basic and advanced mathematical tools. Organize and interpret a range of economic data on both descriptive and analytical levels.	D. literacy and numeracy skills	4.Communication Skills 5. Awareness of Limits of Knowledge

PROGRAM DEVELOPMENT COMMITTEE
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Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A UWindsor graduate will have the ability to demonstrate:	**COU-approved Undergraduate Degree Level Expectations**
Articulate the philosophical basis of economic problems as well as give the appropriate remedies.	E. responsible behaviour to self, others and society	5. Awareness of Limits of Knowledge 6. Autonomy and Professional Capacity
Convey technical information, ideas and arguments to target audiences clearly and persuasively in written form.	F. interpersonal and communications skills	4. Communication Skills 6. Autonomy and Professional Capacity
Collaborate with colleagues to produce ideas or projects with equitable sharing of workloads.	G. teamwork, and personal and group leadership skills	4. Communication Skills 6. Autonomy and Professional Capacity
~~Formulate findings and recommendations on economic problems in a precise and concise manner.~~ **Formulate and communicate evidence-based findings and recommendations on economic problems.**	H. creativity and aesthetic appreciation	2. Knowledge of Methodologies 3. Application of Knowledge 6. Autonomy and Professional Capacity
Demonstrate independent and critical thinking ~~that is required~~ **skills necessary** for continuing professional development.	I. the ability and desire for continuous learning	6. Autonomy and Professional Capacity

University of Windsor
Program Development Committee

*5.12: **English and Creative Writing – Minor Program Changes (Form C)**

Item for: **Approval**

Forwarded by: **Faculty of Arts, Humanites and Social Sciencse**

MOTION: That the degree requirements for the Honours English and Creative Writing be changed in accordance with the program/course change forms.^

^Subject to approval of the expenditures required.

Rationale/Approvals:

- The changes have been approved by the Department of English and Creative Writing Council and the Faculty of Arts, Humanites and Social Sciences Council (April 9, 2025).
- See attached.

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

TITLE OF PROGRAM(S)/CERTIFICATE(S):	**Honours English and Creative Writing**
DEPARTMENT(S)/SCHOOL(S):	**English and Creative Writing**
FACULTY(IES):	**FAHSS**

Proposed change(s) effective as of* [Fall, Winter, Spring]: **(subject to timely and clear submission)*	Fall 2026

Does the minor program change include new courses?:

_____ Yes [All new course proposals must be submitted on PDC Form Ds and submitted for approval with the minor program change proposal (PDC Form C)]

_X___ No

If yes, list all new courses:

A.1 PROGRAM REQUIREMENT CHANGES

Please provide the current program requirements and the proposed new program requirements by cutting and pasting from the current undergraduate or graduate web calendar (www.uwindsor.ca/secretariat/calendars) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining.

Example: Degree requirements: WXYZ-1000, ~~WXYZ-1010~~, WXYZ-1100, WXYZ-2100, WXYZ-3100, WXYZ-4100, plus three additional courses at the **3000-level or** 4000-level.

Honours English and Creative Writing

Degree Requirements

Total courses: forty.

(a) ENGL-1002, ENGL-1003, and ENGL-1004;
(b) any five ENGL courses at the 2000-level, excluding ENGL-2710
(c) ~~six~~ **seven** additional ENGL courses, ~~five~~ **six** of which must be at the 3000 or 4000 level;
~~(d) one of ENGL-4001, ENGL-4002, ENGL-4003, ENGL-4004;~~
~~(e)~~ **(d)** ENGL-2710 (a 6.0-credit course), ENGL-3710, and ENGL-4710 (a 6.0-credit course);
~~(f)~~ **(e)** two courses from Social Sciences;
~~(g)~~ **(f)** two courses from Languages or Science;
~~(h)~~ **(g)** two courses from any area of study, excluding Arts;
~~(i)~~ **(h)** one course with Indigenous content, perspectives, or materials (see Office of the Dean of the Faculty of Arts, Humanities, and Social Sciences for complete list.)
~~(j)~~ **(i)** four courses from any area of study, including English;
~~(k)~~ **(j)** nine courses from any area of study, excluding English

Note: Five (5) 1000-level English courses may count toward the major

Courses used to calculate the major average are: courses listed under requirements (a) to ~~(e)~~ **(d)**, and any courses taken in the major area of study.

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

A.2 MINOR COURSE CHANGES REQUIRING ADDITIONAL RESOURCES OR AFFECTING DEGREE REQUIREMENTS

*If this is a minor course and calendar change (usually noted on a Form E) requiring additional resources or affecting degree requirements, please provide the current course information and the proposed new course information by cutting and pasting from the current undergraduate or graduate web calendar and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with **bolding** and underlining. Examples of minor course changes include: deleting courses, course description changes, pre/anti/co- requisite changes, contact hour/lab requirement changes, course title changes, renumbering courses, and/or cross-listing courses. Minor course calendar changes, which do not require additional resources or do not affect degree requirements, should be submitted on a **Form E.***

N/A

B. RATIONALE

Please provide a rationale for the proposed change(s).

With fewer faculty, English and Creative Writing cannot offer two (ENGL-4001, ENGL-4002) of the four practica currently required for the Honours English and Creative Writing program on a consistent basis. This reduction in choice poses difficulties for English and Creative Writing students in fulfiling this requirement. Replacing this requirement with a course at the 3000 or 4000 level provides more flexibility and maintains the integrity of the program. As with the Honours English program, the Honours English and Creative Writing program still requires two ENGL 4xxx-level courses.

C. RESOURCES

C.1 Resources In Support of the Revised Program and Resource Implications for Other Campus Units or Programs (QAF section 2.1.2.6)

Describe, in general terms, all faculty and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the revised program. Please do not name specific individuals in this section. Describe the impact of the planned utilization of existing human, physical and financial resources (within and outside the unit) on other existing programs in the department or at the university. Provide an assessment of the reliance of the revised program on existing resources from other campus units and include evidence that there are adequate resources available and committed to the revised program to sustain the quality of scholarship produced by undergraduate students as well as graduate students' scholarship and research activities. Consider, for example: faculty resources (within and outside the unit), existing courses (within and outside the unit), equipment or facilities outside the proposer's control, external resources requiring maintenance or upgrading using external resources, staff support, library, teaching and learning support, information technology support, laboratory access, student support services, space, equipment, facilities, GA/TA

N/A

C.1.1 Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program (QAF section 2.1.2.6)

Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the revised program and the associate plans to ensure the sustainability of the revised program and quality of the student experience.

None

C.2 Graduate Faculty Qualifications and Supervisory Loads (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Explain how supervisory loads will be distributed, and describe the qualifications and appointment status of faculty who will provide instruction and supervision in the revised program.

N/A

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

C.3 Financial Assistance for Graduate Students (where appropriate) (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Where appropriate to the revised program, provide evidence that financial assistance for graduate students will be sufficient to ensure adequate quality and numbers of students.

N/A

C.4 Anticipated New Resources (QAF sections 2.1.2.6)

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the revised program.*

None

C.5 Planned Reallocation of Resources and Cost-Savings

Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the revised program. (e.g., streamlining existing programs and courses, deleting courses, etc.)

Streamlines the Honours English and Creative Writing program by providing more options for English and Creative Writing students to fulfil program requriements.

C.6 Additional Resources Required – Resources Requested (QAF section 2.1.2.6f)

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to run the revised program. If not applicable, write n/a.*

Faculty:	
Staff:	
GA/TAs:	

N/A

C.6.1 Additional Institutional Resources and Services Required by all Affected Areas or Departments (QAF section 2.1.2.6f)

*Describe all **additional institutional resources and services** required by all affected areas or departments to run the revised program, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance. If not applicable, write n/a.*

Library Resources and Services:	N/A
Teaching and Learning Support:	N/A
Student Support Services:	N/A
Space and Facilities:	N/A
Equipment (and Maintenance):	N/A

D.1 Form History *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

Date of Modification	Approval Body Modifying	Reason for Modification

University of Windsor
Program Development Committee

*5.13: **Biomedical Sciences – Minor Program Changes (Form C)**

Item for: **Approval**

Forwarded by: **Faculty of Science**

MOTION: **That the degree requirements for the Honours Biomedical Sciences – Interdisciplinary Health Science (IHS) Stream, Honours Biological Science - Interdisciplinary Health Science (IHS) Stream and Honours Psychology – Interdisciplinary Health Sciences (IHS) Stream be changed in accordance with the program/course change forms.^**

^*Subject to approval of the expenditures required.*

Rationale/Approvals:

- The proposed changes have been approved by the Department of Economics Council and the Science Program Development Committee (SPDC) (as delegated by the Faculty of Science Coordinating Council)(April 14, 2026)
- *See attached.*

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

TITLE OF PROGRAM(S)/CERTIFICATE(S):	**Honours Biomedical Sciences – Interdisciplinary Health Science (IHS) Stream** **Honours Biological Science - Interdisciplinary Health Science (IHS) Stream** **Honours Psychology – Interdisciplinary Health Sciences (IHS) Stream**
DEPARTMENT(S)/SCHOOL(S):	**Biomedical Sciences, Integrative Biology and Psychology**
FACULTY(IES):	**Science and FAHSS**

Proposed change(s) effective as of* [Fall, Winter, Spring]: **(subject to timely and clear submission)*	Fall 2026, Undergraduate Calendar

Does the minor program change include new courses?:

____ Yes [All new course proposals must be submitted on PDC Form Ds and submitted for approval with the minor program change proposal (PDC Form C)]

_x___ No

If yes, list all new courses:

A.1 PROGRAM REQUIREMENT CHANGES

Please provide the current program requirements and the proposed new program requirements by cutting and pasting from the current undergraduate or graduate web calendar (www.uwindsor.ca/secretariat/calendars) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining. Example: Degree requirements: WXYZ-1000, ~~WXYZ-1010~~, WXYZ-1100, WXYZ-2100, WXYZ-3100, WXYZ-4100, plus three additional courses at the **3000-level or** 4000-level.

Biomedical Sciences - Interdisciplinary Health Science

Healthcare Economics (~~Take 8 courses~~ Take 7 courses)

ECON-1100. Introduction to Economics I
ECON-1110. Introduction to Economics II
ECON-2120. Intermediate Statistical Methods
ECON-2210. Intermediate Microeconomics
ECON-2900. Health Economics
ECON-4300. Economic Analysis of Law
ECON-4600. Cost-benefit analysis
STAT-2910. Statistics for the Sciences

Aging and Health (~~Take 8 courses~~ Take 7 courses)

GART-2040. Health-Care Ethics through the Lifespan
NURS-4951. The Meaning of Death
PHIL-2250. Ethics of Life, Death and Health Care
PHIL-2520. Existentialism
PSYC-1070. Positive Psychology
PSYC-1150. Introduction to Psychology as a Behavioural Science
PSYC-1160. Introduction to Psychology as a Social Science
PSYC-2250. Developmental Psychology: Adulthood and Aging
PSYC-2360. Introduction to Social Psychology

PSYC-3390. Health Psychology
SACR-3150. On Death and Dying
SWRK-3560. Serving Older People

Health and Society (~~Take 8 courses~~ Take 7 courses)
GART-1210. An Introduction into Indigenous Topics
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GART-2040. Health-Care Ethics through the Lifespan
POLS/SOSC-3300. Psychoactive Substance Use and Social Policy
SOSC/WORK/IACS-4501. Seminar on Prostitution, Sexual Labour and Health
SACR-1100. Foundations of Social Life
SACR-2040. Sociology of Families
SACR-2050. Sociology of Sexualities
SACR-3150. On Death and Dying
SACR-3400. Food and Global Sustainability
SACR-3650. Green Criminology
SWRK-1170. Meeting Human Needs through Social Welfare
ICWG-1000. Women in Canadian Society
ICWG-2500. Women's Bodies, Women's Health
ICWG-2800. Boys to Men: A critical exploration of masculinities
ICWG-3470. Social Work and Violence
ICWG-2300. Gender, Sexuality and Social Justice
ICWG-2200. Women, Race and Social Justice
IACS-3500. Practical Strategies for Social Change: Intervening to Prevent Sexual Violence
IACS-4500. Practicum in Social Change

Indigenous Health (~~Take 8 courses~~ Take 7 courses)
GART-1210. An Introduction into Indigenous Topics
ENGL-2320. Indigenous Literature
HIST-2460. Aboriginal Peoples in Canadian History: Beginnings to Mid-Nineteenth Century
HIST-2470. Aboriginal Peoples in Canadian History: Mid-Nineteenth Century to Present
ENGL-3330. Indigenous Literature of Turtle Island
PHIL-2300. Indigenous Philosophy of the Americas
PHIL-4260. Philosophy of Law
ESTU-1100. Humans and the Environment - An Introduction to Environmental Studies
POLS-2000. Indigenous Policy and Constitutional Relationships
POLS-3000. Indigenous Policy and Constitutional Relationships
POLS-4000. Indigenous Nation-Building: Traditional Governance

Healthy Spaces and Places (~~Take 8 courses~~ Take 7 courses)
ESCI-1151. Fundamentals of GIS
PSYC-1070. Positive Psychology
PSYC-3340. Applied Social Psychology
PSYC-4320. Community Psychology
MACS-2500. Stories of the City
VABE-1100. Architectural Design I
VABE-1200. Architectural Design II
VABE-2130. Principles of Structural Behaviour
VABE-4600. Space in Acoustics and Light
MACS-4520. Urban Ecologies

MACS-4500. Border Culture
MACS-2200. Art Architecture and Public Spaces
VSAR-3850. Green Corridor
MACS-1500. Contemporary Visual Culture
MACS-2050. Art and Material Culture
MACS-2150. Art and Visual Culture

Medical Humanities (~~Take 8 courses~~ Take 7 courses)
CMAF-1010. Introduction to Media and Society
DRAM-2100. Speech Communication to Inform
ENGL-2401. Rhetoric
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GART-1210. An Introduction into Indigenous Topics
GART-2040. Health-Care Ethics through the Lifespan
HIST-2500. Women in Canada and the United States, 1870-present
HIST-4030. Medicine, Healing and the Health Profession
MACS-2500. Stories of the City
PHIL-2550. Knowledge, Science and Society
PHIL-3590. Women, Knowledge & Reality
PSYC-1150. Introduction to Psychology as a Behavioural Science
PSYC-1160. Introduction to Psychology as a Social Science
PSYC-2240. Developmental Psychology: Adolescence
PSYC-2250. Developmental Psychology: Adulthood and Aging
PSYC-2280. Psychological Disorders
PSYC-2400. Psychology of Sex and Gender
PSYC-4320. Community Psychology
ENGL-2310. World Literatures in English
ENGL-2320. Indigenous Literature
ENGL-2330. Gender and Literature

One Health
~~or BIOL-2071.Introductory Microbiology and Techniques~~

~~Take Three (3)~~ **Take Two (2)** of:
BIOL-2040. Human Physiology I
BIOL 2071. Introductory Microbiology and Techniques
BIOL-2080. Economic Botany
BIOL-2101. Ecology
BIOL-2480. Principles of Neuroscience
BIOL-3212. Environmental Physiology
BIOL-3201. Applied Entomology
BIOL-3250. Population and Community ecology
BIOL-4252. Evolutionary Endocrinology
BIOL-4270. Conservation Biology)
BIOM-3070. Medical microbiology or BIOM-3071. Medical Micro and Techniques
BIOM-3540. Immunology
BIOM-3550. Embryology

Take Three (3) of:

ESCI-1100. Environmental systems – an Introduction to Environmental Science
ESCI-1111. Introduction to Earth Science
ESCI-1130. Atmosphere and Climate
ESCI-2210. Introduction to Climate Change
ESCI-3310. Global water Crisis
ESCI-4500. Ecosystem Health

Take Two (2) of:
GART-1210/SOSC-1210. An introduction into Indigenous topics
ESTU-1100. Humans and the Environment - An Introduction to Environmental Studies
ESTU-2500. Concepts for Ecosystem Management
GART-2040. Health-Care Ethics through the Life-Span
PHIL-2270. Environmental Ethics
PHIL-2280. Technology, Human Values and the Environment
PHIL-2300. Indigenous Philosophy of the Americas

Please note that courses used to satisfy the IHS requirements in this section cannot also be used to satisfy another program requirement in any other section of program requirement
Concentration: One Health

Biostatistics (~~Take 8 courses~~ Take 7 courses)
MATH 1720/1760. Differential Calculus
MATH1250/1260. Linear Algebra
Math 1730. Integral Calculus
STAT-2920. Introduction to Probability
STAT-2950. Introduction to Statistics
STAT-3920. Probability
STAT-3950. Statistics
STAT-4xxx. Any other statistics
STAT-4550. Regression Analysis
STAT-4700. Biostatistics

Honours Biomedical Sciences – Interdisciplinary Health Science (IHS) Stream

(a) BIOL-1101, BIOL-1111, BIOL-2111, BIOL-2040, BIOL-2071, BIOM-2131, BIOM-3500, BIOM-3530
(b) Eight courses from: BIOM-2021, BIOL-2480, BIOM-2400, BIOM-3070, BIOM-3200, BIOM-3400, BIOM-3540, BIOM-3550, BIOM-3560, BIOM-3581**, BIOM-3750, BIOM-4008, BIOM-4440*, BIOM-4500, BIOM-4510, BIOM-4530, BIOM-4540, BIOM-4550, BIOM-4560, BIOM-4570, BIOM-4580, BIOM-4590, BIOM-4904**, BIOL-4450.
(c) CHEM-1100, CHEM-1110, CHEM-2300, BIOC-2010, BIOC-3100, BIOC-3130
(d) MATH-1720 (or MATH-1760) ***, STAT-2910, and one pair of both PHYS-1400 and PHYS-1410 or both PHYS-1300 (or PHYS-1400) and PHYS-1310
(e) Two courses from: BIOL-2050, BIOL-2142, BIOL-3571, CHEM-2200, CHEM-2310, CHEM-2500, CHEM-2510,CHEM-3210, BIOC-3030, BIOC-3110, BIOC-3140, BIOC-3310, BIOC-4010, BIOC-4020, BIOC-4030, BIOC-4050, PHYS-3700.
(f) Three IHS core courses; IHSC-1000, IHSC-3000, IHSC-4000
(g) ~~Eight~~ **Seven** courses from one selected IHS concentration
(h) ~~One~~ **Two** course**s** from any area of study

**BIOM-3581 and BIOM-4904 are 6 credit, 2 semester courses. Only students who have maintained a major average of 70% and a cumulative average of 60% will be considered for enrolment in BIOM-4904. Registration

in BIOM-4904 is competitive and requires the consent of the Head of Department.
Courses used to calculate the major average are: courses listed under requirements (a) (b) (e) and (f), and any courses taken in the major area of study.

Honours Biological Sciences - Interdisciplinary Health Science (IHS) Stream

Degree Requirements
Total courses: forty.
a) twenty courses, including the "Core" courses BIOL-1101, BIOL-1111, BIOL-2101, BIOL-2111, BIOM-2131, and BIOL-2142; and fourteen other Biology (BIOL-and BIOM-) courses. At least nine courses must be at the 3000 level or above. (Recommended: BIOL-2071 and BIOL-3022.)
(b) eight Science courses, including CHEM-1100, CHEM-1110, CHEM-2300, BIOC-2010, STAT-2910, MATH-1720 (or MATH-1760)*, and at least one pair of both ESCI-1100 and ESCI-1111, or both PHYS-1300 and PHYS-1310, or both PHYS-1400 and PHYS-1410, or both COMP-1047 or COMP-2067 and COMP-2057, or both COMP-1400 and COMP-1410, or both ESCI-1130 and ESCI-2400
(c) three IHS core courses (IHSC-1000, IHSC-3000, IHSC-4000)
(d) ~~eight~~ **seven** courses from one selected IHS concentration
(e) ~~one~~ **two** course**s** from Arts/Languages or Social Sciences

*It is recommended that students who have taken MATH-1720 (or MATH-1760) also take MATH-1730.
**ECON-XXXX courses will be counted as Social Science courses.
Courses used to calculate the major average are: courses listed under requirement (a), and any other BIOL and BIOM courses taken.

Honours Psychology – Interdisciplinary Health Science (IHS) Stream

Degree requirements:
Total courses: 40
(a) eighteen courses, including PSYC-1150, PSYC-1160, PSYC-2300, PSYC-3200, PSYC-3350 or PSYC-3530 or PSYC-3580. The total number of courses must include at least four 3000-level courses and two 4000-level courses.
(b) two courses from Arts;
(c) two courses from Languages or Science;
(d) two courses from any area of study, excluding Social Sciences.
(d) ENGL-1010 (students with 80% or higher in Grade 12 ENG4U (or equivalent) are exempt from this course requirement and will substitute it with an additional course from any area of study.);
(f) one course with Indigenous content, perspectives, or materials (see Office of the Dean of the Faculty of Arts, Humanities, and Social Sciences for complete list.);
(g) SOSC-2500;
(h) three IHS core courses (IHSC-1000, IHSC-3000, IHSC-4000)
(i) ~~eight~~ **seven** courses from one selected IHS concentration
(j) ~~two~~ **three** courses from any area of study, including psychology
Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

A.2 MINOR COURSE CHANGES REQUIRING ADDITIONAL RESOURCES OR AFFECTING DEGREE REQUIREMENTS

*If this is a minor course and calendar change (usually noted on a Form E) requiring additional resources or affecting degree requirements, please provide the current course information and the proposed new course information by cutting and pasting from the current undergraduate or graduate web calendar and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with **bolding** and underlining.Examples of minor*

*course changes include: deleting courses, course description changes, pre/anti/co- requisite changes, contact hour/lab requirement changes, course title changes, renumbering courses, and/or cross-listing courses. Minor course calendar changes, which do not require additional resources or do not affect degree requirements, should be submitted on a **Form E.***

N/A

B. RATIONALE

Please provide a rationale for the proposed change(s).

Interdisciplinary Health Sciences (IHS) streams involve students enrolled in three different Honours programs. Currently, these streams are very rigid and restrictive regarding the concentration options. In addition, students are experiencing undue stress and are constantly worried about course availability to complete their degree requirements on time and in a balanced fashion. Decreasing the number of concentration courses from 8 to 7 will greatly alleviate this unnecessary stress, make these streams more appealing, and increase retention in the programs. Many of the IHS students are planning to continue their academic journey in professional schools, thus need to have flexibility for elective courses that these schools require for application. In consultation with Department of Psychology, additional courses are being introduced into three out of our eight concentrations, which will also provide more flexibility to IHS students pursuing these concentrations.

C. RESOURCES

C.1 Resources In Support of the Revised Program and Resource Implications for Other Campus Units or Programs (QAF section 2.1.2.6)

Describe, in general terms, all faculty and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the revised program. Please do not name specific individuals in this section. Describe the impact of the planned utilization of existing human, physical and financial resources (within and outside the unit) on other existing programs in the department or at the university. Provide an assessment of the reliance of the revised program on existing resources from other campus units and include evidence that there are adequate resources available and committed to the revised program to sustain the quality of scholarship produced by undergraduate students as well as graduate students' scholarship and research activities. Consider, for example: faculty resources (within and outside the unit), existing courses (within and outside the unit), equipment or facilities outside the proposer's control, external resources requiring maintenance or upgrading using external resources, staff support, library, teaching and learning support, information technology support, laboratory access, student support services, space, equipment, facilities, GA/TA

N/A

C.1.1 Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program (QAF section 2.1.2.6)

Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the revised program and the associate plans to ensure the sustainability of the revised program and quality of the student experience.

N/A

C.2 Graduate Faculty Qualifications and Supervisory Loads (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Explain how supervisory loads will be distributed, and describe the qualifications and appointment status of faculty who will provide instruction and supervision in the revised program.

N/A

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

C.3 Financial Assistance for Graduate Students (where appropriate) (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Where appropriate to the revised program, provide evidence that financial assistance for graduate students will be sufficient to ensure adequate quality and numbers of students.

N/A

C.4 Anticipated New Resources (QAF sections 2.1.2.6)

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the revised program.*

N/A

C.5 Planned Reallocation of Resources and Cost-Savings

Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the revised program. (e.g., streamlining existing programs and courses, deleting courses, etc.)

N/A

C.6 Additional Resources Required – Resources Requested (QAF section 2.1.2.6f)

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to run the revised program. If not applicable, write n/a.*

Faculty:	N/A
Staff:	N/A
GA/TAs:	N/A

C.6.1 Additional Institutional Resources and Services Required by all Affected Areas or Departments (QAF section 2.1.2.6f)

*Describe all **additional institutional resources and services** required by all affected areas or departments to run the revised program, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance. If not applicable, write n/a.*

Library Resources and Services:	N/A
Teaching and Learning Support:	N/A
Student Support Services:	N/A
Space and Facilities:	N/A
Equipment (and Maintenance):	N/A

D.1 Form History *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

Date of Modification	Approval Body Modifying	Reason for Modification

University of Windsor
Program Development Committee

*5.14: **Economics (Graduate) – Minor Program Changes (Form C)**

Item for: **Approval**

Forwarded by: **Faculty of Graduate Studies**

MOTION: That the degree requirements for the Master of Economics (MA) be changed in accordance with the program/course change forms.^

^Subject to approval of the expenditures required.

Rationale/Approvals:

- The proposed changes have been approved by the Department of Economics Council, the Science Program Development Committee (SPDC) (as delegated by the Faculty of Science Coordinating Council) and the Faculty of Graduate Studies Council (April 28, 2026)
- *See attached.*

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

TITLE OF PROGRAM(S)/CERTIFICATE(S):	**Master of Economics (MA)**
DEPARTMENT(S)/SCHOOL(S):	**Economics**
FACULTY(IES):	**Science**

Proposed change(s) effective as of* [Fall, Winter, Spring]: **(subject to timely and clear submission)*	Fall 2026, Graduate Calendar

Does the minor program change include new courses?:

____ Yes [All new course proposals must be submitted on PDC Form Ds and submitted for approval with the minor program change proposal (PDC Form C)]

__X__ No. If yes, list all new courses:

A.1 PROGRAM REQUIREMENT CHANGES

Please provide the current program requirements and the proposed new program requirements by cutting and pasting from the current undergraduate or graduate web calendar (www.uwindsor.ca/secretariat/calendars) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining. Example: Degree requirements: WXYZ-1000, ~~WXYZ-1010~~, WXYZ-1100, WXYZ-2100, WXYZ-3100, WXYZ-4100, plus three additional courses at the **3000-level or** 4000-level.

Master of Economics (MA)

Admission Requirements

1. ~~In addition to the general FACULTY REGULATIONS FOR THE MASTER'S DEGREE, a student with~~ **Applicants holding** an honours Bachelor's degree in Economics or its equivalent, with at least a major average of 70%, may be admitted to a ~~minimum~~ one-year Master's program. Applicants are expected to have completed one course in each of calculus, linear algebra and statistics. Applicants who have not completed the above mathematics requirements ~~are encouraged to do so~~ prior to beginning their graduate course work~~.~~ **might be accepted for the two-year program.**
2. A student with a general degree **in Economics**, or honours ~~graduate~~ **degree** in another discipline, with at least a 70% standing, may be admitted to a ~~minimum~~ two-year Master's program.

Degree Requirements

1. Students in the two-year **MA** program are required to take a ~~make-up or~~ qualifying year in their first year of the ~~MA~~ program. Selection of courses is to be made in consultation with a graduate advisor. **Upon successful completion, students proceed to the following requirements**
2. Students in the one-year MA program ~~(Candidate year)~~ are required to complete:
   a. seven graduate courses and a major paper normally to be in conjunction with one of the courses OR eight graduate courses (no major paper);
   ~~b.~~ **Of the seven graduate courses** at least one course in microeconomics **(e.g., ECON-8010, ECON-8210)**, one in macroeconomics **(e.g., ECON-8020, ECON-8220)** and one in econometrics **(e.g., ECON-8410, ECON-8240) are required**. ~~Students intending to enter a PhD. program are advised to take ECON-8010, ECON-8020, ECON-8030, ECON-8040, ECON-8410, and ECON-8420.~~
   c. Students intending to pursue a PhD program are advised to take ECON-8010 (Microeconomics Theory I), ECON-8020 (Macroeconomics Therory I) , and ECON-8410 (Economics Theory I).

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

Calendar Clarification:

Master of Economics (MA)

Degree Requirements

Two Year MA Program
Students in the two-year MA program are required to take a qualifying year in their first year of the MA program. Selection of courses is to be made in consultation with a graduate advisor. Upon successful completion, students proceed to the remaining requirements.

One Year MA program
Students in the one-year MA program must complete the **Major Paper Stream** or the **Coursework Stream** as outlined below:
Major Paper Stream: 7 courses+ major paper (normally to be in in conjunction with one of the courses)
Required Courses:
- At least 1 course in Microeconomics
- At least 1 course in Macroeconomics
- At least 1 course in Econometrics
- 4 Economics courses at the 8XXX level*
- ECON-8960. Major Paper

Coursework Stream: 8 courses (no major paper required)
Required Courses:
- At least 1 course in Microeconomics
- At least 1 course in Macroeconomics
- At least 1 course in Econometrics
- 5 Economics courses at the 8XXX level

***Note for PhD Preparation**
Students intending to pursue a PhD program are advised to take the following courses:
ECON-8010. Microeconomics Theory I
ECON-8020. Macroeconomics Theory I
ECON-8410. Economics Theory I

List of courses that would fulfill the Microeconomics, Macroeconomics and Econometrics requirements
(students must take one course from each category)

Microeconomics Courses
ECON-8010. Microeconomics Theory I
ECON-8030. Microeconomic Theory II
ECON-8210. Applied Microeconomics

Macroeconomics Courses:
ECON-8020. Macroeconomics Theory I
ECON-8040. Macroeconomic Theory II
ECON-8220. Applied Macroeconomics

Econometric Courses
ECON-8410. Econometric Theory I
ECON-8420. Econometric Theory II
ECON-8240. Applied Econometrics 1
ECON-8250. Applied Econometrics 2

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

A.2 MINOR COURSE CHANGES REQUIRING ADDITIONAL RESOURCES OR AFFECTING DEGREE REQUIREMENTS

*If this is a minor course and calendar change (usually noted on a Form E) requiring additional resources or affecting degree requirements, please provide the current course information and the proposed new course information by cutting and pasting from the current undergraduate or graduate web calendar and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with **bolding** and underlining. Examples of minor course changes include: deleting courses, course description changes, pre/anti/co- requisite changes, contact hour/lab requirement changes, course title changes, renumbering courses, and/or cross-listing courses. Minor course calendar changes, which do not require additional resources or do not affect degree requirements, should be submitted on a **Form E.***

N/A

B. RATIONALE

Please provide a rationale for the proposed change(s).

1. Alignment with IQAP Cyclical Review Recommendations
   This proposal is submitted in response to the recent Institutional Quality Assurance Process (IQAP) cyclical program review. The External Reviewers' Report (dated April 13, 2025) explicitly advised the Department to optimize its graduate offerings, stating: "*ER Recommendation 6: Consider consolidating the core courses of the MAEP and MA programs*." By making the four 82xx-level courses (ECON-8210, ECON-8220, ECON-8240, and ECON-8250) - currently the foundational core of the Master of Applied Economics and Policy (MAEP) program - eligible for students in the traditional MA program, the Department is taking an important step toward implementing the consolidated core recommended by the reviewers.

2. Pedagogical Benefits and Student Experience
   This integration is part of a broader, ongoing curriculum review within the Department of Economics aimed at establishing a shared foundational first term for our graduate cohorts. Pedagogically, we believe that allowing MA students to take these core MAEP courses will:

   - Enhance Cohort Building: Bringing MA and MAEP students together in their first term will foster a more vibrant and collaborative graduate environment and encourage the exchange of theoretical and applied perspectives.

   - Increase Pathway Flexibility: A shared core ensures that all students develop a strong, standardized foundation in economic theory and quantitative methods early in the program, allowing for greater flexibility and specialization in subsequent term(s).

3. Resource Optimization and Institutional Support
   From an administrative perspective, consolidating these core offerings will improve the efficient use of teaching resources. By reducing course duplication across the two master's programs, the Department can better allocate faculty teaching capacity and focus on specialized upper-level electives and research supervision. This initiative supports the long-term sustainability and quality of our graduate programs and reflects ongoing discussions with the Dean of Science on streamlining and strengthening the Department's graduate offerings.

   Learning outcomes with minor changes were included. Learning outcomes will be reviewed in the context of curriculum mapping planned for Summer 2026.

C. RESOURCES

C.1 Resources In Support of the Revised Program and Resource Implications for Other Campus Units or Programs (QAF section 2.1.2.6)

Describe, in general terms, all faculty and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the revised program. Please do not name

specific individuals in this section. Describe the impact of the planned utilization of existing human, physical and financial resources (within and outside the unit) on other existing programs in the department or at the university. Provide an assessment of the reliance of the revised program on existing resources from other campus units and include evidence that there are adequate resources available and committed to the revised program to sustain the quality of scholarship produced by undergraduate students as well as graduate students' scholarship and research activities. Consider, for example: faculty resources (within and outside the unit), existing courses (within and outside the unit), equipment or facilities outside the proposer's control, external resources requiring maintenance or upgrading using external resources, staff support, library, teaching and learning support, information technology support, laboratory access, student support services, space, equipment, facilities, GA/TA

The proposed curriculum modification is highly resource-efficient and does not require any new or additional financial, physical, or human resources. Rather than drawing on new resources, this initiative constitutes a strategic consolidation of existing offerings that will lead to more efficient resource allocation within the Department of Economics.

Currently, both the MA and MAEP programs utilize dedicated faculty and administrative support within the Department of Economics. By allowing MA students to enroll in a number of MAEP 82xx-level core courses, the Department will reduce course duplication. This consolidation will improve faculty teaching workloads, effectively freeing up teaching capacity that can be redirected toward offering specialized electives or supporting graduate research supervision. Administrative support for the graduate programs is currently provided by a part-time graduate secretary. As the MA and MAEP programs become more integrated, the Department may need to reassess administrative support requirements, potentially moving toward full-time graduate program administrative support in the future.

C.1.1 Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program (QAF section 2.1.2.6)

Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the revised program and the associate plans to ensure the sustainability of the revised program and quality of the student experience.

The Department of Economics does not anticipate reliance on Adjunct, Limited-term, or Sessional faculty to deliver the revised program.

C.2 Graduate Faculty Qualifications and Supervisory Loads (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Explain how supervisory loads will be distributed, and describe the qualifications and appointment status of faculty who will provide instruction and supervision in the revised program.

The Department of Economics is supported by a highly qualified complement of 10 full-time faculty members (9 tenured and 1 tenure-track). All faculty members hold doctoral degrees. Of this complement, 9 members currently hold official "Graduate Faculty" status (https://www.uwindsor.ca/graduate-studies/369/graduate-faculty#econ).

The MA program in Economics does not mandate a Major Research Paper (MRP) for graduation. Consequently, the baseline supervisory demand on faculty is highly manageable and will not be negatively impacted by this curriculum update. For students who do elect to pursue an MRP, supervisory arrangements are established through mutual agreement between the student and the faculty member. This ensures a strong alignment between the student's research topic and the faculty member's specific area of expertise. The Graduate Program Chair oversees this matching process to monitor overall supervisory trends.

To ensure sustainable and equitable workload distribution across the department, the Head of the Department actively monitors faculty commitments and may adjust administrative service duties or committee assignments to balance their overall workload.

C.3 Financial Assistance for Graduate Students (where appropriate) (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Where appropriate to the revised program, provide evidence that financial assistance for graduate students will be sufficient to ensure adequate quality and numbers of students.

Financial assistance for MA students is provided through a multi-faceted approach:

- Graduate Assistantships (GAs): The Faculty of Graduate Studies consistently awards 5-10 GAs annually to qualified MA students, providing a reliable baseline of financial support alongside crucial professional and pedagogical training.
- Research Assistantships (RAs): Faculty holding active research grants regularly hire MA students as RAs, offering supplementary financial support and advanced, hands-on research experience.

C.4 Anticipated New Resources (QAF sections 2.1.2.6)

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the revised program.*

N/A

C.5 Planned Reallocation of Resources and Cost-Savings

Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the revised program. (e.g., streamlining existing programs and courses, deleting courses, etc.)

The proposed curriculum revision streamlines operations by consolidating the MA and MAEP core requirements. By allowing MA students to take the 82xx-level MAEP core courses, the Department eliminates course duplication and generates immediate internal efficiencies:

- Teaching Capacity: Faculty resources can be reallocated to specialized electives and graduate research supervision.
- Sustainable Scheduling: A shared foundational term reduces timetabling bottlenecks and optimizes classroom space utilization.
- Administrative Efficiencies: Aligned graduate programs streamline academic advising and reduce administrative burdens for support staff.

Ultimately, this cost-effective restructuring aligns perfectly with IQAP expectations, with no negative resource impacts anticipated for other campus units.

C.6 Additional Resources Required – Resources Requested (QAF section 2.1.2.6f)

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to run the revised program. If not applicable, write n/a.*

Faculty:	N/A
Staff:	N/A
GA/TAs:	N/A

C.6.1 Additional Institutional Resources and Services Required by all Affected Areas or Departments (QAF section 2.1.2.6f)

*Describe all **additional institutional resources and services** required by all affected areas or departments to run the revised program, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance. If not applicable, write n/a.*

Library Resources and Services:	N/A

PROGRAM DEVELOPMENT COMMITTEE
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Teaching and Learning Support:	N/A
Student Support Services:	N/A
Space and Facilities:	N/A
Equipment (and Maintenance):	N/A

D.1 Form History *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

Date of Modification	Approval Body Modifying	Reason for Modification

I. Indigenous (First Nations, Métis, or Inuit) Content, Perspectives, or Material

*The University of Windsor is committed to building and sustaining stronger, more meaningful inclusive partnerships with Indigenous students, scholars, and communities. Indigenization of curriculum takes place in a larger context, including a requirement to respond to the four Calls to Action in education of the Truth and Reconciliation Report (2015) (page 1), the unique legal requirements of the Constitution Act 1982 (Sections 25, 35), the provincial legal requirements of the Ontario Human Rights Code, 1990, and provincial legislation Bill Pr36 (1967). In revising this program, **how** has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*

Please consider these prompt questions and additional Resources including disciplinary examples:

- *What **process** has your department/Faculty used to consider Indigenization?*
- ***How** have you considered the importance or relevance to the course/program?*
- *How has your department or faculty approached raising awareness for Indigenous knowledges in your area?*
- *What do the TRC and University Principles documents suggest relevant to your course?*
- *What have other similar courses/programs done that might be relevant to your course/program?*
- *In what ways could your course/program have flexibility to include new ways of learning, or content for Indigenous approaches or knowledges?*
- *What is your awareness of the history or background to approaches you are considering, such as the land acknowledgement? How have you developed your awareness?*
- *Which literatures, sources, or Indigenous Knowledge Holders have you consulted? (Please confirm you have permission to share any names, it may be helpful to have the person confirm the text if you will be submitting their name)*
- *Are you engaging in critical analysis of Settler Colonialism and/or Decolonization?*
- *Have you included the information in the other relevant areas in the PDC form such as learning outcomes and/or in the syllabus where appropriate?*

The Department of Economics is committed to advancing the Indigenization of its curriculum in a thoughtful and discipline-appropriate manner. The Department of Economics recognizes that traditional economics curricula have historically been centered on Western market-based frameworks while giving limited attention to Indigenous economic systems, values, and ways of knowing. Led by Dr. Sang-Chul Suh (Professor, Department of Economics) and as part of an ongoing process of learning, reflection, and curriculum development, the Department of Economics has engaged in discussions with Jaimie Kechego (Learning Specialist, Indigenization) and reviewed relevant materials on Indigenous and market-based economic perspectives. As for faculty participation in this process, Dr. Sang-Chul Suh, Dr. Jay Rhee, and Dr. Marcelo Arbex have taken the 'Pulling Together- Foundations series' taught by Jaimie Kechego. This series examines the role of colonization and how it continues to affect the Indigenous Peoples of Canada and defines the relationship between Indigenous and non-Indigenous people today. We strongly encourage our faculty to engage in these types of initiatives/courses/workshops to better incorporate Indigenous ways of knowing into their courses.

A key component of this approach is the integration of Indigenous economic perspectives into ECON 1100 – Principles of Economics I (microeconomics), a required course for all Economics programs and a foundational course taken by a large and diverse student population. Introducing Indigenous perspectives at the introductory level ensures that all Economics students are exposed early to alternative economic worldviews and to critical reflection on the assumptions underlying standard economic models.

In ECON 1100/1110 instructors use the *Principles of Microeconomics (Canadian Edition)* and *Principles of Macroeconomics (Canadian Edition)*, by Kevin Milligan; Philip Oreopoulos; Betsey Stevenson; Justin Wolfers. We were recently informed by the publisher that the authors will add indigenous examples throughout the 2nd edition of the textbooks. For example, examples featuring the Innu People, Head-Smashed-In Buffalo Jump and the skills of the Plains peoples, gains from trade, and discussions about indigenous property rights will be incorporated. Dr. Chen (ECON 1100 Leading Instructor) is in contact with the publisher for more information and updates.

Drawing on materials such as *Indigenous Economics* (Addendum I) and *Indigenous Economics vs. Market Economics (*Addendum II), both prepared by Dr. Suh in consultation with Jaimie Kechego and Russell Nahdee – see references below, students in ECON 1100 will be introduced to Indigenous economic principles including interconnectedness, reciprocity, collective responsibility, sustainability, and long-term (intergenerational) decision-making. These perspectives are presented in contrast to core features of market economics such as individualism, profit maximization, private ownership, and short-term efficiency. Students may engage with these materials through assigned readings, videos (see reference below), guided discussion, and short written or reflective exercises that encourage comparison between Indigenous and mainstream economic frameworks (see Addendum III - ECON 1100 – Principles of Economics I course outline (draft) – Fall/2026)

The department's approach to Indigenization in Economics includes the following strategies:

1. **Incorporation of Indigenous Economic Perspectives**
   Where appropriate, courses - particularly foundational courses such as ECON 1100 - include discussion of Indigenous economic systems and values to highlight how economic behaviour, resource use, and decision-making are shaped by culture, history, and institutions.
   - Concrete Next Step: Engage in discussion and prepare materials to introduce Indigenous content into ECON 1110 – Principles of Economics II (Fall/2027), which focus on macroeconomic concepts and policy.
2. **Classroom Discussion and Critical Reflection**
   Students are encouraged to engage critically with Indigenous and market-based economic models, reflecting on the limits of standard economic assumptions and the implications of colonization for economic institutions and outcomes.
   - Concrete Next Step: In ECON 1100 (starting in the Fall/2026), dedicate a structured class discussion or tutorial segment to compare Indigenous and market-based economic frameworks, supported by guided discussion questions or a short-written reflection. Where feasible, the department will invite Indigenous community members to participate through guest talks to support student learning and discussion.
3. **Use of Disciplinary-Relevant Materials**
   Indigenous content is introduced through economics-relevant materials that focus on economic organization, sustainability, distribution, and decision-making, rather than as add-on or stand-alone content.
   - Concrete Next Step: Commit to ongoing review and updating of course materials, including relevant readings, multimedia resources, and economics-focused case examples, informed where appropriate by dialogue with Indigenous community members and Jaimie Kechego (Learning Specialist, Indigenization).
4. **Curriculum Review and Development**
   The department views Indigenization as an ongoing process and will continue to review and refine course

content to identify additional opportunities for meaningful and appropriate integration across the curriculum.

- Concrete Next Step: Beyond the introduction of Indigenous content in first-year Economics courses, the Department of Economics plans to develop (Winter/2027) a dedicated second-year ECON course in Indigenous Economics, with particular focus on Canada. Development of this course will take place in consultation and ongoing dialogue with Jaimie Kechego (Learning Specialist, Indigenization) and Indigenous community members. It will examine Indigenous economic systems emphasizing community, sustainability, and relationships, as well as Indigenous-led enterprises, land and resource stewardship, governance, and economic reconciliation in contrast to Western economic models.

5. **Faculty Awareness and Development**
   Economics faculty has engaged and will continue to engage in learning opportunities related to Indigenization, including workshops and discussions facilitated by Indigenous learning specialists, and are encouraged to continue building capacity to incorporate Indigenous perspectives responsibly.
   - Concrete Next Step: Encourage faculty to further educate themselves about Indigenous histories, economic perspectives, and ways of knowing, and to participate in workshops, training sessions, and related professional development activities offered by the University of Windsor.
6. **Interdisciplinary Awareness**
   The department recognizes that Indigenous economic perspectives intersect with fields such as sustainability, governance, public policy, and social justice, creating opportunities for interdisciplinary dialogue within the social sciences.
   - Concrete Next Step: Where appropriate, highlight connections between Indigenous economic perspectives and related themes in other social science disciplines through examples, readings, or discussion in Economics courses.
7. **Student Engagement and Inclusivity**
   Introducing Indigenous perspectives in required Economics courses helps foster an inclusive learning environment and supports student awareness of diverse economic experiences and ways of knowing.
   - Concrete Next Step: Encourage students to attend workshops, training sessions, and related learning opportunities offered by the University of Windsor that promote awareness of Indigenous perspectives and ways of knowing.

While not all Economics courses include explicit Indigenous learning outcomes, the department's strategy emphasizes early exposure, critical engagement, and gradual expansion of Indigenous perspectives throughout the curriculum. This approach aligns with the Truth and Reconciliation Commission's Calls to Action related to education and with the University of Windsor's principles on Indigenous education, while remaining appropriate to the disciplinary context of Economics.

References:

1. Indigenous Economics – Prepared by Dr. Sang-Chul Suh, Department of Economics, University of Windsor (2025).
2. Indigenous vs Market Economics – Prepared by Dr. Sang-Chul Suh, Department of Economics, University of Windsor (2025).
3. Video Indigenous vs Market Economics – Prepared by Dr. Sang-Chul Suh and Gavin Bayn, Economics major student, Department of Economics, University of Windsor (2025)
4. Truth and Reconciliation Commission of Canada. "Truth and Reconciliation Commission of Canada: Calls to Action." 2015. https://ehprnh2mwo3.exactdn.com/wp-content/uploads/2021/01/Calls_to_Action_English2.pdf
5. Universities Canada. "Universities Canada principles on Indigenous education." June 29, 2015. https://www.univcan.ca/media-room/media-releases/universities-canada-principles-on-indigenous-education/

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

Master of Economics

Learning outcome were last updated May 12, 2017. These are revised learning outcomes.

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A UWindsor graduate will have the ability to demonstrate:	**COU-approved Undergraduate Degree Level Expectations**
A. Critically appraise and apply advanced concepts in economics. Distinguish and evaluate various modeling approaches in different areas of economics. Identify and select real data to match variables used in theoretical economic models.	A. the acquisition, application and integration of knowledge	1.Depth and Breadth of Knowledge 2.Knowledge of Methodologies 3. Application of Knowledge 5.Awareness of Limits of Knowledge
B. Choose appropriate models and **quantitative (empirical and** mathematical**)** techniques to propose solutions to economic problems. Critically evaluate relevant economic literature and identify the appropriate data to analyze economic problems.	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)	1. Depth and Breadth of Knowledge 2. Knowledge of Methodologies 3. Application of Knowledge 5. Awareness of Limits Knowledge
C. Assess complex policy issues and analyze them using economic models. Formulate and conduct **quantitative** exercises, simulations and empirical tests of theoretical economic models using standard data sources. Formulate and assess competing arguments based on established theories. Explain how conclusions depend on underlying assumptions and limitations of data.	C. critical thinking and problem-solving skills	1. Depth and Breadth of Knowledge 2. Knowledge of Methodologies 3. Application of Knowledge 5. Awareness of Limits of Knowledge
D. Apply economic theory and quantitative methods (using software) to solve specific economic problems.	D. literacy and numeracy skills	4.Communication Skills 5. Awareness of Limits of Knowledge

University of Windsor
Program Development Committee

*5.15: **Economics (Graduate) – Minor Program Changes (Form C)**

Item for: **Approval**

Forwarded by: **Faculty of Graduate Studies**

MOTION: That the admission and degree requirements for the Master of Applied Economics and Policy (MAEP) be changed in accordance with the program/course change forms.^

^Subject to approval of the expenditures required.

Rationale/Approvals:

- The proposed changes have been approved by the Department of Economics Council, the Science Program Development Committee (SPDC) (as delegated by the Faculty of Science Coordinating Council) and the Faculty of Graduate Studies Council (April 28, 2026).
- *See attached.*

PROGRAM DEVELOPMENT COMMITTEE
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TITLE OF PROGRAM(S)/CERTIFICATE(S):	**Master of Applied Economics and Policy (MAEP)**
DEPARTMENT(S)/SCHOOL(S):	**Economics**
FACULTY(IES):	**Science**

Proposed change(s) effective as of* [Fall, Winter, Spring]: **(subject to timely and clear submission)*	Fall 2026, Graduate Calendar

Does the minor program change include new courses?:

____ Yes [All new course proposals must be submitted on PDC Form Ds and submitted for approval with the minor program change proposal (PDC Form C)]
__X__ No If yes, list all new courses:

A.1 PROGRAM REQUIREMENT CHANGES

Please provide the current program requirements and the proposed new program requirements by cutting and pasting from the current undergraduate or graduate web calendar (www.uwindsor.ca/secretariat/calendars) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining. Example: Degree requirements: WXYZ-1000, ~~WXYZ-1010~~, WXYZ-1100, WXYZ-2100, WXYZ-3100, WXYZ-4100, plus three additional courses at the **3000-level or** 4000-level.

Master of Applied Economics and Policy (MAEP)

Admission Requirements

In order to be admitted to the program, a student must hold a 4-year bachelor degree with a minimum major average of B- (70%) or an average of B+ (77%) or better in the last 2 years of study. Applicants must have at least one undergraduate course in statistics, and introductory-level courses in microeconomics and macroeconomics. In exceptional cases, students not meeting these requirements can be admitted at the discretion of the Program Coordinator after consultation with the Advisory Board. In addition, two semesters of calculus, and a semester of intermediate microeconomics and macroeconomics are highly recommended, but not required.

Applicants are strongly encouraged to have a demonstrated background in economics and mathematical and statistical foundations. Admission is highly competitive, and preference will be given to applicants who exceed the minimum requirements and who have demonstrated work experience in the field. Candidates who lack the recommended background may be considered for admission on a case-by-case basis.

Candidates must demonstrate English proficiency by meeting or exceeding an IELTS score of 6.5 (or equivalent). If an applicant receives an English language proficiency score of less than 6.5 (or equivalent) they may be offered a conditional letter of acceptance pending successful completion of an approved English Language Training program, such as the University of Windsor's Centre for English Language Development's English Language Improvement Program (ELIP) or submitting a successful English language test score.

~~Applicants must pass a successful interview with representative or agent acting on behalf of the University of Windsor.~~

~~ECON-8210. Applied Microeconomics~~
~~ECON-8220. Applied Macroeconomics~~
~~ECON-8230. Mathematics for Applied Economics~~
~~ECON-8240. Applied Econometrics I~~
~~ECON-8250. Applied Econometrics II~~
~~ECON-8260. Business Communications (Note: This is course will be delivered in four modules with one ten-~~

~~hour module completed each term of the program.)~~
~~ECON-8270. Research Project in Economic Policy and Seminar~~

~~Two ECON-3000 or ECON-4000 level courses, except:~~
~~ECON-3060. Mathematical Economics I~~
~~ECON-4070. Senior Research Workshop~~
~~ECON-4950. Economics Internship~~

~~In addition to item (a), any two ECON-8000 level courses, except:~~
~~ECON-8010. Microeconomic Theory I~~
~~ECON-8020. Macroeconomic Theory I~~
~~ECON-8410. Econometric Theory~~
~~ECON-8960. Major Paper~~

~~Two of the following (offered by the Master of Management program):~~
~~BSMM-8110. Accounting Concepts and Techniques~~
~~BSMM-8120. Finance in a Global Perspective~~
~~BSMM-8310. International Business~~
~~BSMM-8360. International Financial Reporting~~
~~BSMM-8370. International Financial Management~~
~~BSMM-8550. Domestic Transportation and International Shipping~~

~~Students will be required to complete a policy project to fulfill the requirements of ECON-8270 (Research Project in Economic Policy). Topics would normally be of applied nature. Students would work on group projects involving statistical analysis and make group presentations.~~

Degree Requirments

Total Courses: 39 credit hours (13 courses - 3 credit hours each)

Part A (3 courses):
Take all of the following:

ECON 8230: Mathematics for Applied Economics
ECON 8260: Business Communication
ECON 8270: Research Project in Economic Policy and Seminar

Part B (4 courses):
Take four (4) of the following:

ECON 8010: Microeconomic Theory I
ECON 8210: Applied Microeconomics
ECON 8020: Macroeconomic Theory I
ECON 8220: Applied Macroeconomics
ECON 8410: Econometric Theory I
ECON 8240: Applied Econometrics I

Part C (4 courses):
Take 4 additional ECON 8XXX graduate courses not included in Parts A or B except ECON 8960 – Major Paper

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Part D (2 courses):
Take any 2 ECON 3XXX or ECON 4XXX courses, except:
ECON-3060 Mathematical Economics I
ECON-4070 Senior Research Workshop
ECON-4950 Economics Internship

A.2 MINOR COURSE CHANGES REQUIRING ADDITIONAL RESOURCES OR AFFECTING DEGREE REQUIREMENTS

*If this is a minor course and calendar change (usually noted on a Form E) requiring additional resources or affecting degree requirements, please provide the current course information and the proposed new course information by cutting and pasting from the current undergraduate or graduate web calendar and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with **bolding** and underlining. Examples of minor course changes include: deleting courses, course description changes, pre/anti/co- requisite changes, contact hour/lab requirement changes, course title changes, renumbering courses, and/or cross-listing courses. Minor course calendar changes, which do not require additional resources or do not affect degree requirements, should be submitted on a **Form E.***

N/A

B. RATIONALE

Please provide a rationale for the proposed change(s).

Rationale for removal of interview component: The admission requirement of a passed successful interview with a representative or agent is being removed to streamline the admissions process and to avoid losing potential students to other institutions that do not require interviews. No additional resources are required due to this change.

1. Alignment with IQAP Cyclical Review Recommendations
   This proposal is submitted in response to the recent Institutional Quality Assurance Process (IQAP) cyclical program review. The External Reviewers' Report (dated April 13, 2025) explicitly advised the Department to optimize its graduate offerings, stating: "*ER Recommendation 6: Consider consolidating the core courses of the MAEP and MA programs*."

   The proposed revisions to the Master of Applied Economics and Policy (MAEP) program support this recommendation by restructuring the MAEP curriculum to better align with the graduate offerings in the MA program. In particular, the revised structure allows greater integration across the two programs by expanding the set of shared graduate courses and permitting MAEP students to take selected advanced theory and econometrics courses (ECON-8010, ECON-8020, and ECON-8410). This represents an important step toward implementing the consolidated graduate core recommended by the reviewers.

2. Pedagogical Benefits and Student Experience
   These revisions are part of a broader, ongoing curriculum review within the Department of Economics aimed at strengthening the coherence and flexibility of our graduate programs. The revised MAEP structure maintains a clear foundation in applied economic training while increasing opportunities for students to pursue advanced coursework in economic theory and econometrics. Pedagogically, the revised structure will:

   - Enhance Cohort Building: Bringing MA and MAEP students together in their first term will foster a more vibrant and collaborative graduate environment and encourage the exchange of theoretical and applied perspectives.
   - Strengthen Analytical Training: By expanding the role of graduate-level economics courses and incorporating advanced theory and econometrics options (ECON-8010, ECON-8020, and ECON-8410), the program strengthens the analytical and quantitative training expected in contemporary applied economics programs.
   - Enhance Flexibility and Specialization: Expanding the graduate elective menu allows students to tailor their coursework toward areas such as applied econometrics, policy analysis, or advanced economic theory, depending on their academic and professional goals.

3. Modernization of the MAEP Curriculum
   The proposed revision also modernizes the MAEP curriculum by increasing the proportion of graduate-level economics coursework and reducing reliance on courses offered outside the Department. In particular, the revised structure eliminates the requirement that students take courses offered by the Master of Management (BSMM) program and instead emphasizes 8000-level economics courses.

   This change strengthens the program's focus on applied economic analysis and ensures that MAEP students receive more extensive training in economics, econometrics, and policy analysis. The revised curriculum reflects current developments in applied economics programs nationally, which increasingly emphasize advanced econometrics, data-driven policy evaluation, and stronger theoretical foundations.

   The revised MAEP program continues to support the University of Windsor's mission by preparing graduates for evidence-based policy analysis, applied research, and leadership roles in government, business, and international organizations.

4. Resource Optimization and Institutional Support
   From an administrative perspective, consolidating these core offerings will improve the efficient use of teaching resources. By reducing course duplication across the two master's programs, the Department can better allocate faculty teaching capacity and focus on specialized upper-level electives and research supervision. This initiative supports the long-term sustainability and quality of our graduate programs and reflects ongoing discussions with the Dean of Science on streamlining and strengthening the Department's graduate offerings.

   Learning outcomes with minor changes were included. Learning outcomes will be reviewed in the context of curriculum mapping planned for Summer 2026.

C. RESOURCES

C.1 Resources In Support of the Revised Program and Resource Implications for Other Campus Units or Programs (QAF section 2.1.2.6)

Describe, in general terms, all faculty and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the revised program. Please do not name specific individuals in this section. Describe the impact of the planned utilization of existing human, physical and financial resources (within and outside the unit) on other existing programs in the department or at the university. Provide an assessment of the reliance of the revised program on existing resources from other campus units and include evidence that there are adequate resources available and committed to the revised program to sustain the quality of scholarship produced by undergraduate students as well as graduate students' scholarship and research activities. Consider, for example: faculty resources (within and outside the unit), existing courses (within and outside the unit), equipment or facilities outside the proposer's control, external resources requiring maintenance or upgrading using external resources, staff support, library, teaching and learning support, information technology support, laboratory access, student support services, space, equipment, facilities, GA/TA

The proposed curriculum modification is highly resource-efficient and does not require any new or additional financial, physical, or human resources. Rather than drawing on new resources, this initiative constitutes a strategic consolidation of existing offerings that will lead to more efficient resource allocation within the Department of Economics. Currently, both the MA and MAEP programs utilize dedicated faculty and administrative support within the Department of Economics. The revised MAEP curriculum increases the overlap between graduate course offerings in the two programs, reducing unnecessary course duplication. This consolidation will improve faculty teaching workloads, effectively freeing up teaching capacity that can be redirected toward offering specialized electives or supporting graduate research supervision. Administrative support for the graduate programs is currently provided by a part-time graduate secretary. As the MA and MAEP programs become more integrated, the Department may need

to reassess administrative support requirements, potentially moving toward full-time graduate program administrative support in the future.

C.1.1 Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program (QAF section 2.1.2.6)

Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the revised program and the associate plans to ensure the sustainability of the revised program and quality of the student experience.

The Department of Economics does not anticipate reliance on Adjunct, Limited-term, or Sessional faculty to deliver the revised program.

C.2 Graduate Faculty Qualifications and Supervisory Loads (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Explain how supervisory loads will be distributed, and describe the qualifications and appointment status of faculty who will provide instruction and supervision in the revised program.

The Department of Economics is supported by a highly qualified complement of 10 full-time faculty members (9 tenured and 1 tenure-track). All faculty members hold doctoral degrees. Of this complement, 9 members currently hold official "Graduate Faculty" status (https://www.uwindsor.ca/graduate-studies/369/graduate-faculty#econ). MAEP is a course-based program and does not require ECON 8960 – Major Paper for graduation.

C.3 Financial Assistance for Graduate Students (where appropriate) (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Where appropriate to the revised program, provide evidence that financial assistance for graduate students will be sufficient to ensure adequate quality and numbers of students.

N/A

C.4 Anticipated New Resources (QAF sections 2.1.2.6)

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the revised program.*

N/A

C.5 Planned Reallocation of Resources and Cost-Savings

Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the revised program. (e.g., streamlining existing programs and courses, deleting courses, etc.)

The proposed curriculum revision streamlines operations by consolidating the MA and MAEP core requirements. By allowing MAEP students to take the 80xx-level MA core courses, the Department eliminates course duplication and generates immediate internal efficiencies:
Teaching Capacity: Faculty resources can be reallocated to specialized electives and graduate research supervision.
Sustainable Scheduling: A shared foundational term reduces timetabling bottlenecks and optimizes classroom space utilization.
Administrative Efficiencies: Aligned graduate programs streamline academic advising and reduce administrative burdens for support staff.

Ultimately, this cost-effective restructuring aligns perfectly with IQAP expectations, with no negative resource impacts anticipated for other campus units.

C.6 Additional Resources Required – Resources Requested (QAF section 2.1.2.6f)

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*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to run the revised program. If not applicable, write n/a.*

Faculty:	N/A
Staff:	N/A
GA/TAs:	N/A

C.6.1 Additional Institutional Resources and Services Required by all Affected Areas or Departments (QAF section 2.1.2.6f)

*Describe all **additional institutional resources and services** required by all affected areas or departments to run the revised program, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance. If not applicable, write n/a.*

Library Resources and Services:	N/A
Teaching and Learning Support:	N/A
Student Support Services:	N/A
Space and Facilities:	N/A
Equipment (and Maintenance):	N/A

D.1 Form History *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

Date of Modification	Approval Body Modifying	Reason for Modification

PROGRAM DEVELOPMENT COMMITTEE
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APPENDIX A

I. Indigenous (First Nations, Métis, or Inuit) Content, Perspectives, or Material

*The University of Windsor is committed to building and sustaining stronger, more meaningful inclusive partnerships with Indigenous students, scholars, and communities. Indigenization of curriculum takes place in a larger context, including a requirement to respond to the four Calls to Action in education of the Truth and Reconciliation Report (2015) (page 1), the unique legal requirements of the Constitution Act 1982 (Sections 25, 35), the provincial legal requirements of the Ontario Human Rights Code, 1990, and provincial legislation Bill Pr36 (1967). In revising this program, **how** has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*

Please consider these prompt questions and additional Resources including disciplinary examples:

- *What **process** has your department/Faculty used to consider Indigenization?*
- ***How** have you considered the importance or relevance to the course/program?*
- *How has your department or faculty approached raising awareness for Indigenous knowledges in your area?*
- *What do the TRC and University Principles documents suggest relevant to your course?*
- *What have other similar courses/programs done that might be relevant to your course/program?*
- *In what ways could your course/program have flexibility to include new ways of learning, or content for Indigenous approaches or knowledges?*
- *What is your awareness of the history or background to approaches you are considering, such as the land acknowledgement? How have you developed your awareness?*
- *Which literatures, sources, or Indigenous Knowledge Holders have you consulted? (Please confirm you have permission to share any names, it may be helpful to have the person confirm the text if you will be submitting their name)*
- *Are you engaging in critical analysis of Settler Colonialism and/or Decolonization?*
- *Have you included the information in the other relevant areas in the PDC form such as learning outcomes and/or in the syllabus where appropriate?*

The Department of Economics is committed to advancing the Indigenization of its curriculum in a thoughtful and discipline-appropriate manner. The Department of Economics recognizes that traditional economics curricula have historically been centered on Western market-based frameworks while giving limited attention to Indigenous economic systems, values, and ways of knowing. Led by Dr. Sang-Chul Suh (Professor, Department of Economics) and as part of an ongoing process of learning, reflection, and curriculum development, the Department of Economics has engaged in discussions with Jaimie Kechego (Learning Specialist, Indigenization) and reviewed relevant materials on Indigenous and market-based economic perspectives. As for faculty participation in this process, Dr. Sang-Chul Suh, Dr. Jay Rhee, and Dr. Marcelo Arbex have taken the 'Pulling Together- Foundations series' taught by Jaimie Kechego. This series examines the role of colonization and how it continues to affect the Indigenous Peoples of Canada and defines the relationship between Indigenous and non-Indigenous people today. We strongly encourage our faculty to engage in these types of initiatives/courses/workshops to better incorporate Indigenous ways of knowing into their courses.

A key component of this approach is the integration of Indigenous economic perspectives into ECON 1100 – Principles of Economics I (microeconomics), a required course for all Economics programs and a foundational course taken by a large and diverse student population. Introducing Indigenous perspectives at the introductory level ensures that all Economics students are exposed early to alternative economic worldviews and to critical reflection on the assumptions underlying standard economic models.

In ECON 1100/1110 instructors use the *Principles of Microeconomics (Canadian Edition)* and *Principles of Macroeconomics (Canadian Edition)*, by Kevin Milligan; Philip Oreopoulos; Betsey Stevenson; Justin Wolfers. We were recently informed by the publisher that the authors will add indigenous examples throughout the 2nd edition of the textbooks. For example, examples featuring the Innu People, Head-Smashed-In Buffalo Jump and the skills of the Plains

peoples, gains from trade, and discussions about indigenous property rights will be incorporated. Dr. Chen (ECON 1100 Leading Instructor) is in contact with the publisher for more information and updates.

Drawing on materials such as *Indigenous Economics* (Addendum I) and *Indigenous Economics vs. Market Economics (*Addendum II), both prepared by Dr. Suh in consultation with Jaimie Kechego and Russell Nahdee – see references below, students in ECON 1100 will be introduced to Indigenous economic principles including interconnectedness, reciprocity, collective responsibility, sustainability, and long-term (intergenerational) decision-making. These perspectives are presented in contrast to core features of market economics such as individualism, profit maximization, private ownership, and short-term efficiency. Students may engage with these materials through assigned readings, videos (see reference below), guided discussion, and short written or reflective exercises that encourage comparison between Indigenous and mainstream economic frameworks (see Addendum III - ECON 1100 – Principles of Economics I course outline (draft) – Fall/2026)

The department's approach to Indigenization in Economics includes the following strategies:

1. **Incorporation of Indigenous Economic Perspectives**
   Where appropriate, courses - particularly foundational courses such as ECON 1100 - include discussion of Indigenous economic systems and values to highlight how economic behaviour, resource use, and decision-making are shaped by culture, history, and institutions.
   - Concrete Next Step: Engage in discussion and prepare materials to introduce Indigenous content into ECON 1110 – Principles of Economics II (Fall/2027), which focus on macroeconomic concepts and policy.
2. **Classroom Discussion and Critical Reflection**
   Students are encouraged to engage critically with Indigenous and market-based economic models, reflecting on the limits of standard economic assumptions and the implications of colonization for economic institutions and outcomes.
   - Concrete Next Step: In ECON 1100 (starting in the Fall/2026), dedicate a structured class discussion or tutorial segment to compare Indigenous and market-based economic frameworks, supported by guided discussion questions or a short-written reflection. Where feasible, the department will invite Indigenous community members to participate through guest talks to support student learning and discussion.
3. **Use of Disciplinary-Relevant Materials**
   Indigenous content is introduced through economics-relevant materials that focus on economic organization, sustainability, distribution, and decision-making, rather than as add-on or stand-alone content.
   - Concrete Next Step: Commit to ongoing review and updating of course materials, including relevant readings, multimedia resources, and economics-focused case examples, informed where appropriate by dialogue with Indigenous community members and Jaimie Kechego (Learning Specialist, Indigenization).
4. **Curriculum Review and Development**
   The department views Indigenization as an ongoing process and will continue to review and refine course content to identify additional opportunities for meaningful and appropriate integration across the curriculum.
   - Concrete Next Step: Beyond the introduction of Indigenous content in first-year Economics courses, the Department of Economics plans to develop (Winter/2027) a dedicated second-year ECON course in Indigenous Economics, with particular focus on Canada. Development of this course will take place in consultation and ongoing dialogue with Jaimie Kechego (Learning Specialist, Indigenization) and Indigenous community members. It will examine Indigenous economic systems emphasizing community, sustainability, and relationships, as well as Indigenous-led enterprises, land and resource stewardship, governance, and economic reconciliation in contrast to Western economic models.
5. **Faculty Awareness and Development**
   Economics faculty has engaged and will continue to engage in learning opportunities related to

Indigenization, including workshops and discussions facilitated by Indigenous learning specialists, and are encouraged to continue building capacity to incorporate Indigenous perspectives responsibly.

- Concrete Next Step: Encourage faculty to further educate themselves about Indigenous histories, economic perspectives, and ways of knowing, and to participate in workshops, training sessions, and related professional development activities offered by the University of Windsor.

6. **Interdisciplinary Awareness**
   The department recognizes that Indigenous economic perspectives intersect with fields such as sustainability, governance, public policy, and social justice, creating opportunities for interdisciplinary dialogue within the social sciences.
   - Concrete Next Step: Where appropriate, highlight connections between Indigenous economic perspectives and related themes in other social science disciplines through examples, readings, or discussion in Economics courses.
7. **Student Engagement and Inclusivity**
   Introducing Indigenous perspectives in required Economics courses helps foster an inclusive learning environment and supports student awareness of diverse economic experiences and ways of knowing.
   - Concrete Next Step: Encourage students to attend workshops, training sessions, and related learning opportunities offered by the University of Windsor that promote awareness of Indigenous perspectives and ways of knowing.

While not all Economics courses include explicit Indigenous learning outcomes, the department's strategy emphasizes early exposure, critical engagement, and gradual expansion of Indigenous perspectives throughout the curriculum. This approach aligns with the Truth and Reconciliation Commission's Calls to Action related to education and with the University of Windsor's principles on Indigenous education, while remaining appropriate to the disciplinary context of Economics.

References:

1. Indigenous Economics – Prepared by Dr. Sang-Chul Suh, Department of Economics, University of Windsor (2025).
2. Indigenous vs Market Economics – Prepared by Dr. Sang-Chul Suh, Department of Economics, University of Windsor (2025).
3. Video Indigenous vs Market Economics – Prepared by Dr. Sang-Chul Suh and Gavin Bayn, Economics major student, Department of Economics, University of Windsor (2025)
4. Truth and Reconciliation Commission of Canada. "Truth and Reconciliation Commission of Canada: Calls to Action." 2015. https://ehprnh2mwo3.exactdn.com/wp-content/uploads/2021/01/Calls_to_Action_English2.pdf
5. Universities Canada. "Universities Canada principles on Indigenous education." June 29, 2015. https://www.univcan.ca/media-room/media-releases/universities-canada-principles-on-indigenous-education/

PROGRAM DEVELOPMENT COMMITTEE
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LEARNING OUTCOMES

Master of Applied Economics and Policy (MAEP)
Learning outcomes were last updated: February 13, 2015. These are revised learning outcomes.

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A UWindsor graduate will have the ability to demonstrate:	**COU-approved Undergraduate Degree Level Expectations**
Describe, critically appraise, and apply advanced concepts in economics Identify, distinguish, and evaluate various modeling approaches in different areas of economics. Identify and relate real data counterparts to variables used in theoretical economic models.	A. the acquisition, application and integration of knowledge	1.Depth and Breadth of Knowledge 2.Knowledge of Methodologies 3. Application of Knowledge 5.Awareness of Limits of Knowledge
Choose the appropriate models and **quantitative** ~~mathematical~~ techniques to propose solutions to economic problems. Examine and summarize relevant economic literature and identify the appropriate data to analyze economic problems.	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)	1. Depth and Breadth of Knowledge 2. Knowledge of Methodologies 3. Application of Knowledge 5. Awareness of Limits Knowledge
Assess complex policy issues and analyze them using economic models. Formulate and conduct empirical **and quantitative** tests of theoretical economic models using standard data sources. Critically evaluate current applied research in economics. Formulate, summarize and assess competing arguments based on established theories. Explain how conclusions depend on underlying assumptions and limitations of data.	C. critical thinking and problem-solving skills	1. Depth and Breadth of Knowledge 2. Knowledge of Methodologies 3. Application of Knowledge 5. Awareness of Limits of Knowledge

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Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A UWindsor graduate will have the ability to demonstrate:	**COU-approved Undergraduate Degree Level Expectations**
Apply economic theory and quantitative methods to solve specific economic problems. Discuss and formulate economic policy recommendations.	D. literacy and numeracy skills	4.Communication Skills 5. Awareness of Limits of Knowledge
Illustrate and critically assess the important aspects of ethical conduct expected of an economics professional. Identify and appraise various channels through which economic policy decisions impact society and advancement of communities.	E. responsible behaviour to self, others and society	5. Awareness of Limits of Knowledge 6. Autonomy and Professional Capacity
~~Demonstrate high level interpersonal and communications skills through successful project collaborations.~~ **Use high level interpersonal communication skill while collaborating with peers.** **Work successfully and respectfully with peers, both independently and as a team member.** Communicate ideas, issues and conclusions clearly.	F. interpersonal and communications skills	4. Communication Skills 6. Autonomy and Professional Capacity
Contribute as a productive member of an economic analysis team. Demonstrate leadership in project management when working in teams.	G. teamwork, and personal and group leadership skills	4. Communication Skills 6. Autonomy and Professional Capacity
Design economic models in a concise and formal manner. Formulate findings and recommendations on economic problems in a precise and concise manner.	H. creativity and aesthetic appreciation	2. Knowledge of Methodologies 3. Application of Knowledge 6. Autonomy and Professional Capacity

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Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A UWindsor graduate will have the ability to demonstrate:	**COU-approved Undergraduate Degree Level Expectations**
~~Demonstrate ability for independent thinking that is required for continuing professional development.~~ Identify and critically assess current economic policy issues.	I. the ability and desire for continuous learning	6. Autonomy and Professional Capacity

University of Windsor
Program Development Committee

*5.16 **Master of Applied Computing (Graduate) – Minor Program Changes (Form C)**

Item for: **Approval**

Forwarded by: **Faculty of Graduate Studies**

MOTION: That the admission requirements for the Master of Applied Computing and Master of Applied Computing Artificial Intelligence Stream be changed in accordance with the program/course change forms.^

^Subject to approval of the expenditures required.

Rationale/Approvals:

- The proposed changes have been approved by the School of Computer Science Council, the Science Program Development Committee (SPDC) (as delegated by the Faculty of Science Coordinating Council) and the Faculty of Graduate Studies Council (April 28, 2026)
- *See attached.*

PROGRAM DEVELOPMENT COMMITTEE
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FORM C

TITLE OF PROGRAM(S)/CERTIFICATE(S):	**Master of Applied Computing,** **Master of Applied Computing Artificial Intelligence Stream**
DEPARTMENT(S)/SCHOOL(S):	**School of Computer Science**
FACULTY(IES):	**Faculty of Science**

Proposed change(s) effective as of* [Fall, Winter, Spring]: **(subject to timely and clear submission)*	Fall 2026, Graduate Calendar

Does the minor program change include new courses?:

_____ Yes [All new course proposals must be submitted on PDC Form Ds and submitted for approval with the minor program change proposal (PDC Form C)]

__X__ No If yes, list all new courses:

A.1 PROGRAM REQUIREMENT CHANGES

Please provide the current program requirements and the proposed new program requirements by cutting and pasting from the current undergraduate or graduate web calendar (www.uwindsor.ca/secretariat/calendars) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining. Example: Degree requirements: WXYZ-1000, ~~WXYZ-1010~~, WXYZ-1100, WXYZ-2100, WXYZ-3100, WXYZ-4100, plus three additional courses at the **3000-level or** 4000-level.

Master of Applied Computing (MAC)

Admission Requirements

[….]

~~Applicants must pass a successful interview with a representative or agent acting on behalf of the University of Windsor. Submission of up to two reference letters in optional.~~

A.2 MINOR COURSE CHANGES REQUIRING ADDITIONAL RESOURCES OR AFFECTING DEGREE REQUIREMENTS

*If this is a minor course and calendar change (usually noted on a Form E) requiring additional resources or affecting degree requirements, please provide the current course information and the proposed new course information by cutting and pasting from the current undergraduate or graduate web calendar and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with **bolding** and underlining. Examples of minor course changes include: deleting courses, course description changes, pre/anti/co- requisite changes, contact hour/lab requirement changes, course title changes, renumbering courses, and/or cross-listing courses. Minor course calendar changes, which do not require additional resources or do not affect degree requirements, should be submitted on a **Form E.***

N/A

B. RATIONALE

Please provide a rationale for the proposed change(s).

The minor changes to the calendar of the Master of Applied Computing and its Artificial Intelligence stream reflect current admissions practices. Interviews with agents have been discontinued as they provide limited academic value. Furthermore, because reference letters are consistently positive, they have become less effective for differentiating between applicants.

PROGRAM DEVELOPMENT COMMITTEE
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C. RESOURCES

C.1 Resources In Support of the Revised Program and Resource Implications for Other Campus Units or Programs (QAF section 2.1.2.6)

Describe, in general terms, all faculty and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the revised program. Please do not name specific individuals in this section. Describe the impact of the planned utilization of existing human, physical and financial resources (within and outside the unit) on other existing programs in the department or at the university. Provide an assessment of the reliance of the revised program on existing resources from other campus units and include evidence that there are adequate resources available and committed to the revised program to sustain the quality of scholarship produced by undergraduate students as well as graduate students' scholarship and research activities. Consider, for example: faculty resources (within and outside the unit), existing courses (within and outside the unit), equipment or facilities outside the proposer's control, external resources requiring maintenance or upgrading using external resources, staff support, library, teaching and learning support, information technology support, laboratory access, student support services, space, equipment, facilities, GA/TA

N/A

C.1.1 Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program (QAF section 2.1.2.6)

Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the revised program and the associate plans to ensure the sustainability of the revised program and quality of the student experience.

N/A

C.2 Graduate Faculty Qualifications and Supervisory Loads (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Explain how supervisory loads will be distributed, and describe the qualifications and appointment status of faculty who will provide instruction and supervision in the revised program.

N/A

C.3 Financial Assistance for Graduate Students (where appropriate) (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Where appropriate to the revised program, provide evidence that financial assistance for graduate students will be sufficient to ensure adequate quality and numbers of students.

N/A

C.4 Anticipated New Resources (QAF sections 2.1.2.6)

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the revised program.*

N/A

C.5 Planned Reallocation of Resources and Cost-Savings

Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the revised program. (e.g., streamlining existing programs and courses, deleting courses, etc.)

N/A

PROGRAM DEVELOPMENT COMMITTEE
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C.6 Additional Resources Required – Resources Requested (QAF section 2.1.2.6f)

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to run the revised program. If not applicable, write n/a.*

Faculty:	N/A
Staff:	N/A
GA/TAs:	N/A

C.6.1 Additional Institutional Resources and Services Required by all Affected Areas or Departments (QAF section 2.1.2.6f)

*Describe all **additional institutional resources and services** required by all affected areas or departments to run the revised program, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance. If not applicable, write n/a.*

Library Resources and Services:	N/A
Teaching and Learning Support:	N/A
Student Support Services:	N/A
Space and Facilities:	N/A
Equipment (and Maintenance):	N/A

D.1 Form History *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

Date of Modification	Approval Body Modifying	Reason for Modification

University of Windsor
Program Development Committee

*5.17 **Master of Applied Science (MASc), International Master of Applied Science (MASc) in Civil Engineering and PhD in Engineering – Minor Program Changes (Form C)**

Item for: **Approval**

Forwarded by: **Faculty of Graduate Studies**

MOTION: That the degree requirements Master of Applied Science (MASc), PhD in Engineering and International Master of Applied Science (MASc) in Civil Engineering be changed in accordance with the program/course change forms.^

^Subject to approval of the expenditures required.

Rationale/Approvals:

- The changes have been approved by the Faculty of Engineering Coorindating Council and the Faculty of Graduate Studies Council (April 28, 2026).
- The changes addresses recent comments from the Faculty of Graduate Studies by clarifying established past and current practices.
- Specifically, it defines the conditions for accepting external courses, outlines credit parameters and reasonable exceptions for seminar participation, and clarifies seminar credit arrangements for students in the International Master's program with the University of Udine.
- *See attached.*

PROGRAM DEVELOPMENT COMMITTEE
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TITLE OF PROGRAM(S)/CERTIFICATE(S):	**Master of Applied Science (MASc)** **International Master of Applied Science (MASc) in Civil Engineering** **PhD in Engineering**
DEPARTMENT(S)/SCHOOL(S):	**Engineering**
FACULTY(IES):	**Engineering**

Proposed change(s) effective as of* [Fall, Winter, Spring]: **(subject to timely and clear submission)*	Fall 2026

Does the minor program change include new courses?:

____ Yes [All new course proposals must be submitted on PDC Form Ds and submitted for approval with the minor program change proposal (PDC Form C)]

__X__ No

If yes, list all new courses:

A.1 PROGRAM REQUIREMENT CHANGES

Please provide the current program requirements and the proposed new program requirements by cutting and pasting from the current undergraduate or graduate web calendar (www.uwindsor.ca/secretariat/calendars) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining.

Example: Degree requirements: WXYZ-1000, ~~WXYZ-1010~~, WXYZ-1100, WXYZ-2100, WXYZ-3100, WXYZ-4100, plus three additional courses at the **3000-level or** 4000-level.

PhD in Engineering

Program Requirements

The specific minimum program requirements for the PhD. include the successful completion of:

1. Course Requirements: Satisfactory completion of at least four courses, comprising a minimum of eight term hours, beyond the courses required for the Master's degree.

   a Civil Engineering and Environmental Engineering: Students may take up to two graduate courses outside the program for credit provided these courses are deemed relevant and approved by the student's supervisor and the Program Graduate Coordinator. Under special circumstances, one of these two courses may be at the senior undergraduate level. In addition, the students must complete 36 hours of participation in the PhD Seminar, including delivering two presentations in the seminar, by registering in CIVL 9595 or ENVE 9595, respectively.

   b. Students who are unable to complete the Graduate Seminar course may take an additional 3-credit graduate course approved by the Program Graduate Coordinator (or Department Head) to fulfill the credit requirement for the degree. Other exceptions to the nominal graduate seminar requirements may be approved by the Graduate Coordinator (or Department Head) to allow the graduate student to fulfill the graduate seminar requirement through alternate means if the current provisions are not feasible. This request must be supported by the student's supervisor.

   […]

PROGRAM DEVELOPMENT COMMITTEE
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Master of Applied Science (MASc)

Degree Requirements
[…]

4. Industrial Engineering students must additionally take INDE-8595 (Graduate Seminar). They are expected to register in it every semester offered. Normally in the final year of their degree, they are to give a seminar presentation and will receive a Pass/Fail grade. For the MASc. thesis or Major Paper in Industrial Engineering the final grade is "Satisfactory" or "Unsatisfactory".

5. **Civil Engineering and Environmental Engineering: Students may take up to two graduate courses outside the program for credit provided these courses are deemed relevant and approved by the student's supervisor and the Program Graduate Coordinator. Under special circumstances, one of these two courses may be at the senior undergraduate level. In addition, the students must complete 36 hours of participation in the MASc Seminar, including delivering one presentation in the seminar, by registering in CIVL 8595 or ENVE 8595, respectively.**

4. **Students who are unable to complete the Graduate Seminar course may take an additional 3-credit graduate course approved by the Program Graduate Coordinator (or Department Head) to fulfill the credit requirement for the degree. Other exceptions to the nominal graduate seminar requirements may be approved by the Graduate Coordinator (or Department Head) to allow the graduate student to fulfill the graduate seminar requirement through alternate means if the current provisions are not feasible. This request must be supported by the student's supervisor.**

International Master of Applied Science (MASc) in Civil Engineering

Degree Requirements
(a) For Windsor students: 3 Windsor graduate courses and 30 ECTS credits in courses in Italy. The total course requirements are equivalent to the weight of study done to complete a Windsor Master of Applied Science degree in Engineering with a thesis (thus making the students eligible to continue their studies at the doctoral level). For Udine students: 60 ECTS course credits and 3 Windsor graduate courses which makes them eligible for doctoral work in Europe when completed, in conjunction with their major thesis.

b) Students from both institutions will be required to ~~complete~~ **enroll in** the graduate seminar course **(CIVL 8595) for two terms** while at the University of Windsor.

[…]

A.2 MINOR COURSE CHANGES REQUIRING ADDITIONAL RESOURCES OR AFFECTING DEGREE REQUIREMENTS

*If this is a minor course and calendar change (usually noted on a Form E) requiring additional resources or affecting degree requirements, please provide the current course information and the proposed new course information by cutting and pasting from the current undergraduate or graduate web calendar and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with **bolding** and underlining. Examples of minor course changes include: deleting courses, course description changes, pre/anti/co-requisite changes, contact hour/lab requirement changes, course title changes, renumbering courses, and/or cross-listing courses. Minor course calendar changes, which do not require additional resources or do not affect degree requirements, should be submitted on a **Form E.***

N/A

B. RATIONALE

Please provide a rationale for the proposed change(s).

The additional text proposed addresses recent commentary raised by the Faculty of Graduate Studies. The additions clarify what has been accepted as past and current practice; specifically:

- The additional text describes flexible pathways for Civil and Environmental Engineering students to take courses from outside the program in areas that are relevant to their research focus.
- It specifies that the students are required to register and complete the graduate seminar course in addition to the four course requirement.
- The parameters for credit for participating in the graduate seminar presentations for our students studying in the International Masters in Civil Engineering with our partner institution, the University of Udine.

C. RESOURCES

C.1 Resources In Support of the Revised Program and Resource Implications for Other Campus Units or Programs (QAF section 2.1.2.6)

Describe, in general terms, all faculty and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the revised program. Please do not name specific individuals in this section. Describe the impact of the planned utilization of existing human, physical and financial resources (within and outside the unit) on other existing programs in the department or at the university. Provide an assessment of the reliance of the revised program on existing resources from other campus units and include evidence that there are adequate resources available and committed to the revised program to sustain the quality of scholarship produced by undergraduate students as well as graduate students' scholarship and research activities. Consider, for example: faculty resources (within and outside the unit), existing courses (within and outside the unit), equipment or facilities outside the proposer's control, external resources requiring maintenance or upgrading using external resources, staff support, library, teaching and learning support, information technology support, laboratory access, student support services, space, equipment, facilities, GA/TA

N/A

C.1.1 Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program (QAF section 2.1.2.6)

Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the revised program and the associate plans to ensure the sustainability of the revised program and quality of the student experience.

N/A

C.2 Graduate Faculty Qualifications and Supervisory Loads (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Explain how supervisory loads will be distributed, and describe the qualifications and appointment status of faculty who will provide instruction and supervision in the revised program.

N/A

C.3 Financial Assistance for Graduate Students (where appropriate) (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Where appropriate to the revised program, provide evidence that financial assistance for graduate students will be sufficient to ensure adequate quality and numbers of students.

N/A

C.4 Anticipated New Resources (QAF sections 2.1.2.6)

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the revised program.*

N/A

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

C.5 Planned Reallocation of Resources and Cost-Savings

Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the revised program. (e.g., streamlining existing programs and courses, deleting courses, etc.)

N/A

C.6 Additional Resources Required – Resources Requested (QAF section 2.1.2.6f)

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to run the revised program. If not applicable, write n/a.*

Faculty:	N/A
Staff:	N/A
GA/TAs:	N/A

C.6.1 Additional Institutional Resources and Services Required by all Affected Areas or Departments (QAF section 2.1.2.6f)

*Describe all **additional institutional resources and services** required by all affected areas or departments to run the revised program, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance. If not applicable, write n/a.*

Library Resources and Services:	N/A
Teaching and Learning Support:	N/A
Student Support Services:	N/A
Space and Facilities:	N/A
Equipment (and Maintenance):	N/A

D.1 Form History *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

Date of Modification	Approval Body Modifying	Reason for Modification

University of Windsor
Program Development Committee

*5.18: **Master of Engineering Management – Minor Program Changes (Form C)**

Item for: **Approval**

Forwarded by: **Faculty of Graduate Studies**

MOTION: That the admission and degree requirements for the Master of Engineering Management be changed in accordance with the program/course change forms.^

^Subject to approval of the expenditures required.

Rationale/Approvals:

- The proposed changes have been approved by the Faculty of Engineering Council, the Odette School of Business Council and the Faculty of Graduate Studies Council (April 28, 2026)
- *See attached.*

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

TITLE OF PROGRAM(S)/CERTIFICATE(S):	**Master of Engineering Management**
DEPARTMENT(S)/SCHOOL(S):	**Faculty of Engineering/Odette School of Business**
FACULTY(IES):	**Faculty of Engineering/Odette School of Business**

Proposed change(s) effective as of* [Fall, Winter, Spring]: **(subject to timely and clear submission)*	Fall 2026

Does the minor program change include new courses?:
____ Yes [All new course proposals must be submitted on PDC Form Ds and submitted for approval with the minor program change proposal (PDC Form C)]
X__ No. If yes, list all new courses: N/A

A.1 PROGRAM REQUIREMENT CHANGES

Please provide the current program requirements and the proposed new program requirements by cutting and pasting from the current undergraduate or graduate web calendar (www.uwindsor.ca/secretariat/calendars) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining. Example: Degree requirements: WXYZ-1000, ~~WXYZ-1010~~, WXYZ-1100, WXYZ-2100, WXYZ-3100, WXYZ-4100, plus three additional courses at the **3000-level or** 4000-level.

Master of Engineering Management (MEM) (Joint Program with Engineering)
The Master of Engineering Management program is offered jointly between the Odette School of Business and the Faculty of Engineering. For the regular Master of Engineering Management (MEM) Program: Fall semester intake only.

Admission Requirements
Admission will be granted, within the limits of program availability, to students with the following credentials:
1. Bachelor of Applied Science degree in engineering (or other undergraduate degree (or equivalent) with related technical background) with an average of at least B (73%) from an accredited university
2. Proof of English language proficiency IELTS: 7.0 / IBT TOEFL: 100
~~3. Two reference letters~~
4. CV/Resume
5. Statement of purpose letter
6. Preference will be given to candidates who have at least two years of relevant work experience in engineering or a related field

Master of Engineering Management (MEM)
Degree Requirements
Total courses: 9 courses (30 credits)

Courses will be divided into:
A) Core Courses (6 courses for a total of 18 credits)
B) Non-core Courses (2 courses for a total of 6 credits)
C) Capstone Project Course (two semester course for a total of 6 credits)

Core Courses
All students need to complete the following 6 mandatory core business and engineering courses before taking any non-core courses:

Core Business Courses:

BUSI-8310. Financial and Managerial Accounting for Engineers
BUSI-8300. Applied Finance for Engineering Managers
STEN-8980. Strategic Management

Core Engineering Courses
INDE-8430. Product Innovation and Design Management
GENG-8020. Engineering Project Management
GENG-8050 Data Analytics and Decision-Making

Non-core Courses Choose two from:
INDE-8390. Work Organization: Analysis and Design
INDE-8420. Supply Chain Management and Logistics
GENG-8060. Strategic Entrepreneurial Management
CIVL-8900 (Section 55). Special Topics in Civil Engineering (Decision Making/Sustainability)
MSCI-8040. Operations Management
BUSI-8050. Marketing Management
STEN-8820. Manufacturing Strategy
STEN-8920. Special Topics (depending on semester)
INDE 8900. Special Topics (Additive Manufacturing Technologies)
MECH 8006. Life Cycle Thinking for Engineering Projects

~~BSMM-8130. Managing for Organizational Effectiveness~~
~~BSMM-8310. International Business~~
~~BSMM-8340. Leadership and Organizational Change~~
~~BSMM-8370. International Financial Management~~
~~BSMM-8550. Domestic Transportation and International Shipping~~
~~BSMM-8570. Supply Chain Management~~
~~BSMM-8660. Managing for High Performance~~
~~BSMM-8330. Introduction to Business Logistics Management~~
[…]

A.2 MINOR COURSE CHANGES REQUIRING ADDITIONAL RESOURCES OR AFFECTING DEGREE REQUIREMENTS

*If this is a minor course and calendar change (usually noted on a Form E) requiring additional resources or affecting degree requirements, please provide the current course information and the proposed new course information by cutting and pasting from the current undergraduate or graduate web calendar and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with **bolding** and underlining.Examples of minor course changes include: deleting courses, course description changes, pre/anti/co- requisite changes, contact hour/lab requirement changes, course title changes, renumbering courses, and/or cross-listing courses. Minor course calendar changes, which do not require additional resources or do not affect degree requirements, should be submitted on a **Form E.***

N/A

B. RATIONALE

Please provide a rationale for the proposed change(s).

Re: Admission Requirements Changes (Remove reference letters)

Requiring applicants to submit reference letters often delays the application process and rarely leads to a negative recommendation for admission. Eliminating this requirement will streamline the application process without compromising the evaluation of candidates.

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

Re: Degree Requirements (Removal of BSMM (Master of Management) courses and addition of existing courses

Courses are removed because the large number of courses to choose from is confusing student selection, and many have repetitive topics covered by other electives.

The following existing engineering courses are added to the non-core course pool because they have received interest from current MEM students:

- INDE 8900. Special Topics (Additive Manufacturing Technologies)
- MECH 8006. Life Cycle Thinking for Engineering Projects

C. RESOURCES

C.1 Resources In Support of the Revised Program and Resource Implications for Other Campus Units or Programs (QAF section 2.1.2.6)

Describe, in general terms, all faculty and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the revised program. Please do not name specific individuals in this section. Describe the impact of the planned utilization of existing human, physical and financial resources (within and outside the unit) on other existing programs in the department or at the university. Provide an assessment of the reliance of the revised program on existing resources from other campus units and include evidence that there are adequate resources available and committed to the revised program to sustain the quality of scholarship produced by undergraduate students as well as graduate students' scholarship and research activities. Consider, for example: faculty resources (within and outside the unit), existing courses (within and outside the unit), equipment or facilities outside the proposer's control, external resources requiring maintenance or upgrading using external resources, staff support, library, teaching and learning support, information technology support, laboratory access, student support services, space, equipment, facilities, GA/TA

No resource implications.

C.1.1 Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program (QAF section 2.1.2.6)

Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the revised program and the associate plans to ensure the sustainability of the revised program and quality of the student experience.

No changes to resource or staffing.

C.2 Graduate Faculty Qualifications and Supervisory Loads (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Explain how supervisory loads will be distributed, and describe the qualifications and appointment status of faculty who will provide instruction and supervision in the revised program.

No changes to resource or staffing.

C.3 Financial Assistance for Graduate Students (where appropriate) (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Where appropriate to the revised program, provide evidence that financial assistance for graduate students will be sufficient to ensure adequate quality and numbers of students.

N/A

C.4 Anticipated New Resources (QAF sections 2.1.2.6)

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the revised program.*

No changes to resource or staffing.

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

C.5 Planned Reallocation of Resources and Cost-Savings

Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the revised program. (e.g., streamlining existing programs and courses, deleting courses, etc.)

No changes to resource or staffing.

C.6 Additional Resources Required – Resources Requested (QAF section 2.1.2.6f)

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to run the revised program. If not applicable, write n/a.*

Faculty:	N/A
Staff:	N/A
GA/TAs:	N/A

C.6.1 Additional Institutional Resources and Services Required by all Affected Areas or Departments (QAF section 2.1.2.6f)

*Describe all **additional institutional resources and services** required by all affected areas or departments to run the revised program, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance. If not applicable, write n/a.*

Library Resources and Services:	No changes to resource or staffing.
Teaching and Learning Support:	No changes to resource or staffing.
Student Support Services:	No changes to resource or staffing.
Space and Facilities:	No changes to resource or staffing.
Equipment (and Maintenance):	No changes to resource or staffing.

D.1 Form History *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

Date of Modification	Approval Body Modifying	Reason for Modification

University of Windsor
Program Development Committee

*5.19: **Master of Medical Biotechnology (MMB) (Graduate) – Minor Program Changes (Form C)**

Item for: **Approval**

Forwarded by: **Faculty of Graduate Studies**

MOTION: That the admission requirements for the Master of Medical Biotechnology (MMB) be changed in accordance with the program/course change forms.^

^Subject to approval of the expenditures required.

Rationale/Approvals:

- The proposed changes have been approved by the Department of Chemistry and Biochemistry Council, the Science Program Development Committee (SPDC) (as delegated by the Faculty of Science Coordinating Council) and the Faculty of Graduate Studies Council (April 28, 2026)
- *See attached.*

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

TITLE OF PROGRAM(S)/CERTIFICATE(S):	**Master of Medical Biotechnology (MMB)**
DEPARTMENT(S)/SCHOOL(S):	**Chemistry and Biochemistry**
FACULTY(IES):	**Science**

Proposed change(s) effective as of* [Fall, Winter, Spring]:*(subject to timely and clear submission)*	Fall 2026, Graduate Calendar

Does the minor program change include new courses?:

____ Yes [All new course proposals must be submitted on PDC Form Ds and submitted for approval with the minor program change proposal (PDC Form C)]

__X__ No. If yes, list all new courses:

A.1 PROGRAM REQUIREMENT CHANGES

Please provide the current program requirements and the proposed new program requirements by cutting and pasting from the current undergraduate or graduate web calendar (www.uwindsor.ca/secretariat/calendars) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining. Example: Degree requirements: WXYZ-1000, ~~WXYZ-1010~~, WXYZ-1100, WXYZ-2100, WXYZ-3100, WXYZ-4100, plus three additional courses at the **3000-level or** 4000-level.

Master of Medical Biotechnology (MMB)

Admission Requirements

In accordance with our current admission requirements for the MSc program, students entering this program must have a four (4) year BSc or BSc (Honours) degree in Biochemistry, Biology, Chemistry, or accepted equivalent from an academic institution approved by the University of Windsor.

They must have the equivalent of a 70% average or higher in their undergraduate studies when converted to Ontario standards.

Candidates must demonstrate English proficiency by meeting or exceeding an IELTS score of 6.5 with not more than one band (reading, writing, speaking, listening) at or below 6.0. For TOEFL-Internet Based Test, this would correspond to 83 overall with a minimum score of 21 in no more than one band. If an applicant receives an IELTS score of less than 6.5 (or TOEFL- Internet-Based Test less than 83), they may be offered a conditional letter of acceptance pending successful completion of an approved English Language Training program.

~~Applicants must pass a successful interview with a representative or agent acting on behalf of the University of Windsor and submit two letters of reference~~.

A.2 MINOR COURSE CHANGES REQUIRING ADDITIONAL RESOURCES OR AFFECTING DEGREE REQUIREMENTS

*If this is a minor course and calendar change (usually noted on a Form E) requiring additional resources or affecting degree requirements, please provide the current course information and the proposed new course information by cutting and pasting from the current undergraduate or graduate web calendar and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with **bolding** and underlining. Examples of minor course changes include: deleting courses, course description changes, pre/anti/co- requisite changes, contact hour/lab requirement changes, course title changes, renumbering courses, and/or cross-listing courses. Minor course calendar changes, which do not require additional resources or do not affect degree requirements, should be submitted on a **Form E.***

N/A

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

B. RATIONALE

Please provide a rationale for the proposed change(s).

Current admission requirements for the medical biotechnology program requires applicants to pass a successful interview with a representative or agent acting on behalf of the University of Windsor and to submit two letters of reference. This language on the Graduate Calendar does not reflect the actual practice where agents generally do not interview students and is redundant. The admission requirement for the two reference letters has also led to processing delays, resulting in incomplete applications and preventing the enrollment of some students who have met all other admission requirements. Furthermore, very few students have been rejected based on reference letters, which are nearly always positive. The proposed changes are urgently needed to streamline the admission process for the MMB program in light of its recent expansion from a single Fall intake to an additional Winter intake starting in 2026. The proposed changes will facilitate the enrollment of well-qualified applicants and is consistent with many other ICBM programs on campus which do not require reference letters or interviews for admission.

C. RESOURCES

C.1 Resources In Support of the Revised Program and Resource Implications for Other Campus Units or Programs (QAF section 2.1.2.6)

Describe, in general terms, all faculty and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the revised program. Please do not name specific individuals in this section. Describe the impact of the planned utilization of existing human, physical and financial resources (within and outside the unit) on other existing programs in the department or at the university. Provide an assessment of the reliance of the revised program on existing resources from other campus units and include evidence that there are adequate resources available and committed to the revised program to sustain the quality of scholarship produced by undergraduate students as well as graduate students' scholarship and research activities. Consider, for example: faculty resources (within and outside the unit), existing courses (within and outside the unit), equipment or facilities outside the proposer's control, external resources requiring maintenance or upgrading using external resources, staff support, library, teaching and learning support, information technology support, laboratory access, student support services, space, equipment, facilities, GA/TA

N/A

C.1.1 Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program (QAF section 2.1.2.6)

Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the revised program and the associate plans to ensure the sustainability of the revised program and quality of the student experience.

N/A

C.2 Graduate Faculty Qualifications and Supervisory Loads (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Explain how supervisory loads will be distributed, and describe the qualifications and appointment status of faculty who will provide instruction and supervision in the revised program.

N/A

C.3 Financial Assistance for Graduate Students (where appropriate) (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Where appropriate to the revised program, provide evidence that financial assistance for graduate students will be sufficient to ensure adequate quality and numbers of students.

N/A

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

C.4 Anticipated New Resources (QAF sections 2.1.2.6)

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the revised program.*

N/A

C.5 Planned Reallocation of Resources and Cost-Savings

Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the revised program. (e.g., streamlining existing programs and courses, deleting courses, etc.)

N/A

C.6 Additional Resources Required – Resources Requested (QAF section 2.1.2.6f)

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to run the revised program. If not applicable, write n/a.*

Faculty:	N/A
Staff:	N/A
GA/TAs:	N/A

C.6.1 Additional Institutional Resources and Services Required by all Affected Areas or Departments (QAF section 2.1.2.6f)

*Describe all **additional institutional resources and services** required by all affected areas or departments to run the revised program, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance. If not applicable, write n/a.*

Library Resources and Services:	N/A
Teaching and Learning Support:	N/A
Student Support Services:	N/A
Space and Facilities:	N/A
Equipment (and Maintenance):	N/A

D.1 Form History *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

Date of Modification	Approval Body Modifying	Reason for Modification

University of Windsor
Program Development Committee

*5.20: **Physics (Graduate) – Minor Program Changes (Form C)**

Item for: **Approval**

Forwarded by: **Faculty of Graduate Studies**

MOTION: That the degree requirements for the MSc in Physics and PhD in Physics be changed in accordance with the program/course change forms.^

^Subject to approval of the expenditures required.

Rationale/Approvals:

- The proposed changes have been approved by the Department of Physics Council, the Science Program Development Committee (SPDC) (as delegated by the Faculty of Science Coordinating Council) and the Faculty of Graduate Studies Council (April 28, 2026)
- .
- *See attached.*

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

TITLE OF PROGRAM(S)/CERTIFICATE(S):	**Doctor of Philosophy, Master of Science**
DEPARTMENT(S)/SCHOOL(S):	**Physics**
FACULTY(IES):	**Science**

Proposed change(s) effective as of* [Fall, Winter, Spring]: **(subject to timely and clear submission)*	Fall 2026

Does the minor program change include new courses?:

____ Yes [All new course proposals must be submitted on PDC Form Ds and submitted for approval with the minor program change proposal (PDC Form C)]

__x__ No

If yes, list all new courses:

A.1 PROGRAM REQUIREMENT CHANGES

Please provide the current program requirements and the proposed new program requirements by cutting and pasting from the current undergraduate or graduate web calendar (www.uwindsor.ca/secretariat/calendars) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining.

Example: Degree requirements: WXYZ-1000, ~~WXYZ-1010~~, WXYZ-1100, WXYZ-2100, WXYZ-3100, WXYZ-4100, plus three additional courses at the **3000-level or** 4000-level.

Physics

Doctor of Philosophy (PhD)

Admission Requirements

Students may apply to the PhD program either with a Master's degree, or request to transfer after a year of excellent performance in the M.Sc. thesis program.

An applicant with a Master's degree must have adequate specialization in Physics with a minimum CumulativeGrade Point Average (CGPA) of 75% in the last 2 years of full-time study including all graduate courses. Exceptionally qualified undergraduates may be directly admitted into the PhD. program. A four-year Bachelor's degree with adequate specialization in Physics with a minimum Cumulative Grade Point Average (CGPA) of 77%, and a minimum Cumulative Grade Point Average (CGPA) of 80% in the last 2 years of full-time study is required.

Possession of minimum required CGPA does not ensure admission. The actual admitting average varies and is competitive.

International Applicants must submit evidence of English language proficiency with minimum scores as required by the Faculty of Graduate Studies. Some examples of minimum scores are TOEFL: IBT-83, or IELTS: 6.5, or Pearson: 65. A Graduate Record Examination (GRE) Advanced Physics Test score is helpful to the Admissions Committee to evaluate your application more completely.

Transferring to the PhD program

Master of Science (MSc) thesis plan students may transfer to the PhD. program following a meeting with the MSc Thesis Committee (with participation of the Outside Reader optional) at which approval to transfer is recommended. To be eligible, the student must have completed all graduate courses for the Master's degree and must have obtained

a minimum 80% average. Students wishing to transfer into the PhD program must apply to do so before the end of the 3rd semester in the MSc (Thesis) program.

Qualifying Examinations: All candidates must pass a qualifying examination covering the general field of physics at the level of the honours program given at this university. The examinations must be passed no later than one year after registration as a PhD. student. Other examinations (written or oral) may be set at the discretion of the Graduate Coordinator, in consultation with the Doctoral Committee.

Degree Requirements
Dissertation: The main requirement of a doctoral degree is the presentation and acceptance of a PhD. Dissertation that describes an original and significant contribution to a field made by the candidate.

Doctoral Committee: An advisory committee consisting of the research advisor and two other faculty members in Physics will periodically review the student's progress. The Doctoral Committee must be requested by the student, and approved by the Department, and Faculty of Graduate Studies prior to the second term of registration in the PhD program.

Each candidate will, on recommendation of the doctoral committee, submit to a final oral examination in defence of the dissertation. For the defence of dissertation (final oral examination) the doctoral committee will be supplemented by one professor from outside Physics and an external examiner who, as an expert in the field of physics in which the candidate's research is carried out, will appraise the dissertation and ordinarily will also be present at the final oral examination.

Period of Study: Every student in a program leading to the degree of Doctor of Philosophy must be registered in a full-time program of study for a minimum of three calendar years, normally in succession. Credit for one of these years may be given for the time spent in proceeding to a Master's degree. Expected time to completion for a PhD program is four years of full-time study (five years for a direct-entry PhD).

Time Limit: A student admitted to a PhD. program must complete all requirements for the PhD. within six consecutive years of full-time registration. If an extension of the time limit becomes necessary, the student should address a petition to the Dean of Graduate Studies giving reasons for the request and plans for the completion of the work. A student who exceeds the time limit may be required to take additional qualifying examinations or additional course work, or both.

~~Course requirements:~~
~~Candidates with a Master's degree in Physics (or equivalent): a minimum of 4 graduate courses:~~
~~(1) PHYS-8100: Advanced Quantum Theory I, PHYS-8110: Advanced Quantum Theory II, PHYS-8200: Classical Electrodynamics, and PHYS-9130: Statistical Physics I must be taken, if previous equivalent credit has not been obtained.~~
~~(2) PHYS-9000 (Seminar for PhD Students) will be required of all candidates in the fall and winter terms.~~
~~(3) Candidates may request to substitute an optional course, with the permission of the Supervisor and Graduate Coordinator and with the approval of the Faculty of Graduate Studies, with up to one graduate-level course from another department (normally from the Faculty of Science or the Faculty of Engineering).~~
~~(4) The student may be required to take up to two additional courses, as stipulated by the Doctoral Committee.~~
~~(5) Students in the PhD program must register for PHYS-9980 PhD Dissertation in each term before graduation.~~

Course requirements:
Candidates with a Master's degree in Physics (or equivalent) must successfully complete a minimum of four courses chosen from the available graduate offerings (including PHYS-9000 seminar) in the Department of Physics. The student may be required to take additional courses, as stipulated by the student's Doctoral Committee.

(1) Candidates may substitute courses, with the permission of the student's Doctoral Committee, Graduate Coordinator, and the Faculty of Graduate Studies up to:
(i) one graduate-level course from another department (normally from the Faculty of Science or the Faculty of Engineering);
(ii) one cross-career or 4000-level course in physics.
(2) PHYS-9000 (Seminar for PhD Students) will be required of all candidates in the fall and winter terms.
(3) Students in the PhD program must register for PHYS-9980 PhD Dissertation in each term before graduation.

~~Candidates who do not have a Master's degree in Physics (or equivalent): a minimum of 7 courses:~~
~~(1) PHYS-8200: Classical Electrodynamics, PHYS-8100: Advanced Quantum Theory I, PHYS-9130: Statistical Physics I and PHYS-8110: Advanced Quantum Theory II, or equivalent, are required.~~
~~(2) PHYS-9000 (Seminar for PhD Students) is required of all candidates in the fall and winter terms. [Note: PHYS-8000 (Seminar for MSc Students) cannot be taken for credit.] (3) Candidates may request to substitute optional courses, with the permission of the Supervisor and GraduateCoordinator and with the approval of the Faculty of Graduate Studies up to:~~
~~(i) one 4000-level undergraduate course in physics (pre-approved by the Department) or one graduate course from another department and~~
~~(ii) one graduate-level course from another department normally from the Faculty of Science or the Faculty of Engineering.~~
~~(4) The student may be required to take up to two additional courses, as stipulated by the Doctoral Committee.~~
~~(5) Students in the PhD program must register for PHYS-9980 PhD Dissertation in each term before graduation.~~

Candidates who do not have a Master's degree in Physics (or equivalent) must successfully complete a minimum of seven courses chosen from the available graduate offerings (including PHYS-9000) in the Department of Physics. The student may be required to take additional courses, as stipulated by the student's Doctoral Committee.
(1) Candidates may substitute courses, with the permission of the student's Doctoral Committee, Graduate Coordinator, and the Faculty of Graduate Studies up to:
(i) two graduate-level courses from another department normally from the Faculty of Science or the Faculty of Engineering.
(ii) two cross-career or 4000-level courses in physics
(2) PHYS-9000 (Seminar for PhD Students) is required of all candidates in the fall and winter terms. [Note: PHYS-8000 (Seminar for MSc Students) cannot be taken for credit.]
(3) Students in the PhD program must register for PHYS-9980 PhD Dissertation in each term before graduation.

Minimum Grade Required for Graduate Credit:
Courses in which a grade of 70% or higher is received will be accepted for graduate credit. ~~Students MUST obtain a grade of 70% or higher in all required courses (PHYS 8100, PHYS 8960 Major Paper and PHYS 8970 Thesis).~~

Policy on Grades below 70%: In rare cases, one grade below 70% may be allowed if ~~the grade is on a non- required course, and~~ the grade is between 65-69%.

~~Qualifying Examinations: All candidates must pass a qualifying examination covering the general field of physics at the level of the honours program given at this university. The examinations must be passed no later than one year after registration as a PhD. student. Other examinations (written or oral) may be set at the discretion of the program coordinator.~~

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

Master of Science

Admission Requirements
A four-year Bachelor's degree with adequate specialization in Physics with a minimum Cumulative Grade Point Average (CGPA) of 75% in the last 2 years of full-time study. Possession of minimum required CGPA does not ensure admission. The actual admitting average varies and is competitive.

International Applicants must submit evidence of English language proficiency with minimum scores as required by the Faculty of Graduate Studies. Some examples of minimum scores are TOEFL: IBT-83, or IELTS: 6.5, or Pearson: 65. A Graduate Record Examination (GRE) Advanced Physics Test score is helpful to the Admissions Committee to evaluate your application more completely.

Degree Requirements
Program M2. Master of Science (MSc)
Students may complete an MSc degree in the Department of Physics by enrolling in one of the following plans:

Thesis Plan
The MSc thesis program plan in Physics is intended for students with an honours B.Sc. degree in Physics or closely allied field who wish to pursue a career in scientific research and development. The program requirements may be completed by taking four graduate semester courses plus a thesis. The M.Sc. thesis is completed under the supervision of a faculty advisor and is evaluated by the M.Sc. thesis committee. The normal duration of the MSc thesis program plan is two years, however, students who wish to transfer into the PhD program may complete the course requirements within one year.

~~A typical course schedule for students in this program is:~~
~~YEAR 1~~
~~FALL~~
~~PHYS 8100. Advanced Quantum Theory I~~
~~PHYS 8970. MSc Thesis~~
~~PHYS 8000. Seminar for MSc Students~~
~~One Physics course at the 8XXX level or above~~
~~WINTER~~
~~One or Two Physics courses at the 8XXX level or above~~
~~PHYS 8970. MSc Thesis~~
~~PHYS 8000. Seminar for MSc Students~~
~~SUMMER~~
~~PHYS 8970. MSc Thesis~~
~~YEAR 2~~
~~PHYS 8970. MSc Thesis~~
~~PHYS 8000. Seminar for MSc Students~~
~~WINTER~~
~~PHYS 8970. MSc Thesis~~
~~PHYS 8000. Seminar for MSc Students~~
~~SUMMER~~
~~PHYS 8970. MSc Thesis~~

~~Notes:~~
~~1. All new students must complete PHYS 8100. Advanced Quantum Theory I in their first semester, which will be the Fall semester.~~
~~2. Students must register for PHYS 8000 Seminar for MSc Students every Fall and Winter Semester.~~
~~3. Students are expected to finish their coursework in the first year of the MSc program~~

~~4. Students planning to pursue or transfer to a PhD program are advised to take PHYS 8110, and PHYS 8200 or PHYS 9130~~
~~5. Students planning to transfer into the PhD program should consult the 'Fast-Track Admission to the Degree of Doctor of Philosophy' section of the Graduate Calendar~~

Course requirements:
All physics MSc students in the thesis plan must successfully complete four courses chosen from the available graduate offerings (including PHYS-8000 Seminar for MSc Students) in the Department of Physics. The student may be required to take additional courses, as stipulated by the student's Master's committee.
(1) Students may substitute courses with alternatives from related and cognate programs, with the permission of the Master's Committee, Graduate Coordinator, and the Faculty of Graduate Studies, up to:
(i) one graduate-level course from another department normally from the Faculty of Science or the Faculty of Engineering
(ii) one cross-career or 4000-level course in physics
(2) PHYS-8000 (Seminar for MSc Students) will be required of all students in the fall and winter terms.
(3) Students in the MSc program must register for PHYS-8970 MSc Thesis in each term before graduation.

Major Paper Plan
The one-year M.Sc. Major Paper program plan in Physics is intended for students with an honours BSc degree in Physics or closely allied field who wish to pursue a career in scientific research and development.
The program requirements may be completed by taking six graduate semester courses plus a Major Paper under the supervision of a faculty advisor.

~~Recommended Sequencing~~
~~Year 1~~
~~FALL~~
~~PHYS-8000. Seminar for MSc Students~~
~~PHYS 8100. Advanced Quantum Theory I~~
~~PHYS 8960. MSc Major Paper~~
~~One to Two Physics courses at the 8XX level or above~~
~~WINTER~~
~~PHYS-8000. Seminar for MSc Students~~
~~Two to three Physics courses at the 8XXX level or above~~
~~SUMMER~~
~~PHYS 8960. MSc Major Paper~~
~~Notes:~~
~~1. All new students must complete PHYS 8100 Advanced Quantum Theory I in their first semester, which will be the Fall semester.~~
~~2. Students must register for PHYS 8000 Seminar for MSc Students every Fall and Winter Semester.~~
~~3. You may register in PHYS 8960 only if a faculty advisor agrees to supervise your Major Paper.~~
~~4. Three terms of registration are the minimum required for completing this degree plan~~

Course requirements:
All physics MSc students in the major paper plan must successfully complete six courses chosen from the available graduate offerings (including PHYS-8000 Seminar for MSc Students) in the Department of Physics.
(1) Students may substitute courses with alternatives from related and cognate programs, with the permission of the faculty advisor, Graduate Coordinator, and the Faculty of Graduate Studies, up to:
(i) two graduate-level courses from another department normally from the Faculty of Science or the Faculty of Engineering
(ii) two cross-career or 4000-level courses in physics
(2) PHYS-8000 (Seminar for MSc Students) will be required of all students in the fall and winter terms.

(3) Students in the MSc major paper plan must register for PHYS-8960 MSc Major Paper in each term before graduation.

Course Work Plan

The one-year MSc. course-work program plan in Physics is intended for students with an honours B.Sc. degree in Physics or closely allied field who wish to pursue a career outside research. The program requirements may be completed by taking eight graduate courses.

~~FALL~~
~~PHYS-8000. Seminar for MSc Students~~
~~PHYS 8100. Advanced Quantum Theory I~~
~~Two Physics courses at the 8XX level or above~~
~~WINTER~~
~~PHYS-8000. Seminar for MSc Students~~
~~Three Physics courses at the 8XXX level or above~~
~~SUMMER~~
~~One Physics course at the 8XX level or above~~
~~Notes: All new students must complete PHYS-8100 Advanced Quantum Theory I in their first semester, which will be the Fall semester.~~
~~Students must register for PHYS-8000 Seminar for MSc Students every Fall and Winter Semester.~~
~~Students will not receive credit for PHYS-8970 or PHYS-8960.~~
~~Three terms of registration are the minimum required for completing this degree plan.~~

Course requirements:
All physics MSc students in the course work plan must successfully complete eight courses chosen from the available graduate offerings (including PHYS-8000 Seminar for MSc Students) in the Department of Physics.
(1) Students may substitute courses with alternatives from related and cognate programs, with the permission of the Graduate Coordinator and the Faculty of Graduate Studies, up to:
(i) two graduate-level courses from another department normally from the Faculty of Science or the Faculty of Engineering
(ii) two cross-career or 4000-level courses in physics
(2) PHYS-8000 (Seminar for MSc Students) will be required of all students in the fall and winter terms.
(3) Students will not receive credit for PHYS-8970 MSc Thesis or PHYS-8960 MSc Major Paper

~~Course substitutions:~~
~~Students in the M2 MSc program may request to substitute optional courses with certain 4000-level courses in Physics or graduate courses from another Department (usually in the Faculty of Science or Faculty of Engineering) for some of the non-required Physics graduate courses in their program. Students in the Thesis plan may substitute up to one optional course, students in the Major Paper plan may substitute up to two optional courses, and students in the Coursework plan may substitute up to three optional courses, only two of which may be 4000-level courses. Requests for course substitution must be approved by the Research Supervisor (if applicable), Department and the Faculty of Graduate Studies within the first two weeks of the course.~~

Minimum Grade Required for Graduate Credit:

Courses in which a grade of 70% or higher is received will be accepted for graduate credit. Students ~~MUST~~ **must** obtain a grade of 70% or higher in all ~~required~~ courses ~~(PHYS 8100, PHYS 8960 Major Paper and PHYS 8970 Thesis)~~.

Policy on Grades below 70%: In rare cases of extenuating circumstances, where in spite of the accommodation provided a grade of 60-69% was obtained, the Department may recommend to the Faculty of Graduate Studies to grant graduate credit for this course~~, as long as said course is not a required course, Major Paper or Thesis~~. Only one such course where a grade of 60-69% was earned can receive graduate credit.

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

Master's Thesis/Major Paper Committees:
An advisory committee consisting of the research advisor and at least one other faculty member in Physics will periodically review the student's progress. The Master's Thesis/Major Paper Committee must be requested by the student, and approved by the Faculty of Graduate Studies prior to the second term of registration in the MSc program.

Each MSc candidate in the Thesis plan will, on recommendation of the advisory committee, submit to a final oral examination in defence of the thesis. For the defence of the thesis, the committee will be supplemented by one faculty member from outside Physics who will be present at the final oral examination.

~~Program M1. Master of Science Qualifying Year~~
~~Students who have insufficient prerequisite coursework in Physics may be admitted to the M1 Master's qualifying year. The following undergraduate courses must be completed as part of the M1 year with a minimum mark of 70% in each course:~~
~~FALL~~
~~PHYS-3115. Atomic and Molecular Spectra~~
~~PHYS-3200. Electromagnetic Theory~~
~~PHYS-3500. Classical Mechanics~~
~~Winter~~
~~PHYS-4100. Quantum Mechanics I~~
~~PHYS-3210. Electromagnetic Waves~~
~~PHYS-4130. Introduction to Statistical Mechanics~~
~~Students who successfully complete these six courses with a minimum mark of 70% in each course will advance to the M2 MSc coursework year. If an advisor agrees to supervise the student, an M1 student may advance to the M2 MSc thesis or major paper plan. No graduate courses or undergraduate/graduate cross-career courses may be taken in this year~~

A.2 MINOR COURSE CHANGES REQUIRING ADDITIONAL RESOURCES OR AFFECTING DEGREE REQUIREMENTS

*If this is a minor course and calendar change (usually noted on a Form E) requiring additional resources or affecting degree requirements, please provide the current course information and the proposed new course information by cutting and pasting from the current undergraduate or graduate web calendar and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with **bolding** and underlining.*

*Examples of minor course changes include: deleting courses, course description changes, pre/anti/co- requisite changes, contact hour/lab requirement changes, course title changes, renumbering courses, and/or cross-listing courses. Minor course calendar changes, which do not require additional resources or do not affect degree requirements, should be submitted on a **Form E.***

N/A

B. RATIONALE

Please provide a rationale for the proposed change(s).

Doctor of Philosophy
Current PhD program requires students to complete a fixed set of four core courses: PHYS-8100: Advanced Quantum Theory I, PHYS-8110: Advanced Quantum Theory II, PHYS-8200: Classical Electrodynamics, and PHYS-9130: Statistical Physics I. This structure limits the flexibility of the program and does not align with the research directions, current pedagogical approaches in physics, or the increasingly interdisciplinary nature of graduate physics research.

We propose to replace this fixed course list with four courses deemed relevant to their area of study by their committee (with three additional required courses for students in the PhD program without MSc). This change will:

1. Allow the student to take courses that are more focused on their research and relevant to their areas of study.
2. Enable students to complete their coursework earlier in their degree, reducing delays caused by course rotation schedules.
3. Facilitate enrollment in complementary courses across departments, fostering collaborative and cross-disciplinary studies research.
4. This aligns with the course requirement expectations of other departments.

This modification better supports individualized and research-oriented training.

Master of Science

The MSc program currently requires all incoming students to complete PHYS 8100 – Advanced Quantum Theory I in their first semester. While academically appropriate, this requirement creates structural and pedagogical limitations:

1. Low enrolment pressure: The department is obligated to offer PHYS 8100 every Fall regardless of cohort size, even in years with very small MSc intake.
2. Restricted course diversity: Because PHYS 8100 must be offered annually, other core graduate courses (e.g., advanced electrodynamics or statistical physics) are offered infrequently or not at all.
3. Limited flexibility for students: Students entering in Winter cannot easily meet the "first-semester" requirement.
4. Misalignment with PhD structure: The recently revised PhD program now requires completion of *one of* several core graduate physics courses rather than mandating a single specific course. This change aligns the MSc program with the PhD program structure, which uses flexible, committee-guided coursework rather than fixed course requirements.
5. Updated wording on substitutions to limit to one-third of graduate courses for cross-career and 4000-level courses.
6. We are developing the integrated master's program for graduate program growth. Avoiding named courses allows for more options for these students.

C. RESOURCES

C.1 Resources In Support of the Revised Program and Resource Implications for Other Campus Units or Programs (QAF section 2.1.2.6)

Describe, in general terms, all faculty and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the revised program. Please do <u>not</u> name specific individuals in this section. Describe the impact of the planned utilization of existing human, physical and financial resources (within and outside the unit) on other existing programs in the department or at the university. Provide an assessment of the reliance of the revised program on existing resources from <u>other</u> campus units and include evidence that there are adequate resources available and committed to the revised program to sustain the quality of scholarship produced by undergraduate students as well as graduate students' scholarship and research activities. Consider, for example: faculty resources (within and outside the unit), existing courses (within and outside the unit), equipment or facilities outside the proposer's control, external resources requiring maintenance or upgrading using external resources, staff support, library, teaching and learning support, information technology support, laboratory access, student support services, space, equipment, facilities, GA/TA

The Department of Physics has sufficient qualified faculty to support graduate teaching, supervision, and research. Existing administrative structures within the department, the Faculty of Science, and the Graduate Studies division adequately support the program.

The revision requires no additional human, physical, or financial resources. Graduate courses will continue to be offered within the department's regular teaching complement. Allowing flexible course selection improves the use of existing instructional capacity and has no negative impact on other programs.

Students may enroll in graduate courses offered by other departments or faculties when these are relevant to their research (at the approval of the graduate supervisor and/or committee). Enrollment in such courses will be subject to the host unit's approval and capacity, and no additional teaching or administrative resources will be required from those units.

C.1.1 Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program (QAF section 2.1.2.6)

Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the revised program and the associate plans to ensure the sustainability of the revised program and quality of the student experience.

None

C.2 Graduate Faculty Qualifications and Supervisory Loads (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Explain how supervisory loads will be distributed, and describe the qualifications and appointment status of faculty who will provide instruction and supervision in the revised program.

All faculty in the Department of Physics meet University standards for graduate supervision and instruction. This change will not affect supervisory loads or faculty responsibilities. Greater flexibility in course selection will allow instructors to teach in their areas of expertise, enhancing research alignment and mentorship while maintaining existing program capacity.

C.3 Financial Assistance for Graduate Students (where appropriate) (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Where appropriate to the revised program, provide evidence that financial assistance for graduate students will be sufficient to ensure adequate quality and numbers of students.

None; part of course work.

C.4 Anticipated New Resources (QAF sections 2.1.2.6)

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the revised program.*

None

C.5 Planned Reallocation of Resources and Cost-Savings

Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the revised program. (e.g., streamlining existing programs and courses, deleting courses, etc.)

The department currently offers one to two graduate courses per semester. However, the challenge is to ensure that these courses both meet the needs of all PhD candidates and satisfy the rigid core-course requirements. By allowing flexibility in course selection, supervisors will be able to teach courses that directly support their graduate students' research, as well as students working in related areas.

Because these courses are already part of the department's regular offerings, this change will not increase teaching load or resource requirements. Instead, it will make more efficient use of existing teaching capacity and scheduling. The broader range of available courses will also give students greater opportunity to complete their coursework earlier and to select offerings that best align with their research interests.

Overall, the modification optimizes resources while improving student progression and training relevance, and is expected to be cost-neutral for the department while improving efficiency.

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

C.6 Additional Resources Required – Resources Requested (QAF section 2.1.2.6f)

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to run the revised program. If not applicable, write n/a.*

Faculty:	N/A
Staff:	N/A
GA/TAs:	N/A

C.6.1 Additional Institutional Resources and Services Required by all Affected Areas or Departments (QAF section 2.1.2.6f)

*Describe all **additional institutional resources and services** required by all affected areas or departments to run the revised program, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance. If not applicable, write n/a.*

Library Resources and Services:	N/A
Teaching and Learning Support:	N/A
Student Support Services:	N/A
Space and Facilities:	N/A
Equipment (and Maintenance):	N/A

D.1 Form History *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

Date of Modification	Approval Body Modifying	Reason for Modification

University of Windsor
Program Development Committee

*5.21: **Political Science – Minor Program Changes (Form C)**

Item for: **Approval**

Forwarded by: **Faculty of Arts, Humanites and Social Sciencse**

MOTION: That the degree requirements for the Honours Political Science with French Specialization (with Thesis) be changed in accordance with the program/course change forms.^

^Subject to approval of the expenditures required.

Rationale/Approvals:

- The changes have been approved by the Department of Political Science Council and the Faculty of Arts, Humanites and Social Sciences Council (April 9, 2025).
- See attached.

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

TITLE OF PROGRAM(S)/CERTIFICATE(S):	**Honours Political Science with French Specialization (with Thesis)**
DEPARTMENT(S)/SCHOOL(S):	**Political Science**
FACULTY(IES):	**FAHSS**

Proposed change(s) effective as of* [Fall, Winter, Spring]: **(subject to timely and clear submission)*	Fall 2026

Does the minor program change include new courses?:

____ Yes [All new course proposals must be submitted on PDC Form Ds and submitted for approval with the minor program change proposal (PDC Form C)]

__X__ No

If yes, list all new courses:

A.1 PROGRAM REQUIREMENT CHANGES

Please provide the current program requirements and the proposed new program requirements by cutting and pasting from the current undergraduate or graduate web calendar (www.uwindsor.ca/secretariat/calendars) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining.

Example:
Degree requirements: WXYZ-1000, ~~WXYZ-1010~~, WXYZ-1100, WXYZ-2100, WXYZ-3100, WXYZ-4100, plus three additional courses at the **3000-level or** 4000-level.

Honours Political Science with French Specialization (with Thesis)

Degree requirements
Total courses: forty (40)
(a) University of Windsor [14 courses]:
- (i) POLS-1000, POLS-1300, POLS-1600 and POLS-2750;
- (ii) one of POLS-2035 or POLS-2055 [French];
- (iii) one of POLS-2510 or POLS-2520 [to be taken in Semester 3,4 or 5];
- (iv) POLS-4970 and POLS-4980;
- (v) six additional Political Science courses, including at least two at the 3000-level

(b) University of Ottawa [5 courses]:
POL2507. Introduction à la pensée politique
POL3514. Vie politique en Asie
POL3525. Pouvoir municipal au Canada
POL3526. Les femmes et la politique
POL3533. Politique et medias
POL3540. Vie politique aux États-Unis
POL3542. Vie politique en Europe occidentale
POL3544. Vie politique en Afrique
Or other approved course at the 2000-level or above
Or Five Political Science Courses in French taken on exchange or a letter of permission at a French-speaking university with the advanced approval of the department.

(c) two courses from Arts;

(d) two courses from Languages or Science;
(e) two courses from any area of study, excluding Social Sciences;
(f) ENGL-1010 (students with 80% or higher in Grade 12 ENG4U (or equivalent) are exempt from this course requirement and will substitute it with an additional course from any area of study.);
(g) one course with Indigenous content, perspectives, or materials (one of: GART-1210/SOSC-1210, ENGL-2320, HIST-2460, HIST-2470, PHIL-1350, PHIL-2300, POLS-2000, POLS-3000, POLS-4000, ICWG-2380);
(h) SOSC-2500;
(i) FREN-1210, FREN-1220, FREN-2210, FREN-2220 ~~and FREN-2700~~
(j) ~~one~~ **two** of FREN-2530, FREN-2600, **FREN-2700,** FREN-2810 or FREN-2830
(k) three courses from any area of study, including Political Science
(l) three courses from any area of study, excluding Political Science

A.2 MINOR COURSE CHANGES REQUIRING ADDITIONAL RESOURCES OR AFFECTING DEGREE REQUIREMENTS

*If this is a minor course and calendar change (usually noted on a Form E) requiring additional resources or affecting degree requirements, please provide the current course information and the proposed new course information by cutting and pasting from the current undergraduate or graduate web calendar and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with **bolding** and underlining.*

*Examples of minor course changes include: deleting courses, course description changes, pre/anti/co- requisite changes, contact hour/lab requirement changes, course title changes, renumbering courses, and/or cross-listing courses. Minor course calendar changes, which do not require additional resources or do not affect degree requirements, should be submitted on a **Form E.***

The proposed course changes are minor revisions that do not require any additional financial, human, or physical resources and won't affect the current degree requirements or program structure.

B. RATIONALE

Please provide a rationale for the proposed change(s).

We are proposing the above change to avoid the need for AAR Exceptions for FREN-2700, which is not available yearly, but offered on rotation. While the courses under (i) are available yearly, the courses under (j) are offered on rotation with one being available per year. Moreover, the courses under (i) are language training courses, while those listed under (j) are culture and civilization courses. Given that FREN-2700 focuses on the francophone cultural experience in Canada, it makes sense for it to be listed under (j) alongside the other culture and civilization courses offered by French Studies and of which the students registered in the degree program are now required to take two instead of one.

The proposed minor changes were discussed and approved by the Departments of French Studies and Political Science.

C. RESOURCES

C.1 Resources In Support of the Revised Program and Resource Implications for Other Campus Units or Programs (QAF section 2.1.2.6)

Describe, in general terms, all faculty and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the revised program. Please do not name specific individuals in this section. Describe the impact of the planned utilization of existing human, physical and financial resources (within and outside the unit) on other existing programs in the department or at the university. Provide an assessment of the reliance of the revised program on existing resources from other campus units and include evidence that there are adequate resources available and committed to the revised program to sustain the quality of scholarship produced by undergraduate students as well as graduate students' scholarship and research activities. Consider, for example: faculty resources (within and outside the unit), existing courses (within and outside

the unit), equipment or facilities outside the proposer's control, external resources requiring maintenance or upgrading using external resources, staff support, library, teaching and learning support, information technology support, laboratory access, student support services, space, equipment, facilities, GA/TA

The proposed changes concern courses that are already taught on a regular basis by the French Studies faculty. No additional resources are required to implement these revisions. Furthermore, the proposed changes have no implications for other campus units or academic programs.

C.1.1 Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program (QAF section 2.1.2.6)

Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the revised program and the associate plans to ensure the sustainability of the revised program and quality of the student experience.

The revised program does not anticipate increased reliance on adjunct, limited-term, or sessional faculty. The courses in question will continue to be taught by the existing French Studies faculty members who have been delivering these courses on a regular basis for an extended period of time. As such, the program changes do not alter current staffing patterns and do not create additional instructional demands. The sustainability of the revised program and the quality of the student experience will therefore be maintained through established faculty expertise, continuity in course delivery, and stable instructional planning.

C.2 Graduate Faculty Qualifications and Supervisory Loads (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Explain how supervisory loads will be distributed, and describe the qualifications and appointment status of faculty who will provide instruction and supervision in the revised program.

N/A

C.3 Financial Assistance for Graduate Students (where appropriate) (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Where appropriate to the revised program, provide evidence that financial assistance for graduate students will be sufficient to ensure adequate quality and numbers of students.

N/A

C.4 Anticipated New Resources (QAF sections 2.1.2.6)

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the revised program.*

No new resources are required to support the revised program. The proposed changes will be implemented within existing departmental resources and current budget allocations.

C.5 Planned Reallocation of Resources and Cost-Savings

Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the revised program. (e.g., streamlining existing programs and courses, deleting courses, etc.)

The proposed revision represents an internal curricular adjustment designed to improve program efficiency and reduce the need for administrative exceptions. Specifically, we are proposing this edit to eliminate the recurring need for AAR Exceptions for FREN-2700, which is not offered annually but on a rotational basis. This adjustment streamlines degree requirements, improves scheduling predictability, and reduces administrative workload, thereby supporting program sustainability without requiring additional resources.

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

C.6 Additional Resources Required – Resources Requested (QAF section 2.1.2.6f)

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to run the revised program. If not applicable, write n/a.*

Faculty:	N/A
Staff:	N/A
GA/TAs:	N/A

C.6.1 Additional Institutional Resources and Services Required by all Affected Areas or Departments (QAF section 2.1.2.6f)

*Describe all **additional institutional resources and services** required by all affected areas or departments to run the revised program, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance. If not applicable, write n/a.*

Library Resources and Services:	N/A
Teaching and Learning Support:	N/A
Student Support Services:	N/A
Space and Facilities:	N/A
Equipment (and Maintenance):	N/A

D.1 Form History *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

Date of Modification	Approval Body Modifying	Reason for Modification

University of Windsor
Program Development Committee

*5.22: **Political Science – Minor Program Changes (Form C)**

Item for: **Approval**

Forwarded by: **Faculty of Arts, Humanites and Social Sciencse**

MOTION 1: **That the degree requirements for the International Relations and Development Studies (with/without thesis) be changed in accordance with the program/course change forms.^**

MOTION 2: **That the International Relations and Development Studies (with/without thesis) be renamed International Relations.^**

^Subject to approval of the expenditures required.

Rationale/Approvals:

- The changes have been approved by the Department of Political Science Council and the Faculty of Arts, Humanites and Social Sciences Council (April 9, 2025). .
- See attached.

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

TITLE OF PROGRAM(S)/CERTIFICATE(S):	**International Relations and Development Studies** **International Relations and Development Studies (with Thesis)**
DEPARTMENT(S)/SCHOOL(S):	**Department of Political Science**
FACULTY(IES):	**FAHSS**

Proposed change(s) effective as of* [Fall, Winter, Spring]: **(subject to timely and clear submission)*	Fall 2026

Does the minor program change include new courses?:

____ Yes [All new course proposals must be submitted on PDC Form Ds and submitted for approval with the minor program change proposal (PDC Form C)]
__X__ No.
If yes, list all new courses: N/A

A.1 PROGRAM REQUIREMENT CHANGES

Please provide the current program requirements and the proposed new program requirements by cutting and pasting from the current undergraduate or graduate web calendar (www.uwindsor.ca/secretariat/calendars) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining.

Example: Degree requirements: WXYZ-1000, ~~WXYZ-1010~~, WXYZ-1100, WXYZ-2100, WXYZ-3100, WXYZ-4100, plus three additional courses at the **3000-level or** 4000-level.

International Relations~~ and Development Studie~~

Degree requirements
Total courses: forty.
(a) POLS-1000, POLS-1300, POLS-1600, POLS-2640 or POLS-2670, POLS-2750, POLS-3540 or POLS-3550, POLS-3600, POLS-4610;
(b) **Two of** HIST-1230, HIST-1240, **or POLS-2340**;
(c) One of POLS-2510 or POLS-2520**;**
(d) Three of POLS-2065, POLS-2300, POLS-2320, POLS-2330, POLS-2340 **(if not taken under requirements for (b))**, POLS-2350, POLS-2410, POLS-2440, POLS-2490, POLS-2600, POLS-2610, POLS-2640 or POLS-2670 (if not taken under requirements for (a)), POLS-2680;
(e) Two of POLS-3350, POLS-3460, POLS-3540 or POLS-3550 (if not taken under requirements for (a)), POLS-3560, POLS-3610, POLS-3620/PHIL-3230, POLS-3630, POLS-3650, POLS-3670, POLS-3720**;**
(f) One of POLS-4310, POLS-4340, POLS-4410, POLS-4420, POLS-4430, POLS-4450, POLS-4640, POLS-4650, POLS-4950, POLS-4960**;**
(g) ECON-1100 or ECON-2000, ECON-1110 or ECON-2010 (students pursuing an Economics Minor for requirement (k) may take two additional elective courses under requirement (l);
(h) ENGL-1010 (students with 80% or higher in Grade 12 ENG4U (or equivalent) are exempt from this course requirement and will substitute it with an additional course from any area of study~~.~~);
(i) **O**~~o~~ne course with Indigenous content, perspectives, or materials (one of: GART-1210/SOSC-1210, ENGL-2320, HIST-2460, HIST-2470, PHIL-1350, PHIL-2300, POLS-2000, POLS-3000, POLS-4000, ICWG-2380)**;**
(j) SOSC-2500**;**
(k) Minor in one of: Arabic Studies; Business Administration; Communication, Media, and Film; Economics; Entrepreneurship; French Studies; Geography; History; Jewish Studies; Latin American Studies; Modern Languages;

Philosophy; Sociology; Women's and Gender Studies; Indigenous Studies; Race and Ethnicity Studies. (Minors consist of 6 courses, but note that some courses may require prerequisites that are not part of the Minor; students are strongly encouraged to seek academic guidance from the academic advisor in the appropriate department);
(l) Eleven courses from any area of study, at least five of which must be outside Political Science.
Courses used to calculate the major average are: courses listed under requirements (a) to (f) and any courses taken in the major area(s) of study.

International Relations (with Thesis) ~~and Development Studies~~

Degree requirements
Total courses: forty.
(a) POLS-1000, POLS-1300, POLS-1600, POLS-2640 or 2670, POLS-2750, POLS-3540 or POLS-3550, POLS-3600, POLS-4610, POLS-4970, POLS-4980;
(b) **Two of** HIST-1230, HIST-1240, **or POLS-2340**;
(c) One of POLS-2510 or POLS-2520;
(d) Three of POLS-2065, POLS-2300, POLS-2320, POLS-2330, POLS-2340 **(if not taken under requirements for (b))**, POLS-2350, POLS-2410, POLS-2440, POLS-2490, POLS-2600, POLS-2610, POLS-2640 or POLS-2670 (if not taken under requirements for (a)), POLS-2680;
(e) Two of POLS-3350, POLS-3460, POLS-3540 or POLS-3550 (if not taken under requirements for (a)), POLS-3560, POLS-3610, POLS-3620/PHIL-3230, POLS-3630, POLS-3650, POLS-3670, POLS-3720, POLS-4310, POLS-4340, POLS-4410, POLS-4420, POLS-4430, POLS-4450, POLS-4640, POLS-4650, POLS-4950, POLS-4960;
(f) ECON-1100 or ECON-2000, ECON-1110 or ECON-2010 (students pursuing an Economics Minor for requirement (j) may take two additional elective courses under requirement (k) below);
(g) ENGL-1010 (students with 80% or higher in Grade 12 ENG4U (or equivalent) are exempt from this course requirement and will substitute it with an additional course from any area of study);
(h) One course with Indigenous content, perspectives, or materials (one of: GART-1210/SOSC-1210, ENGL-2320, HIST-2460, HIST-2470, PHIL-1350, PHIL-2300, POLS-2000, POLS-3000, POLS-4000, ICWG-2380);
(i) SOSC-2500;
(j) Minor in one of: Arabic Studies; Business Administration; Communication, Media, and Film; Economics; Entrepreneurship; French Studies; Geography; History; Jewish Studies; Latin American Studies; Modern Languages; Philosophy; Sociology; Women's and Gender Studies; Indigenous Studies; Race and Ethnicity Studies. (Minors consist of 6 courses, but note that some courses may require prerequisites that are not part of the Minor; students are strongly encouraged to seek academic guidance from the academic advisor in the appropriate department);

(k) Eleven courses from any area of study, at least five of which must be outside Political Science.

A.2 MINOR COURSE CHANGES REQUIRING ADDITIONAL RESOURCES OR AFFECTING DEGREE REQUIREMENTS

*If this is a minor course and calendar change (usually noted on a Form E) requiring additional resources or affecting degree requirements, please provide the current course information and the proposed new course information by cutting and pasting from the current undergraduate or graduate web calendar and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with **bolding** and underlining.*

*Examples of minor course changes include: deleting courses, course description changes, pre/anti/co- requisite changes, contact hour/lab requirement changes, course title changes, renumbering courses, and/or cross-listing courses. Minor course calendar changes, which do not require additional resources or do not affect degree requirements, should be submitted on a **Form E.***

Not applicable. The proposed changes do not involve minor course changes requiring additional resources or individual course calendar changes of the type normally addressed through Form E.

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

B. RATIONALE

Please provide a rationale for the proposed change(s).

The proposed revisions are intended to strengthen the International Relations program by expanding students' curricular options while preserving coherence in the program's intellectual design. The proposal adds POLS-2340, Making of the Global World, as an eligible course in section (b), in addition to section (d). Following review by the Undergraduate Committee and discussion among faculty members, this course was deemed well suited to section (b) because it provides students with important historical background on major global transformations and world historical developments that are directly relevant to the study of international relations. The course helps students build the broader historical foundation necessary for understanding contemporary international systems, political change, and global processes.

At the same time, in order to allow for greater flexibility and to diversify the range of courses available to students to satisfy their program requirements, the department agreed to retain POLS-2340 as one of the possible Political Science electives in section (d). The course engages themes and concepts that are closely connected to political science and to the analytical concerns of the program. Allowing the course to count toward either section (b) or section (d), but not both, recognizes its interdisciplinary value while giving students greater flexibility in how they complete their degree requirements. This change diversifies the range of courses available to students, makes the program more adaptable to student interests, and supports more flexible pathways through the major without altering its academic integrity.

Rationale for Program Name Change:
The proposed changes to the program titles from (a) *International Relations and Development Studies* to *International Relations* and (b) *International Relations and Development Studies (with Thesis)* to *International Relations (with Thesis)* reflect faculty support for a clearer, more recognizable, and more marketable program identity. Although development-focused content remains an important part of the curriculum, the inclusion of "Development Studies" in the program titles no longer accurately reflects the program's primary identity or how it is presented externally. Following a comprehensive discussion, the majority of faculty supported the revised titles, *International Relations* and *International Relations (with Thesis)*, on the grounds that they align more clearly with established academic and professional fields and offer stronger branding in relation to conferences, graduate study pathways, and labor market visibility. For these reasons, faculty endorsed the proposed title changes.

C. RESOURCES

C.1 Resources In Support of the Revised Program and Resource Implications for Other Campus Units or Programs (QAF section 2.1.2.6)

Describe, in general terms, all faculty and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the revised program. Please do <u>not</u> name specific individuals in this section.

Describe the impact of the planned utilization of existing human, physical and financial resources (within and outside the unit) on other existing programs in the department or at the university.

Provide an assessment of the reliance of the revised program on existing resources from <u>other</u> campus units and include evidence that there are adequate resources available and committed to the revised program to sustain the quality of scholarship produced by undergraduate students as well as graduate students' scholarship and research activities. Consider, for example: faculty resources (within and outside the unit), existing courses (within and outside the unit), equipment or facilities outside the proposer's control, external resources requiring maintenance or upgrading using external resources, staff support, library, teaching and learning support, information technology support, laboratory access, student support services, space, equipment, facilities, GA/TA

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

No additional resources are required to implement the proposed changes. The revisions consist of adjustments to existing program requirements and the recognition of courses already offered within the current curriculum and taught regularly by full-time faculty in the Departments of Political Science. Accordingly, there are no anticipated resource implications for the Department of Political Science or for other campus units.

C.1.1 Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program (QAF section 2.1.2.6)

Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the revised program and the associate plans to ensure the sustainability of the revised program and quality of the student experience.

The revised program will continue to be delivered by regular full-time faculty in the Department. The proposed changes do not require any additional reliance on adjunct, limited-term, or sessional faculty.

C.2 Graduate Faculty Qualifications and Supervisory Loads (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Explain how supervisory loads will be distributed, and describe the qualifications and appointment status of faculty who will provide instruction and supervision in the revised program.

N/A

C.3 Financial Assistance for Graduate Students (where appropriate) (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Where appropriate to the revised program, provide evidence that financial assistance for graduate students will be sufficient to ensure adequate quality and numbers of students.

N/A

C.4 Anticipated New Resources (QAF sections 2.1.2.6)

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the revised program.*

None. No new resources are anticipated or required to support the proposed changes.

C.5 Planned Reallocation of Resources and Cost-Savings

Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the revised program. (e.g., streamlining existing programs and courses, deleting courses, etc.)

None anticipated. The proposed revisions do not require any internal reallocation of resources and are not expected to generate specific cost savings. They will be implemented within existing departmental resources.

C.6 Additional Resources Required – Resources Requested (QAF section 2.1.2.6f)

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to run the revised program. If not applicable, write n/a.*

Faculty:	No additional faculty, staff and GA/TA resources required
Staff:	No additional faculty, staff and GA/TA resources required
GA/TAs:	No additional faculty, staff and GA/TA resources required

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

C.6.1 Additional Institutional Resources and Services Required by all Affected Areas or Departments (QAF section 2.1.2.6f)

*Describe all **additional institutional resources and services** required by all affected areas or departments to run the revised program, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance. If not applicable, write n/a.*

Library Resources and Services:	N/A
Teaching and Learning Support:	N/A
Student Support Services:	N/A
Space and Facilities:	N/A
Equipment (and Maintenance):	N/A

D.1 Form History *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

Date of Modification	Approval Body Modifying	Reason for Modification

University of Windsor
Program Development Committee

*5.23: **Science – Minor Program Changes (Form C)**

Item for: **Approval**

Forwarded by: **Faculty of Science**

MOTION: That the degree requirements and Calculation of Averages for the Bachelor of Science (General Science) be changed in accordance with the program/course change forms.^

^Subject to approval of the expenditures required.

Rationale/Approvals:

- The proposed changes have been approved by the Science Program Development Committee (SPDC) (as delegated by the Faculty of Science Coordinating Council) (April 14, 2026).
- *See attached.*

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

TITLE OF PROGRAM(S)/CERTIFICATE(S):	**Bachelor of Science**
DEPARTMENT(S)/SCHOOL(S):	**Science**
FACULTY(IES):	**Science**

Proposed change(s) effective as of* [Fall, Winter, Spring]: **(subject to timely and clear submission)*	Fall 2026, Undergraduate Calendar

Does the minor program change include new courses?:

__X__ Yes [All new course proposals must be submitted on PDC Form Ds and submitted for approval with the minor program change proposal (PDC Form C)]

____ No

If yes, list all new courses:

A.1 PROGRAM REQUIREMENT CHANGES

Please provide the current program requirements and the proposed new program requirements by cutting and pasting from the current undergraduate or graduate web calendar (www.uwindsor.ca/secretariat/calendars) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining.

Example: Degree requirements: WXYZ-1000, ~~WXYZ-1010~~, WXYZ-1100, WXYZ-2100, WXYZ-3100, WXYZ-4100, plus three additional courses at the **3000-level or** 4000-level.

Bachelor of Science (General Science)

Degree Requirements
Total courses: thirty

(d) four courses from Arts/Languages and Social Sciences, with at least one from each. (**COMP-3057, CHEM-1003, and PHYS-2040 can be counted here)**

Calculation of Major Average

The major average is calculated from the grades of all Science courses, excluding the grades obtained in the following courses: ECON-2000, ECON-2010, **ECON-2100, ECON-2510,** BIOM-1003, BIOL-1013, **BIOM-1073**, BIOM-2093, **CHEM-1003**, CHEM-2003, CHEM-2305, BIOC-2015, **COMP-2057, COMP-2067,** COMP-2077, **COMP-2087,** COMP-2097, **COMP-2547,** COMP-2707, ~~COMP-3057,~~ **COMP-3037, COMP-3067,** COMP-3077, ESCI-1000, ESCI-1010, **ESCI-1020,** ~~ESCI-2300,~~ **ESCI-2000,** ESCI-2010, ESCI-2630, MATH-1280, MATH-1780, MATH-1980, PHYS-1000, PHYS-1010, **PHYS-1305, PHYS-2000, PHYS-2040, and** PHYS-2060. ~~and ESCI-2000~~.

Note: COMP-2067 and COMP-2087 count as a 'science pair' (see requirement (b) above) and will be included in the calculation of the major average.

A.2 MINOR COURSE CHANGES REQUIRING ADDITIONAL RESOURCES OR AFFECTING DEGREE REQUIREMENTS

*If this is a minor course and calendar change (usually noted on a Form E) requiring additional resources or affecting degree requirements, please provide the current course information and the proposed new course information by cutting and pasting from the current undergraduate or graduate web calendar and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with **bolding** and underlining. Examples of minor course changes include: deleting courses, course description changes, pre/anti/co- requisite changes, contact hour/lab requirement changes, course title changes, renumbering courses, and/or cross-listing courses. Minor*

*course calendar changes, which do not require additional resources or do not affect degree requirements, should be submitted on a **Form E.***

N/A

B. RATIONALE

Please provide a rationale for the proposed change(s).

To update the list of science courses that do not count towards the major average calculation in the General Science program and add a few courses that can count towards the FAHSS elective courses section.

C. RESOURCES

C.1 Resources In Support of the Revised Program and Resource Implications for Other Campus Units or Programs (QAF section 2.1.2.6)

Describe, in general terms, all faculty and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the revised program. Please do not name specific individuals in this section. Describe the impact of the planned utilization of existing human, physical and financial resources (within and outside the unit) on other existing programs in the department or at the university. Provide an assessment of the reliance of the revised program on existing resources from other campus units and include evidence that there are adequate resources available and committed to the revised program to sustain the quality of scholarship produced by undergraduate students as well as graduate students' scholarship and research activities. Consider, for example: faculty resources (within and outside the unit), existing courses (within and outside the unit), equipment or facilities outside the proposer's control, external resources requiring maintenance or upgrading using external resources, staff support, library, teaching and learning support, information technology support, laboratory access, student support services, space, equipment, facilities, GA/TA

N/A

C.1.1 Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program (QAF section 2.1.2.6)

Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the revised program and the associate plans to ensure the sustainability of the revised program and quality of the student experience.

N/A

C.2 Graduate Faculty Qualifications and Supervisory Loads (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Explain how supervisory loads will be distributed, and describe the qualifications and appointment status of faculty who will provide instruction and supervision in the revised program.

N/A

C.3 Financial Assistance for Graduate Students (where appropriate) (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Where appropriate to the revised program, provide evidence that financial assistance for graduate students will be sufficient to ensure adequate quality and numbers of students.

N/A

C.4 Anticipated New Resources (QAF sections 2.1.2.6)

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the revised program.*

N/A

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

C.5 Planned Reallocation of Resources and Cost-Savings

Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the revised program. (e.g., streamlining existing programs and courses, deleting courses, etc.)

N/A

C.6 Additional Resources Required – Resources Requested (QAF section 2.1.2.6f)

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to run the revised program. If not applicable, write n/a.*

Faculty:	N/A
Staff:	N/A
GA/TAs:	N/A

C.6.1 Additional Institutional Resources and Services Required by all Affected Areas or Departments (QAF section 2.1.2.6f)

*Describe all **additional institutional resources and services** required by all affected areas or departments to run the revised program, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance. If not applicable, write n/a.*

Library Resources and Services:	N/A
Teaching and Learning Support:	N/A
Student Support Services:	N/A
Space and Facilities:	N/A
Equipment (and Maintenance):	N/A

D.1 Form History *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

Date of Modification	Approval Body Modifying	Reason for Modification

University of Windsor
Program Development Committee

*5.24: **Womens and Gender Studies – Minor Program Changes (Form C)**

Item for: **Approval**

Forwarded by: **Faculty of Arts, Humanites and Social Sciencse**

MOTION: That the degree requirements for the Womens and Gender Studies programs be changed in accordance with the program/course change forms.^

^Subject to approval of the expenditures required.

Rationale/Approvals:

- The changes have been approved by the Department of Department of Interdisciplinary and Critical Studies Council and the Faculty of Arts, Humanites and Social Sciences Council (April 9, 2025).
- *See attached.*

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

TITLE OF PROGRAM(S)/CERTIFICATE(S):	**General BA in Women's and Gender Studies** **BA Honours in Women's and Gender Studies** **Combined Honours in Women's and Gender Studies** **Combined Honours Women's and Gender Studies when taken with Criminology** **Certificate in Women's Studies** **Major and Minor Concentrations - Bachelor of Interdisciplinary Arts and Science (IAS) - Women's and Gender Studies**
DEPARTMENT(S)/SCHOOL(S):	**Department of Interdisciplinary and Critical Studies**
FACULTY(IES):	**Faculty of Arts, Humanities, and Social Sciences**

Proposed change(s) effective as of* [Fall, Winter, Spring]: **(subject to timely and clear submission)*	Fall 2026

Does the minor program change include new courses?:

____ Yes[All new course proposals must be submitted on PDC Form Ds and submitted for approval with the minor program change proposal (PDC Form C)]

_X___ No If yes, list all new courses:

A.1 PROGRAM REQUIREMENT CHANGES

Please provide the current program requirements and the proposed new program requirements by cutting and pasting from the current undergraduate or graduate web calendar (www.uwindsor.ca/secretariat/calendars) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining. Example: Degree requirements: WXYZ-1000, ~~WXYZ-1010~~, WXYZ-1100, WXYZ-2100, WXYZ-3100, WXYZ-4100, plus three additional courses at the **3000-level or** 4000-level.

General BA in Women's and Gender Studies

Degree Requirements

Total courses: thirty.

(a) ICWG-1000, ICWG-2500, ICWG-3050 or ICWG/PHIL-3590, ICWG-3060

(b) five of SACR-2100, ICWG-2200, ~~IACS-2350~~, **ICDS-2010, ICWG-2510** , IACS-2600, ICWG-2380, ICWG-3000, or KINE-3501/PSYC/SACR/ SOSC/SWRK/ ICWG-3500

[…]

BA Honours in Women's and Gender Studies

Degree Requirements

Total courses: forty.

a) ICWG-1000, ICWG-2500, ICWG-3050 or ICWG/PHIL-3590, ICWG-3060, ICWG-4000

b) five of SACR-2100, ICWG-2200, ~~IACS-2350~~, **ICDS-2010, ICWG-2510** , IACS-2600, ICWG- 2380, ICWG-3000, or KINE-3501/PSYC/SACR/SOSC/SWRK/IACS-3500

[…]

Combined Honours in Women's and Gender Studies

Degree Requirements

Total courses: forty.

a) Women's and Gender Studies: ICWG-1000, ICWG-2500, ICWG-3050 or ICWG/PHIL-3590, ICWG-3060, ICWG-4000, five of ICWG/SACR-2100, ICWG-2200, ~~IACS-2350~~**,** **ICDS-2010, ICWG-2510** , IACS-2600, ICWG-2380, ICWG-3000, or KINE- 3501/PSYC/SACR/ SOSC/SWRK/IACS-3500; ICWG-4000 level course ; two additional Women's and Gender Studies courses at the 3000 or 4000-level.

[…]

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

Combined Honours Women's and Gender Studies when taken with Criminology

Degree Requirements

Total courses: forty.

a) Women's and Gender Studies: ICWG-1000, ICWG-2500, ICWG-3050 or ICWG/PHIL-3590, ICWG-3060, ICWG- 4000, five of ICWG/SACR-2100, ICWG-2200, ~~IACS-2350,~~ **ICDS-2010, ICWG-2510,** IACS-2600, ICWG-2380, ICWG-3000, or KINE- 3501/PSYC/SACR/ SOSC/SWRK/IACS-3500; ICWG-4000 level course ;

Certificate in Women's Studies

Degree Requirements

Total courses: ten

a) ICWG-1000;
b) at least one of ICWG/PHIL-3590 (or ICWG -3050) or ICWG -3060;
c) at least three of ICWG /SACR-2100, ICWG -2200, ~~IACS-2350,~~ **ICDS-2010, ICWG-2510** , IACS-2600, ICWG-2380, ICWG-3000, or KINE- 3501/PSYC/SACR/SOSC/SWRK/IACS-3500
d) five Women's and Gender Studies courses, with at least one at the 3000- or 4000-level.

Major Concentration - Bachelor of Interdisciplinary Arts and Science (IAS) - Women's and Gender Studies

Major Concentration: ICWG-1000, at least one of ICWG/PHIL-3590, ICWG -3050, or ICWG -3060; five of SACR- 2100, ICWG -2200, ~~IACS-2350,~~ **ICDS-2010, ICWG-2510 ,** IACS-2600, ICWG-2380, ICWG -3000, or KINE-3501/PSYC/SACR/SOSC/SWRK/IACS-3500; one Women's and Gender Studies course at the 1000-level or above, one Women's and Gender Studies course at the 2000-level or above, three Women's and Gender Studies.

A.2 MINOR COURSE CHANGES REQUIRING ADDITIONAL RESOURCES OR AFFECTING DEGREE REQUIREMENTS

*If this is a minor course and calendar change (usually noted on a Form E) requiring additional resources or affecting degree requirements, please provide the current course information and the proposed new course information by cutting and pasting from the current undergraduate or graduate web calendar and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with **bolding** and underlining. Examples of minor course changes include: deleting courses, course description changes, pre/anti/co- requisite changes, contact hour/lab requirement changes, course title changes, renumbering courses, and/or cross-listing courses. Minor course calendar changes, which do not require additional resources or do not affect degree requirements, should be submitted on a **Form E.***

N/A

B. RATIONALE

Please provide a rationale for the proposed change(s).

The proposed changes in degree requirements more accurately reflect current core course offerings:

IACS-2350: Disability, Madness and Social Justice and ICDS-2010: Disability Studies: Theory and Culture have similar learning outcomes but ICDS-2010 is offered every year as it is also a program requirement for Disability Studies. Replacing IACS-2350 with ICDS-2010 will better align program requirements with current offerings and allow students to progress through their program in a more timely manner.

ICWG-2510: History of Women's Movements in North America is offered regularly and its addition will provide another option to support students in progressing through their program in a timely manner. Its subject matter is foundational to the discipline and complements the other courses in this category.

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

C. RESOURCES

C.1 Resources In Support of the Revised Program and Resource Implications for Other Campus Units or Programs (QAF section 2.1.2.6)

Describe, in general terms, all faculty and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the revised program. Please do not name specific individuals in this section. Describe the impact of the planned utilization of existing human, physical and financial resources (within and outside the unit) on other existing programs in the department or at the university. Provide an assessment of the reliance of the revised program on existing resources from other campus units and include evidence that there are adequate resources available and committed to the revised program to sustain the quality of scholarship produced by undergraduate students as well as graduate students' scholarship and research activities. Consider, for example: faculty resources (within and outside the unit), existing courses (within and outside the unit), equipment or facilities outside the proposer's control, external resources requiring maintenance or upgrading using external resources, staff support, library, teaching and learning support, information technology support, laboratory access, student support services, space, equipment, facilities, GA/TA

The change outlined above does not necessitate new resources.

C.1.1 Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program (QAF section 2.1.2.6)

Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the revised program and the associate plans to ensure the sustainability of the revised program and quality of the student experience.

The removal of IACS-2350 and addition of ICDS-2010 and ICWG-2510 into the degree requirements align with the expertise and teaching loads of the full-time faculty members in the Department of Interdisciplinary and Critical Studies, thus supporting program sustainability.

C.2 Graduate Faculty Qualifications and Supervisory Loads (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Explain how supervisory loads will be distributed, and describe the qualifications and appointment status of faculty who will provide instruction and supervision in the revised program.

N/A

C.3 Financial Assistance for Graduate Students (where appropriate) (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7)

Where appropriate to the revised program, provide evidence that financial assistance for graduate students will be sufficient to ensure adequate quality and numbers of students.

N/A

C.4 Anticipated New Resources (QAF sections 2.1.2.6)

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the revised program.*

N/A

C.5 Planned Reallocation of Resources and Cost-Savings

Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the revised program. (e.g., streamlining existing programs and courses, deleting courses, etc.)

N/A

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

C.6 Additional Resources Required – Resources Requested (QAF section 2.1.2.6f)

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to run the revised program. If not applicable, write n/a.*

Faculty:	N/A
Staff:	N/A
GA/TAs:	N/A

C.6.1 Additional Institutional Resources and Services Required by all Affected Areas or Departments (QAF section 2.1.2.6f)

*Describe all **additional institutional resources and services** required by all affected areas or departments to run the revised program, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance. If not applicable, write n/a.*

Library Resources and Services:	N/A
Teaching and Learning Support:	N/A
Student Support Services:	N/A
Space and Facilities:	N/A
Equipment (and Maintenance):	N/A

D.1 Form History *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

Date of Modification	Approval Body Modifying	Reason for Modification

University of Windsor
Program Development Committee

*5.25 **Biomedical Sciences - Summary of Minor Course and Calendar Changes (Form E)**

Item for: **Information**

Forwarded by: **Faculty of Science**

Form History *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

Date of Modification	Approval Body Modifying	Reason for Modification

INSTRUCTIONS ARE PROVIDED IN SHADED AREAS. DO NOT WRITE IN SHADED AREAS.

ALL SECTIONS OF THIS FORM ***MUST*** BE COMPLETED. **LEARNING OUTCOMES MUST BE PROVIDED FOR LISTED COURSES WHERE** THERE ARE **NO OFFICIAL LEARNING OUTCOMES FOR THE COURSE** IN THE PDC/SENATE RECORD (check the CuMA database at https://ctl2.uwindsor.ca/cuma/public/)

Confirmation of Consultation with AAUs That Will Be Affected, in Major Ways, by the Changes

AAU Consulted	AAU Head/Directors	Date Consulted	Supportive	
			Yes	No

Please specify to which calendar *[Undergraduate or Graduate]* **the changes will be made. Include the effective date*** *[Fall, Winter, Spring, 20XX]***.** **(subject to timely and clear submission)* **These changes require no new resources.**	Fall 2026, Undergraduate Calendar

A. Proposed Course Calendar Revisions

Please provide the current and the proposed new course information by cutting and pasting from the current undergraduate or graduate online calendar (www.uwindsor.ca/secretariat/calendars) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining. For contact hour/laboratory requirement changes which do not always appear in the calendar, please type in the current information and clearly mark deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining. Example: **CHEM-1001. University Senates ~~– Role and Power~~** This course explores the history, role, and power of Senates in Canadian universities. ~~(Also offered as BIOC-1001.)~~ (Prerequisite: CHEM-1000.) ~~2 lecture hours and 1 tutorial hour per week~~ **3 lecture hours/week**

BIOM-3200. Systems Neuroscience
This course will provide students with an understanding of the structure and function of various neural circuits and systems that make up the central nervous system of an organism. Students will learn how different neural circuits process sensory information, form perceptions, execute movements, and perform high-level mental functions. Students will also learn how dysfunctions of neural circuits underlie a wide range of neurological diseases. This course will provide the necessary background for upper-level BIOM neuroscience courses. (Prerequisite: BIOL-2480 **or BIOM-2400**). (3 lecture hours per week).

BIOM-3400. Neurobiology of the Synapse
Synapses are specialized structures where nerve cells communicate with each other through a process called synaptic transmission. Synapses are the functional units of the brain and are targets of many diseases and drugs. The ability of synapses to transmit information from one neuron to another, changes with experience (synaptic plasticity) in processes such as learning and memory. This course will help students understand aspects of synapses from a cellular

and molecular perspective. Topics such as synaptic vesicle cycling, synaptic plasticity, learning and memory, and neurological diseases originating at the synapse will be covered. Synapses from both the peripheral and central nervous systems of invertebrates and vertebrates will be discussed. (Prerequisite: BIOL-2480 **or BIOM-2400**.) ~~(Recommended for 3000/4000 level student.)~~ (3 lecture hours~~/~~ **per** week.)

BIOM-4440. Neurophysiology
This course examines functions of the brain and physiological processes that are responsible for these functions at the system, cellular, and molecular levels. Topics include the generation, transmission, and integration of neural signals. They also include neural signaling related to the processing of sensory information, controlling of movement, and generation of complex mental activity Modern research methods that are used in the study of brain functions and underlying physiological processes are also discussed. (Prerequisite: BIOL-2480 **or BIOM-2400** ~~or permission from the instructor~~.) (3 lecture hours a week.)

BIOM 4500. Molecular Basis of Behaviour
This course will provide students with insights into the molecular determinants of behaviour. Students will learn how genes and proteins affect behaviour through key examples of mammalian behaviours, such as learning and memory. This course will cover various molecular and genetic techniques used to study behaviour in mammalian models. Students will also learn about behavioural changes associated with neurological diseases and the underlying cellular and molecular mechanisms that cause these behavioural changes. **(**Prerequisite BIOL-2480 **or BIOM-2400)**. (3 lecture hours per week).

BIOM-4510. Stem Cells
Stem cells are populations of cells present in the body that divide to make all the cells that compose specific tissues and organs. What we know about stem cells is the result of rapidly evolving, and sometimes controversial, research. This seminar course deals with current research topics in stem cell biology. Topics will include: stem cell potency, embryonic precursors vs adult tissue stem cells, symmetry of division versus clonal drift, regeneration and healing, and whether stem cells contribute to ageing. The purpose of this course is to develop a knowledge of core concepts that guide research in this area. (Prerequisites: ~~BIOL 2111 and BIOM 2131~~ **BIOM-3500 or BIOM-3530**.) (3 lecture hours a week.)

BIOM-4540. Regenerative Neurobiology and Disease
This course examines the remarkable natural process of neural tissue regeneration, a critical biological function that maintains tissue homeostasis and replaces damaged or aging tissues to restore function. This course will explore the phenomenon of regeneration and continual post-natal development, specifically after injury or during chronic neurological diseases. This will involve analysing molecular pathways regulating stem cell differentiation, how specialized cells proliferate and undergo programmed cell death and how the architecture of tissues is preserved despite the constant replacement of old cells by new. We will also discuss how abrogation of these programs underlies neurological disorders. (Prerequisites: BIOL-2480 **or BIOM-2400** ~~and any 1 course chosen from BIOM 3500, BIOM 3530 or BIOM 3550~~.) (3 lecture hours a week.)

BIOM-4580. Nutrition: Cellular and Molecular Mechanisms in the Gut, Brain, and Beyond
The study of nutrition has focused on how nutrients affect the body in both positive and negative ways. This course will focus on recent findings in the field that have revealed the precise cellular and molecular mechanisms underlying the effects of nutrition on the body. Students will cover new and emerging research topics including but not limited to: nutrients and human health, the gut - brain axis, how food intake regulates neuronal circuits in appetite and behaviour, nutrigenomics, how nutrition affects the microbiome, mechanisms of food allergies and/or sensitivity, fasting and the effects of intermittent fasting diets. Both human-based and animal-based studies will be covered. Students will learn the mechanisms underlying physiological responses to nutrition, and the latest research informing this field. (Prerequisite: ~~BIOM 2131~~ **BIOM-3500 or BIOM-3530**). (3 lecture hours per week).

PROGRAM DEVELOPMENT COMMITTEE
SUMMARY OF MINOR COURSE AND CALENDAR CHANGES
FORM E

A.1 Experiential Learning Categories

Does the proposed course revision include the addition or deletion of an experiential learning component? For definitions go to: https://www.uwindsor.ca/cces/1423/experiential-learning-definitions

☒ **No** – the revision(s) does (do) not include the addition or deletion of experiential learning component(s).

☐ **Yes** – the revision(s) include(s) the addition or deletion of experiential learning component(s). Check all that apply:

Experiential Learning Categories	Addition	Deletion
applied research	☐	☐
Capstone	☐	☐
Clinic	☐	☐
co-op	☐	☐
community service learning	☐	☐
creative performance or exhibit (*for visual and performing arts*)	☐	☐
Entrepreneurship	☐	☐
field experience or site visit	☐	☐
field work	☐	☐
industry/community consulting project	☐	☐
interactive simulations	☐	☐
internship – full-time	☐	☐
internship – part-time	☐	☐
professional practicum	☐	☐
research project	☐	☐
study abroad	☐	☐
Labs	☐	☐

A.2 Are any of the courses being deleted currently required in one or more programs? *(if no courses are being deleted, check "No".)*

____ Yes [A minor program change proposal (PDC Form C) or major program change proposal (PDC Form B) must be submitted with the summary of minor course and calendar changes (PDC Form E)]

__X__ No If yes, list all courses that are being deleted and the programs in which they are currently required:

B. Learning Outcomes for the Courses Listed above where there are no official learning outcomes for the course.

BIOM-3200. Systems Neuroscience: Learning outcomes were last updated April 11, 2025
BIOM-3400. Neurobiology of the Synapse: Learning outcomes were last updated May 22, 2020
BIOM-4440. Neurophysiology: Learning outcomes were last updated May 11, 2020
BIOM 4500. Molecular Basis of Behaviour: Learning outcomes were last updated April 11, 2020
BIOM-4510. Stem Cells: Learning outcomes were last updated May 11, 2020
BIOM-4540. Regenerative Neurobiology and Disease: Learning outcomes were last updated January 15, 2025
BIOM-4580. Nutrition: Cellular and Molecular Mechanisms in the Gut, Brain, and Beyond Learning outcomes were last updated April 11, 2025.

University of Windsor
Program Development Committee

*5.26: **Civil Engineering (Undergraduate/Graduate) - Summary of Minor Course and Calendar Changes (Form E)**

Item for: **Information**

Forwarded by: **Faculty of Engineering**

Form History *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

Date of Modification	Approval Body Modifying	Reason for Modification

INSTRUCTIONS ARE PROVIDED IN SHADED AREAS. DO NOT WRITE IN SHADED AREAS.

ALL SECTIONS OF THIS FORM ***MUST*** BE COMPLETED. **LEARNING OUTCOMES MUST BE PROVIDED FOR LISTED COURSES WHERE** THERE ARE **NO OFFICIAL LEARNING OUTCOMES FOR THE COURSE** IN THE PDC/SENATE RECORD (check the CuMA database at https://ctl2.uwindsor.ca/cuma/public/)

Confirmation of Consultation with AAUs That Will Be Affected, in Major Ways, by the Changes

AAU Consulted	AAU Head/Directors	Date Consulted	Supportive	
			Yes	No

Please specify to which calendar *[Undergraduate or Graduate]* **the changes will be made. Include the effective date*** *[Fall, Winter, Spring, 20XX]***.** **(subject to timely and clear submission)* **These changes require no new resources.**	Undergraduate and Graduate Fall 2026

A. Proposed Course Calendar Revisions

Please provide the current and the proposed new course information by cutting and pasting from the current undergraduate or graduate online calendar (www.uwindsor.ca/secretariat/calendars) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining. For contact hour/laboratory requirement changes which do not always appear in the calendar, please type in the current information and clearly mark deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining. Example: **CHEM-1001. University Senates ~~– Role and Power~~** This course explores the history, role, and power of Senates in Canadian universities. ~~(Also offered as BIOC-1001.)~~ (Prerequisite: CHEM-1000.) ~~2 lecture hours and 1 tutorial hour per week~~ **3 lecture hours/week**

CIVL-4970. Life Cycle Thinking
Practical and theoretical applications of life cycle thinking in engineering projects, products, and processes. Understand international standards and methods in Life Cycle Assessment (LCA), Life Cycle Costing (LCC), and Social Life Cycle Assessment (S-LCA). Analyze, interpret, provide critical feedback, and report on claims on sustainability. ~~Life-cycle assessment, life-cycle cost (LCC) analysis, systems thinking and system dynamic modelling. Greenhouse gas emission estimation. Social life-cycle analysis (S-LCA), stakeholder communication. Decision making.~~
(Prerequisites: ENVE-2200.) (3 lecture hours, 1.5 tutorial/laboratory hours weekly. **(May be offered as a cross-career with CIVL-8006 and ENVE-8006)**

CIVL-8006. Life Cycle Thinking ~~for Engineering Projects~~
Practical and theoretical applications of life cycle thinking in engineering projects, products, and processes. Understand international standards and methods in Life Cycle Assessment (LCA), Life Cycle Costing (LCC), and Social

Life Cycle Assessment (S-LCA). Analyze, interpret, provide critical feedback, and report on claims on sustainability. (Antirequisite: CIVL-8900-49.) (Cross-listed with ENVE-8006 and MECH-8006.) (May be offered as a cross-career course with MECH-4341 (Section 1) **and CIVL-4970.)**

ENVE-4811. Climate Change and Infrastructure
Climate change adaptation and mitigation measures. Engineering risk management. Resilience, systems thinking applied to engineered systems. (Prerequisites: ENVE-2200) (3 lecture hours, 1.5 tutorial/laboratory hours weekly) **(May be offered as a cross-career course with ENVE-8440.)**

ENVE-8440. Climate Change and Infrastructure
Climate change adaptation and mitigation measures. Engineering risk management. Resilience, systems thinking applied to engineered systems. **(Cross-listed with CIVL-8440.) (May be offered as a cross-career course with ENVE-4811.)**

CIVL-8440. Climate Change and Infrastructure
Climate change adaptation and mitigation measures. Engineering risk management. Resilience, systems thinking applied to engineered systems. **(Cross-listed with ENVE-8440.) (May be offered as a cross-career course with ENVE-4811.)**

ENVE-3630. Water and Wastewater Treatment
Water and wastewater quality, guidelines and standards, flow fluctuation and design capacity. Design of different unit operations and processes in water and wastewater treatment. (Prerequisites: ENVE-2200 and a course in fluid mechanics or hydraulics.) (3 lecture, 3 laboratory hours a week.) **(May be offered as a cross-career course with ENVE-8450)**

ENVE-8450. Water and Wastewater Treatment
Water and wastewater quality, guidelines and standards, flow fluctuation and design capacity. Design of different unit operations and processes in water and wastewater treatment. **(Cross-listed with CIVL-8450.) (May be offered as a cross-career course with ENVE-3630.)**

CIVL-8450. Water and Wastewater Treatment
Water and wastewater quality, guidelines and standards, flow fluctuation and design capacity. Design of different unit operations and processes in water and wastewater treatment. **(Cross-listed with ENVE-8450.) (May be offered as a cross-career course with ENVE-3630.)**

A.1 Experiential Learning Categories

Does the proposed course revision include the addition or deletion of an experiential learning component? For definitions go to: https://www.uwindsor.ca/cces/1423/experiential-learning-definitions

☒ **No** - the revision(s) does (do) not include the addition or deletion of experiential learning component(s).

☐ **Yes** - the revision(s) include(s) the addition or deletion of experiential learning component(s). Check all that apply:

Experiential Learning Categories	Addition	Deletion
applied research	☐	☐
Capstone	☐	☐
Clinic	☐	☐
co-op	☐	☐
community service learning	☐	☐
creative performance or exhibit (*for visual and performing arts*)	☐	☐

Entrepreneurship	☐	☐
field experience or site visit	☐	☐
field work	☐	☐
industry/community consulting project	☐	☐
interactive simulations	☐	☐
internship – full-time	☐	☐
internship – part-time	☐	☐
professional practicum	☐	☐
research project	☐	☐
study abroad	☐	☐
Labs	☐	☐

A.2 **Are any of the courses being deleted currently required in one or more programs?** *(if no courses are being deleted, check "No".)*

____ Yes [A minor program change proposal (PDC Form C) or major program change proposal (PDC Form B) must be submitted with the summary of minor course and calendar changes (PDC Form E)]

_X___ No (If yes, list all courses that are being deleted and the programs in which they are currently required:

B. Learning Outcomes for the Courses Listed above where there are no official learning outcomes for the course.

LEARNING OUTCOMES TABLE

COURSE NUMBER AND TITLE: CIVL-4970. Life Cycle Thinking *Learning outcome were last updated: May 26, 2023 (No changes are being made to these learning outcomes)*	
Course Learning Outcomes *This is a sentence completion exercise.* At the end of the course, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A U of Windsor graduate will have the ability to demonstrate:
A. Conduct LCA, LCC, and S-LCA of products and processes according to international standards. Conduct system dynamic modelling (SDM) to evaluate the long-term performance of systems. Evaluate, interpret, and report social, environmental, and economic impacts of projects, products, and processes. Quantify greenhouse gas emissions.	A. the acquisition, application and integration of knowledge
B. Critically analyze the outputs from LCA software.	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C. Identify and obtain necessary data for LCA, LCC, and S-LCA. Analyze LCA results to propose controls and improvements to products and processes. Apply multi-criteria decision making (MCDM) in project evaluation.	C. critical thinking and problem-solving skills

Perform lifecycle costing.	
D.	D. literacy and numeracy skills
E. Interact professionally with others and in accordance with professional standards for engineering.	E. responsible behaviour to self, others and society
F.	F. interpersonal and communications skills
G.	G. teamwork, and personal and group leadership skills
H.	H. creativity and aesthetic appreciation
I.	I. the ability and desire for continuous learning

LEARNING OUTCOMES TABLE

COURSE NUMBER AND TITLE: CIVL-8006. Life Cycle Thinking *These are new graduate learning outcomes.*	
Course Learning Outcomes *This is a sentence completion exercise.* At the end of the course, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A U of Windsor graduate will have the ability to demonstrate:
A. Conduct LCA, LCC, and S-LCA of products and processes according to international standards. Conduct system dynamic modelling (SDM) to evaluate the long-term performance of systems. Evaluate, interpret, and report social, environmental, and economic impacts of projects, products, and processes. Quantify greenhouse gas emissions.	A. the acquisition, application and integration of knowledge
B. Critically analyze the outputs from LCA software. Critically evaluate LCA reports of case studies.	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C. Identify and obtain necessary data for LCA, LCC, and S-LCA. Analyze LCA results to propose controls and improvements to products and processes. Apply multi-criteria decision making (MCDM) in project evaluation. Perform lifecycle costing. Apply the principles of social LCA to evaluate social impacts of engineering systems Identify challenges associated with applying LCA, LCC, and S-LCA to engineering systems	C. critical thinking and problem-solving skills
D.	D. literacy and numeracy skills
E. Interact professionally with others and in accordance with professional standards for engineering.	E. responsible behaviour to self, others and society
F.	F. interpersonal and communications skills
G.	G. teamwork, and personal and group leadership skills

H.	H. creativity and aesthetic appreciation
I.	I. the ability and desire for continuous learning

COURSE NUMBER AND TITLE: ENVE-4811. Climate Change and Infrastructure *Learning Outcomes were last updated May 26, 2023. (No changes are being made to these learning outcomes)*	
Course Learning Outcomes *This is a sentence completion exercise.* At the end of the course, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A U of Windsor graduate will have the ability to demonstrate:
A. Quantify the effectiveness of mitigation and adaptation measures for climate change.	A. the acquisition, application and integration of knowledge
B. Apply ISO-aligned methodologies to quantify climate risk by evaluating likelihood, consequence, and exposure for infrastructure systems.	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C. Demonstrate systems thinking for a case study of a complex system.	C. critical thinking and problem-solving skills
D.	D. literacy and numeracy skills
E. Interact professionally with others and in accordance with professional standards for engineering. Demonstrate systems thinking to analyze a complex system by identifying interdependencies, feedback loops, and cascading impacts across interconnected infrastructure systems.	E. responsible behaviour to self, others and society
F.	F. interpersonal and communications skills
G.	G. teamwork, and personal and group leadership skills
H.	H. creativity and aesthetic appreciation
I.	I. the ability and desire for continuous learning

COURSE NUMBER AND TITLE: ENVE-8440/CIVL-8440. Climate Change and Infrastructure *These are new graduate learning outcomes.*	
Course Learning Outcomes *This is a sentence completion exercise.* At the end of the course, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A U of Windsor graduate will have the ability to demonstrate:
A. Quantify the effectiveness of mitigation and adaptation measures for climate change. Apply ISO-aligned methodologies to quantify climate risk by evaluating likelihood, consequence, and exposure for infrastructure systems..	A. the acquisition, application and integration of knowledge

Predict deterioration of infrastructure systems and conduct maintenance planning.	
B.	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C. ~~Demonstrate systems thinking for a case study of a complex system~~. Demonstrate systems thinking to analyze a complex system by identifying interdependencies, feedback loops, and cascading impacts across interconnected infrastructure systems.	C. critical thinking and problem-solving skills
D.	D. literacy and numeracy skills
E. Interact professionally with others and in accordance with professional standards for engineering.	E. responsible behaviour to self, others and society
F.	F. interpersonal and communications skills
G.	G. teamwork, and personal and group leadership skills
H.	H. creativity and aesthetic appreciation
I.	I. the ability and desire for continuous learning

COURSE NUMBER AND TITLE: ENVE-3630. Water and Wastewater Treatment *Learning Outcomes were last updated: Sept 13, 2023. (No changes are being made to these learning outcomes)*	
Course Learning Outcomes *This is a sentence completion exercise.* At the end of the course, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A U of Windsor graduate will have the ability to demonstrate:
A. Describe pollution and pollution control, use of water, water cycle, Ontario standards and guidelines. Describe water and wastewater (W&WWA) quality parameters. Perform analysis of W&Wwa: physical/chemical tests (pH, alkalinity, hardness etc.), settling type, biological oxygen demand.	A. the acquisition, application and integration of knowledge
B. Select processes for W&Wwa treatment. Lay-out plants with preliminary unit operations and processes. Design coagulation/flocculation processes, settling chambers, filtration beds, water softening, and disinfection unit processes for drinking water treatment. Design screens, grit chambers, flow measurement devices, primary clarifiers, chemical precipitation systems, biological treatment, sludge handling systems, stabilization ponds,	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)

aerated lagoons, disinfection, and disposal in relation to wastewater treatment.	
C.	C. critical thinking and problem-solving skills
D. Calculate design capacity for W&Wwa plants and unit processes. Collegially and respectfully engage with peers	D. literacy and numeracy skills
E.	E. responsible behaviour to self, others and society
F.	F. interpersonal and communications skills
G.	G. teamwork, and personal and group leadership skills
H.	H. creativity and aesthetic appreciation
I.	I. the ability and desire for continuous learning

(Note: Wet Weather Flow / Wet Weather Wastewater = W&Wwa)

COURSE NUMBER AND TITLE: ENVE-8450. Water and Wastewater Treatment *These are new graduate learning outcomes.*	
Course Learning Outcomes *This is a sentence completion exercise.* At the end of the course, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A U of Windsor graduate will have the ability to demonstrate:
A. Describe pollution and pollution control, use of water, water cycle, Ontario standards and guidelines. Describe water and wastewater (W&WWA) quality parameters. Perform analysis of W&Wwa: physical/chemical tests (pH, alkalinity, hardness etc.), settling type, biological oxygen demand.	A. the acquisition, application and integration of knowledge
B. Select processes for W&Wwa treatment. Lay-out plants with preliminary unit operations and processes. Design coagulation/flocculation processes, settling chambers, filtration beds, water softening, and disinfection unit processes for drinking water treatment. Design screens, grit chambers, flow measurement devices, primary clarifiers, chemical precipitation systems, biological treatment, sludge handling systems, stabilization ponds, aerated lagoons, disinfection, and disposal in relation to wastewater treatment.	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C. Learn to compare various treatment train while meeting the standards	C. critical thinking and problem-solving skills
D. Calculate design capacity for W&Wwa plants and unit processes.	D. literacy and numeracy skills

Demonstrate professional behaviour in their individual interactions with others (Examples: proper etiquette in e-mail and other communications, adherence to submission deadlines, courteous interactions with students and staff).	
E.	E. responsible behaviour to self, others and society
F.	F. interpersonal and communications skills
G.	G. teamwork, and personal and group leadership skills
H.	H. creativity and aesthetic appreciation
I.	I. the ability and desire for continuous learning

University of Windsor
Program Development Committee

*5.27: **Computer Science (Graduate) - Summary of Minor Course and Calendar Changes (Form E)**

Item for: **Information**

Forwarded by: **Faculty of Graduate Studies**

Form History *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

Date of Modification	Approval Body Modifying	Reason for Modification

INSTRUCTIONS ARE PROVIDED IN SHADED AREAS. DO NOT WRITE IN SHADED AREAS.

ALL SECTIONS OF THIS FORM ***MUST*** BE COMPLETED. **LEARNING OUTCOMES MUST BE PROVIDED FOR LISTED COURSES WHERE** THERE ARE **NO OFFICIAL LEARNING OUTCOMES FOR THE COURSE** IN THE PDC/SENATE RECORD (check the CuMA database at https://ctl2.uwindsor.ca/cuma/public/)

Confirmation of Consultation with AAUs That Will Be Affected, in Major Ways, by the Changes

AAU Consulted	AAU Head/Directors	Date Consulted	Supportive	
			Yes	No

Please specify to which calendar *[Undergraduate or Graduate]* **the changes will be made. Include the effective date*** *[Fall, Winter, Spring, 20XX]***.** **(subject to timely and clear submission)* **These changes require no new resources.**	Graduate calendar, Fall 2026

A. Proposed Course Calendar Revisions

Please provide the current and the proposed new course information by cutting and pasting from the current undergraduate or graduate online calendar (www.uwindsor.ca/secretariat/calendars) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining. For contact hour/laboratory requirement changes which do not always appear in the calendar, please type in the current information and clearly mark deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining. Example: **CHEM-1001. University Senates ~~– Role and Power~~** This course explores the history, role, and power of Senates in Canadian universities. ~~(Also offered as BIOC-1001.)~~ (Prerequisite: CHEM-1000.) ~~2 lecture hours and 1 tutorial hour per week~~ **3 lecture hours/week**

COMP-8740. **Foundations of** Machine Learning ~~and Pattern Recognition~~
~~This course is a~~**~~n~~** ~~general introduction to~~ **Students will learn the introduction background and foundations of** machine learning ~~and pattern recognition~~. Topics may include: **matrix algebra, probability theory, multivariable calculus, information theory, algorithms and complexity, intractability, computational learning theory, optimization,** Bayesian learning, ~~estimation, distance based models~~, linear methods, support vector machines, kernels, dimensionality reduction, **matrix decomposition and factorization,** ~~feature extraction and selection,~~ clustering, performance evaluation, regression, ~~representation learning, regularization,~~ decision trees, ~~random forest,~~ **and** neural networks ~~and deep learning models~~. Topics also include ~~the~~ legal, societal and ethical implications of machine learning ~~and pattern recognition. Applications in bioinformatics, genomics, networks, computer vision, speech, and natural language may be discussed~~. **(This is an experiential learning course.)**

PROGRAM DEVELOPMENT COMMITTEE
SUMMARY OF MINOR COURSE AND CALENDAR CHANGES
FORM E

A.1 Experiential Learning Categories

Does the proposed course revision include the addition or deletion of an experiential learning component? For definitions go to: https://www.uwindsor.ca/cces/1423/experiential-learning-definitions

☐ **No** - the revision(s) does (do) not include the addition or deletion of experiential learning component(s).

☒ **Yes** - the revision(s) include(s) the addition or deletion of experiential learning component(s). Check all that apply:

Experiential Learning Categories	**Addition**	**Deletion**
applied research	☒	☐
Capstone	☐	☐
Clinic	☐	☐
co-op	☐	☐
community service learning	☐	☐
creative performance or exhibit (*for visual and performing arts*)	☐	☐
Entrepreneurship	☐	☐
field experience or site visit	☐	☐
field work	☐	☐
industry/community consulting project	☐	☐
interactive simulations	☐	☐
internship – full-time	☐	☐
internship – part-time	☐	☐
professional practicum	☐	☐
research project	☒	☐
study abroad	☐	☐
Labs	☐	☐

A.2 **Are any of the courses being deleted currently required in one or more programs?** *(if no courses are being deleted, check "No".)*

____ Yes [A minor program change proposal (PDC Form C) or major program change proposal (PDC Form B) must be submitted with the summary of minor course and calendar changes (PDC Form E)]

____ No

If yes, list all courses that are being deleted and the programs in which they are currently required:

PROGRAM DEVELOPMENT COMMITTEE
SUMMARY OF MINOR COURSE AND CALENDAR CHANGES
FORM E

B. Learning Outcomes

LEARNING OUTCOMES TABLE

COURSE NUMBER AND TITLE: COMP-8740. Machine Learning and Pattern Recognition *Learning outcomes were last updated November 21, 2019. These are revised learning outcomes.*	
Course Learning Outcomes *This is a sentence completion exercise.* At the end of the course, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A U of Windsor graduate will have the ability to demonstrate:
A. Explain machine learning ~~and pattern recognition~~ methods for classification, clustering, regression and representation learning, and apply them to concrete practical problems.	A. the acquisition, application and integration of knowledge
B. Define methods for solving classification, clustering, regression and representation learning problems.	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C. Solve practical classification, clustering, regression and representation problems by using and combining several machine learning ~~and pattern recognition~~ concepts and strategies.	C. critical thinking and problem-solving skills
D. Write coherently, concisely, and clearly in a range of formats and for a variety of audiences.	D. literacy and numeracy skills
E. Explain the societal, legal and ethical implications of machine learning ~~and pattern recognition~~.	E. responsible behaviour to self, others and society
F. Present research work to computer science audiences, and answer questions.	F. interpersonal and communications skills
G. Design new algorithms in machine learning ~~and pattern recognition~~.	G. teamwork, and personal and group leadership skills
H. Identify situations in machine learning ~~and pattern recognition~~ and propose solutions.	H. creativity and aesthetic appreciation
I. Identify how good theoretical and practical knowledge of problems leads to efficient machine learning ~~and pattern recognition~~ solutions.	I. the ability and desire for continuous learning

Note: The title change to the course COMP-8740 will be reflected in the Master of Applied Computing (MAC) and Master of Science in Computer Science (MSc) Artificial Intelligence Stream program requirements.

University of Windsor
Program Development Committee

*5.28: **Dramatic Arts - Summary of Minor Course and Calendar Changes**

Item for: **Information**

Forwarded by: **Faculty of Arts, Humanities and Social Sciences**

Form History *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

Date of Modification	Approval Body Modifying	Reason for Modification

INSTRUCTIONS ARE PROVIDED IN SHADED AREAS. DO NOT WRITE IN SHADED AREAS.

ALL SECTIONS OF THIS FORM ***MUST*** BE COMPLETED. **LEARNING OUTCOMES MUST BE PROVIDED FOR LISTED COURSES WHERE** THERE ARE **NO OFFICIAL LEARNING OUTCOMES FOR THE COURSE** IN THE PDC/SENATE RECORD (check the CuMA database at https://ctl2.uwindsor.ca/cuma/public/)

Confirmation of Consultation with AAUs That Will Be Affected, in Major Ways, by the Changes

AAU Consulted	AAU Head/Directors	Date Consulted	Supportive	
			Yes	No
SoDA	David Court	March 2026	X	

Please specify to which calendar *[Undergraduate or Graduate]* **the changes will be made. Include the effective date*** *[Fall, Winter, Spring, 20XX]***.** **(subject to timely and clear submission)* **These changes require no new resources.**	Undergraduate Fall 2026

A. Proposed Course Calendar Revisions

Please provide the current and the proposed new course information by cutting and pasting from the current undergraduate or graduate online calendar (www.uwindsor.ca/secretariat/calendars) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining.

For contact hour/laboratory requirement changes which do not always appear in the calendar, please type in the current information and clearly mark deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining.

Example: **CHEM-1001. University Senates ~~– Role and Power~~** This course explores the history, role, and power of Senates in Canadian universities. ~~(Also offered as BIOC 1001.)~~ (Prerequisite: CHEM-1000.) ~~2 lecture hours and 1 tutorial hour per week~~ **3 lecture hours/week**

DRAM-1000. ~~Introduction to Theatre and Performance Studies I~~ **Introduction to Drama, Theatre and Performance Studies** ~~Introduction to the process of Theatre and Performance Studies.~~

An overview of major themes, concepts, and practices within the discipline of Drama, Theatre and Performance Studies. Several of the following topics will be covered: play and performance analysis; genre and style; alternative articulations of performance; **creative and design processes;** ~~theories and process of production design; a survey of technical practices;~~ and communication and collaboration. Introduction to **Drama,** Theatre and Performance Studies is ~~a two-part sequence,~~ required for majors in all School of Dramatic Art programs. This course must be successfully

completed in the first year of the program. (Open to non-majors). ~~(This is an experiential learning course.)~~ **(3 lecture hours or 2 lecture hours and 1 tutorial hour per week.)**

A.1 Experiential Learning Categories

Does the proposed course revision include the addition or deletion of an experiential learning component? For definitions go to: https://www.uwindsor.ca/cces/1423/experiential-learning-definitions

☐ **No** - the revision(s) does (do) not include the addition or deletion of experiential learning component(s).

☒ **Yes** - the revision(s) include(s) the addition or deletion of experiential learning component(s). Check all that apply:

Experiential Learning Categories	**Addition**	**Deletion**
applied research	☐	☐
Capstone	☐	☐
Clinic	☐	☐
co-op	☐	☐
community service learning	☐	☐
creative performance or exhibit (*for visual and performing arts*)	☐	☐
Entrepreneurship	☐	☐
field experience or site visit	☐	☐
field work	☐	☐
industry/community consulting project	☐	☐
interactive simulations	☐	☐
internship – full-time	☐	☐
internship – part-time	☐	☐
professional practicum	☐	☐
research project	☐	☐
study abroad	☐	☐
Labs	☐	☒

A.2 Are any of the courses being deleted currently required in one or more programs? *(if no courses are being deleted, check "No".)*

____ Yes [A minor program change proposal (PDC Form C) or major program change proposal (PDC Form B) must be submitted with the summary of minor course and calendar changes (PDC Form E)]

__x__ No

If yes, list all courses that are being deleted and the programs in which they are currently required:

B. Learning Outcomes for the Courses Listed above where there are no official learning outcomes for the course.

Learning outcomes were last updated April 17, 2025.

University of Windsor
Program Development Committee

*5.29: **Economics (Graduate) - Summary of Minor Course and Calendar Changes (Form E)**

Item for: **Information**

Forwarded by: **Department of Graduate Studies**

Form History *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

Date of Modification	Approval Body Modifying	Reason for Modification

INSTRUCTIONS ARE PROVIDED IN SHADED AREAS. DO NOT WRITE IN SHADED AREAS.

ALL SECTIONS OF THIS FORM ***MUST*** BE COMPLETED. **LEARNING OUTCOMES MUST BE PROVIDED FOR LISTED COURSES WHERE** THERE ARE **NO OFFICIAL LEARNING OUTCOMES FOR THE COURSE** IN THE PDC/SENATE RECORD (check the CuMA database at https://ctl2.uwindsor.ca/cuma/public/)

Confirmation of Consultation with AAUs That Will Be Affected, in Major Ways, by the Changes

AAU Consulted	AAU Head/Directors	Date Consulted	Supportive	
			Yes	No

Please specify to which calendar *[Undergraduate or Graduate]* **the changes will be made. Include the effective date*** *[Fall, Winter, Spring, 20XX]***.** **(subject to timely and clear submission)* **These changes require no new resources.**	Fall 2026

A. Proposed Course Calendar Revisions

Please provide the current and the proposed new course information by cutting and pasting from the current undergraduate or graduate online calendar (www.uwindsor.ca/secretariat/calendars) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining. For contact hour/laboratory requirement changes which do not always appear in the calendar, please type in the current information and clearly mark deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining. Example: **CHEM-1001. University Senates ~~– Role and Power~~** This course explores the history, role, and power of Senates in Canadian universities. ~~(Also offered as BIOC 1001.)~~ (Prerequisite: CHEM-1000.) ~~2 lecture hours and 1 tutorial hour per week~~ **3 lecture hours/week**

ECON-8260. Business Communications

~~This course aims to enhance students' communications skills and ability within a Canadian academic and employment context, including the opportunity to enhance their academic and occupational communication skills throughout a variety of relevant mediums. (NB: This course will be delivered in four modules with one ten-hour module completed each term of the program.) (ECON-8260A. Module 1: Business Communications; ECON-8260B. Module 2: The Writing Process; ECON8260C. Module 3: Presentation Skills; ECON8260D. Module 4: Employment Communications)~~ **Students develop and strengthen their communication skills within a Canadian academic and professional context, building the ability to communicate economic ideas effectively across a variety of relevant formats. The course is designed to enhance students' academic and professional communication abilities, including writing, presentations, and employment-related communication.**

PROGRAM DEVELOPMENT COMMITTEE
SUMMARY OF MINOR COURSE AND CALENDAR CHANGES
FORM E

A.1 Experiential Learning Categories

Does the proposed course revision include the addition or deletion of an experiential learning component? For definitions go to: https://www.uwindsor.ca/cces/1423/experiential-learning-definitions

☒ **No** - the revision(s) does (do) not include the addition or deletion of experiential learning component(s).

☐ **Yes** - the revision(s) include(s) the addition or deletion of experiential learning component(s). Check all that apply:

Experiential Learning Categories	Addition	Deletion
applied research	☐	☐
Capstone	☐	☐
Clinic	☐	☐
co-op	☐	☐
community service learning	☐	☐
creative performance or exhibit (*for visual and performing arts*)	☐	☐
Entrepreneurship	☐	☐
field experience or site visit	☐	☐
field work	☐	☐
industry/community consulting project	☐	☐
interactive simulations	☐	☐
internship – full-time	☐	☐
internship – part-time	☐	☐
professional practicum	☐	☐
research project	☐	☐
study abroad	☐	☐
Labs	☐	☐

A.2 Are any of the courses being deleted currently required in one or more programs? *(if no courses are being deleted, check "No".)*

____ Yes [A minor program change proposal (PDC Form C) or major program change proposal (PDC Form B) must be submitted with the summary of minor course and calendar changes (PDC Form E)]

__x__ No

If yes, list all courses that are being deleted and the programs in which they are currently required:

B. Learning Outcomes for the Courses Listed above where there are no official learning outcomes for the course.

N/A

University of Windsor
Program Development Committee

*5.30 **English and Creative Writing (Undergraduate/Graduate) - Summary of Minor Course and Calendar Changes (Form E)**

Item for: **Information**

Forwarded by: **Faculty of Graduate Studies**

Form History *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

Date of Modification	Approval Body Modifying	Reason for Modification

INSTRUCTIONS ARE PROVIDED IN SHADED AREAS. DO NOT WRITE IN SHADED AREAS.

ALL SECTIONS OF THIS FORM ***MUST*** BE COMPLETED. **LEARNING OUTCOMES MUST BE PROVIDED FOR LISTED COURSES WHERE** THERE ARE **NO OFFICIAL LEARNING OUTCOMES FOR THE COURSE** IN THE PDC/SENATE RECORD (check the CuMA database at https://ctl2.uwindsor.ca/cuma/public/)

Confirmation of Consultation with AAUs That Will Be Affected, in Major Ways, by the Changes

AAU Consulted	AAU Head/Directors	Date Consulted	Supportive	
			Yes	No
N/A				

Please specify to which calendar *[Undergraduate or Graduate]* **the changes will be made. Include the effective date*** *[Fall, Winter, Spring, 20XX]***.** **(subject to timely and clear submission)* **These changes require no new resources.**	Fall 2026

A. Proposed Course Calendar Revisions

Please provide the current and the proposed new course information by cutting and pasting from the current undergraduate or graduate online calendar (www.uwindsor.ca/secretariat/calendars) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining. For contact hour/laboratory requirement changes which do not always appear in the calendar, please type in the current information and clearly mark deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining.

Example: **CHEM-1001. University Senates ~~– Role and Power~~** This course explores the history, role, and power of Senates in Canadian universities. ~~(Also offered as BIOC-1001.)~~ (Prerequisite: CHEM-1000.) ~~2 lecture hours and 1 tutorial hour per week~~ **3 lecture hours/week**

ENGL-4000. ~~Honours~~ Seminar
A seminar focused on a specific topic in literary, cultural, language, or rhetoric studies. (Restricted to majors in English and IAS only.) (Prerequisite: Semester Five standing and three 3000-level English courses.) (May be repeated for credit if the topics are different.) ~~(Credit cannot be obtained for both ENGL-4000 and ENGL-4119, ENGL-4129, ENGL-4139, ENGL-4149, ENGL-4159, ENGL-4169, ENGL-4179, ENGL-4189, ENGL-4199, ENGL-4209 or ENGL-4249 unless topic is different.)~~ **(May be offered as a cross-career course with ENGL-8010).**

PROGRAM DEVELOPMENT COMMITTEE
SUMMARY OF MINOR COURSE AND CALENDAR CHANGES
FORM E

ENGL-8010. ~~Tutorials~~ Seminar
A seminar focused on a specific topic in literary, cultural, language, or rhetoric studies **(May be offered as a cross-career course with ENGL-4000).**

A.1 Experiential Learning Categories

Does the proposed course revision include the addition or deletion of an experiential learning component? For definitions go to: https://www.uwindsor.ca/cces/1423/experiential-learning-definitions

☒ **No** - the revision(s) does (do) not include the addition or deletion of experiential learning component(s).

☐ **Yes** - the revision(s) include(s) the addition or deletion of experiential learning component(s). Check all that apply:

Experiential Learning Categories	Addition	Deletion
applied research	☐	☐
Capstone	☐	☐
Clinic	☐	☐
co-op	☐	☐
community service learning	☐	☐
creative performance or exhibit (*for visual and performing arts*)	☐	☐
Entrepreneurship	☐	☐
field experience or site visit	☐	☐
field work	☐	☐
industry/community consulting project	☐	☐
interactive simulations	☐	☐
internship – full-time	☐	☐
internship – part-time	☐	☐
professional practicum	☐	☐
research project	☐	☐
study abroad	☐	☐
Labs	☐	☐

A.2 Are any of the courses being deleted currently required in one or more programs? *(if no courses are being deleted, check "No".)*

____ Yes [A minor program change proposal (PDC Form C) or major program change proposal (PDC Form B) must be submitted with the summary of minor course and calendar changes (PDC Form E)]

__X__ No. If yes, list all courses that are being deleted and the programs in which they are currently required:

B. Learning Outcomes for the Courses Listed above where there are no official learning outcomes for the course.

Please complete the following table. State the specific learning outcomes that make up the goal of the course (what will students know and be able to do at the end of this course?) and link the learning outcomes to the Characteristics of a University of Windsor Graduate outlined in "To Greater Heights" by listing them in the appropriate rows.Please note that a learning outcome may link to more than one of the specified Characteristics of a University of Windsor Graduate, and that a single course might not touch on each of the Characteristics. ***If a specific learning outcome is not applicable for the course, please enter N/A or not applicable.*** *Proposers are strongly encouraged to contact the Centre for Teaching and Learning for assistance with the articulation of learning outcomes.*

- The learning outcomes for ENGL-4000 (Honours Seminar) were last updated December 15, 2017. No changes are being made to the learning outcomes.
- The learning outcomes for ENGL-8010 (Tutorials) were last updated March 19, 2025. No changes are being made to the learning outcomes

University of Windsor
Program Development Committee

*5.31 **FAHSS - Summary of Minor Course and Calendar Changes (Form E)**

Item for: **Information**

Forwarded by: **Faculty of Arts, Humanities, and Social Sciences**

Form History *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

Date of Modification	Approval Body Modifying	Reason for Modification

INSTRUCTIONS ARE PROVIDED IN SHADED AREAS. DO NOT WRITE IN SHADED AREAS.

Confirmation of Consultation with AAUs That Will Be Affected, in Major Ways, by the Changes

AAU Consulted	AAU Head/Directors	Date Consulted	Supportive	
			Yes	No
Kinesiology	Dr. Jess Dixon			
Psychology	Dr. Patti Timmons Fritz			
Sociology & Criminology	Dr. John Deukmedjian			
Social Work	Dr. Wayne Ambrose-Miller			

Please specify to which calendar *[Undergraduate or Graduate]* **the changes will be made. Include the effective date*** *[Fall, Winter, Spring, 20XX]***.** **(subject to timely and clear submission)* **These changes require no new resources.**	Fall 2026

A. Proposed Course Calendar Revisions

IACS-4500. Practicum in Social Change
Supervised practicum in a university setting. Students consolidate and enhance their knowledge of sexual violence and bystander intervention, and they lead sexual violence prevention workshops to groups of students on campus. This course equips students to deliver educational content on sensitive issues. (Prerequisite: Final mark of 75% or higher in KINE-3501/IACS-3500/SOSC-3500/PSYC-3500/SWRK-3500/SACR-3500 and permission of the instructor by online application at bystanderinitiative.ca.) (Also offered as PSYC-4500, SACR-4500, SOSC- 4500, SWRK-4500.) (This is an experiential learning course. **Students will be required to comply with a practicum contract outlining professional and ethical behaviours and expectations. Failure to adhere to the contract may constitute sufficient cause to warrant dismissal from or failure of the course.**) **(This is an experiential learning course)**

A.2 Experiential Learning Categories

Does the proposed course revision include the addition or deletion of an experiential learning component? For definitions go to: https://www.uwindsor.ca/cces/1423/experiential-learning-definitions

☐ **No** - the revision(s) does (do) not include the addition or deletion of experiential learning component(s).

☒ **Yes** - the revision(s) include(s) the addition or deletion of experiential learning component(s). Check all that apply:

Experiential Learning Categories	Addition	Deletion
applied research	☐	☐
Capstone	☐	☐

Clinic	☐	☐
co-op	☐	☐
community service learning	☐	☒
creative performance or exhibit (*for visual and performing arts*)	☐	☐
entrepreneurship	☐	☐
field experience or site visit	☐	☐
field work	☐	☐
industry/community consulting project	☐	☐
interactive simulations	☐	☐
internship – full-time	☐	☐
internship – part-time	☐	☐
professional practicum	☐	☐
research project	☐	☐
study abroad	☐	☐
Labs	☐	☐

B. Learning Outcomes for the Courses Listed Above

COMPLETE THIS TABLE FOR EACH COURSE LISTED IN SECTION "A" ABOVE.	
COURSE NUMBER AND TITLE:	**IACS- 3500. Practicum Strategies in Social Change** *Learning outcomes were last updates January 15, 2025. These are revised learning outcomes.*
SELECT ONE OF THE FOLLOWING:	
I. There are no official learning outcomes for the course in the PDC/Senate record. (check the CuMA database at https://ctl2.uwindsor.ca/cuma/public/)	___Provide learning outcomes for the course by completing the Learning Outcomes Table below.
II. There are changes to the course learning outcomes	**_X__** Provide learning outcomes for the course by completing the Learning Outcomes Table below.
III. It has been 5 years since learning outcomes for the course were last submitted to PDC/Senate. (check the CuMA database for the date of last submission at https://ctl2.uwindsor.ca/cuma/public/)	___Provide learning outcomes for the course by completing the Learning Outcomes Table below.
IV. Learning Outcomes have been reviewed in the past 5 years and no revisions are being proposed.	____ Learning outcomes need not be submitted. PROVIDE DATE LAST REVIEWED BY PDC/SENATE then go to the next course: _____ (check CUMA database at: https://ctl2.uwindsor.ca/cuma/public/)

PROGRAM DEVELOPMENT COMMITTEE
SUMMARY OF MINOR COURSE AND CALENDAR CHANGES
FORM E

LEARNING OUTCOMES TABLE

IACS- 3500. Practicum Strategies in Social Change **Course Learning Outcomes** *This is a sentence completion exercise.* At the end of the course, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A U of Windsor graduate will have the ability to demonstrate:
A. Apply the relevant theory and research respecting: sexual violence prevention, bystander intervention, social norms, and social change.	A. the acquisition, application and integration of knowledge
B. Critically evaluate relevant literature.	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C. Evaluate situations and formulate appropriate strategies to reduce risk of sexual violence.	C. critical thinking and problem-solving skills
D.	D. literacy and numeracy skills
E. Develop strategies to interest others in changing social norms around sexual violence. Analyze and critique personal investments in racist, sexist, and/or homophobic discourses which support sexual violence and sexual assault.	E. responsible behaviour to self, others and society
F. ~~Formulate constructive feedback for group members. Also applies to G.~~ ~~Implement constructive feedback. Also applies to G.~~ **Actively and empathetically listen to others.** **Respectfully collaborate with peers.**	F. interpersonal and communications skills
G.	G. teamwork, and personal and group leadership skills
H.	H. creativity and aesthetic appreciation
I. Apply sexual violence prevention knowledge and principles ~~in~~**to** other settings (e.g., the workplace).	I. the ability and desire for continuous learning

PROGRAM DEVELOPMENT COMMITTEE
SUMMARY OF MINOR COURSE AND CALENDAR CHANGES
FORM E

COMPLETE THIS TABLE FOR EACH COURSE LISTED IN SECTION "A" ABOVE.	
COURSE NUMBER AND TITLE:	**IACS- 4500. Practicum in Social Change** *Learning outcomes were last updates January 15, 2025. These are revised learning outcomes.*
SELECT ONE OF THE FOLLOWING:	
I. There are no official learning outcomes for the course in the PDC/Senate record. (check the CuMA database at https://ctl2.uwindsor.ca/cuma/public/)	____ Provide learning outcomes for the course by completing the Learning Outcomes Table below.
II. There are changes to the course learning outcomes	**_X___** Provide learning outcomes for the course by completing the Learning Outcomes Table below.
III. It has been 5 years since learning outcomes for the course were last submitted to PDC/Senate. (check the CuMA database for the date of last submission at https://ctl2.uwindsor.ca/cuma/public/)	___ Provide learning outcomes for the course by completing the Learning Outcomes Table below.
IV. Learning Outcomes have been reviewed in the past 5 years and no revisions are being proposed.	___ Learning outcomes need not be submitted. PROVIDE DATE LAST REVIEWED BY PDC/SENATE then go to the next course: _____ (check CUMA database at: https://ctl2.uwindsor.ca/cuma/public/)

LEARNING OUTCOMES TABLE

IACS- 4500. Practicum in Social Change **Course Learning Outcomes** *This is a sentence completion exercise.* At the end of the course, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A U of Windsor graduate will have the ability to demonstrate:
A. Explain why Bringing in the Bystander™ is an effective sexual violence prevention workshop for university and college students. Also applies to C. Apply teaching methods needed to deliver Bringing in the Bystander™ program to small groups **(approximately 25-30 people)**. Also applies to F.	A. the acquisition, application and integration of knowledge
B. Critically evaluate relevant literature. Also applies to D.	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C. Design and apply strategies to address barriers to learning and other difficulties relevant to sexual violence prevention. Analyze the strengths and limitations of bystander-type intervention programs for a range of community members, in particular, racialized, Indigenous, and LGBTQ+ individuals.	C. critical thinking and problem-solving skills
D.	D. literacy and numeracy skills

PROGRAM DEVELOPMENT COMMITTEE
SUMMARY OF MINOR COURSE AND CALENDAR CHANGES
FORM E

IACS- 4500. Practicum in Social Change **Course Learning Outcomes** *This is a sentence completion exercise.* At the end of the course, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** A U of Windsor graduate will have the ability to demonstrate:
E. Develop and implement patient and professional responses to workshop participants' misunderstandings or ~~challenges to authority~~ **resistance to prevention education**.	E. responsible behaviour to self, others and society
F. Communicate the knowledge and skills for effective bystander-type intervention programs orally and in writing.	F. interpersonal and communications skills
G. Apply effective facilitation skills as a peer co-facilitator. Formulate constructive feedback for group members. (Also applies to F) Implement constructive feedback from group members. (Also applies to F.)	G. teamwork, and personal and group leadership skills
H.	H. creativity and aesthetic appreciation
I. Apply sexual violence prevention knowledge and principles ~~in~~**to** other settings (e.g., the workplace).	I. the ability and desire for continuous learning

University of Windsor
Program Development Committee

*5.32 **Political Science - Summary of Minor Course and Calendar Changes (Form E)**

Item for: **Information**

Forwarded by: **Faculty of Arts, Humanities and Social Sciences**

Form History *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

Date of Modification	Approval Body Modifying	Reason for Modification

INSTRUCTIONS ARE PROVIDED IN SHADED AREAS. DO NOT WRITE IN SHADED AREAS.

ALL SECTIONS OF THIS FORM ***MUST*** BE COMPLETED. **LEARNING OUTCOMES MUST BE PROVIDED FOR LISTED COURSES WHERE** THERE ARE **NO OFFICIAL LEARNING OUTCOMES FOR THE COURSE** IN THE PDC/SENATE RECORD (check the CuMA database at https://ctl2.uwindsor.ca/cuma/public/)

Confirmation of Consultation with AAUs That Will Be Affected, in Major Ways, by the Changes

AAU Consulted	AAU Head/Directors	Date Consulted	Supportive	
			Yes	No

Please specify to which calendar *[Undergraduate or Graduate]* **the changes will be made. Include the effective date*** *[Fall, Winter, Spring, 20XX]***.** **(subject to timely and clear submission)* **These changes require no new resources.**	Fall 2026

A. Proposed Course Calendar Revisions

Please provide the current and the proposed new course information by cutting and pasting from the current undergraduate or graduate online calendar (www.uwindsor.ca/secretariat/calendars) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining. For contact hour/laboratory requirement changes which do not always appear in the calendar, please type in the current information and clearly mark deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining. Example: **CHEM-1001. University Senates ~~– Role and Power~~** This course explores the history, role, and power of Senates in Canadian universities. ~~(Also offered as BIOC-1001.)~~ (Prerequisite: CHEM-1000.) ~~2 lecture hours and 1 tutorial hour per week~~ **3 lecture hours/week**

POLS-2640. Introduction to ~~Canadian~~ Foreign Policy and Diplomacy A
n overview of the formulation of and trends in foreign policy and the conduct of international diplomacy with a focus on how states make and implement foreign policy, the institutional settings in which foreign policy and diplomacy occur, and important contemporary debates about foreign policy and the changing nature of diplomacy. ~~An overview of the formulation and trends of Canadian foreign policy from World War I to the present, together with an examination of the domestic and external determinants of Canadian foreign policy and of the foreign policy making process.~~ (Prerequisite: POLS-1000, **or POLS-1300,** or POLS-1600, or consent of instructor.)

POLS-2670. Strategic Studies
An examination of the theories, tools, and concepts that explain **conflict** ~~war~~ and how ~~international~~ violence can be used for political ends **in the international system**. The focus will be primarily on the modern state system, especially ~~on~~ the post-WWII environment. ~~Among t~~ **T**opics **that may~~o~~** be addressed **include** ~~are~~ theories of war, deterrence, arms control, the **"**democratic peace**"** thesis, and proliferation of weapons of mass destruction. (Prerequisite: POLS-1600 or consent of the instructor.)

PROGRAM DEVELOPMENT COMMITTEE
SUMMARY OF MINOR COURSE AND CALENDAR CHANGES
FORM E

POLS-4950. ~~Advanced Topics in~~ Canadian Foreign Policy and Diplomacy

This seminar will focus on issues that are driving the contemporary Canadian foreign policy agenda. Members of the seminar will read and discuss recent research on topics including Canada's defence and security policy, trade and aid policies, environmental record, as well as more recent foreign policy initiatives. Students are expected to learn through active participation in the class. Students are also expected to have some background knowledge of both Canadian history and Canadian government and politics. ~~The course is restricted to Political Science and International Relations majors in and sSemesters 5 through 7 and 8.~~ **The course is restricted to majors in Political Science and International Relations in semesters 5 through 8.** Students must have taken POLS-1600 (Introduction to International Relations) before taking this course. ~~While not a pre-requisite, it is also recommended that students take POLS-2640 (Introduction to Canadian Foreign Policy) before this class, although the instructor will permit students into the course without it.~~

A.1 Experiential Learning Categories

Does the proposed course revision include the addition or deletion of an experiential learning component? For definitions go to: https://www.uwindsor.ca/cces/1423/experiential-learning-definitions

☒ **No** - the revision(s) does (do) not include the addition or deletion of experiential learning component(s).

☐ **Yes** - the revision(s) include(s) the addition or deletion of experiential learning component(s). Check all that apply:

Experiential Learning Categories	Addition	Deletion
applied research	☐	☐
Capstone	☐	☐
Clinic	☐	☐
co-op	☐	☐
community service learning	☐	☐
creative performance or exhibit (*for visual and performing arts*)	☐	☐
Entrepreneurship	☐	☐
field experience or site visit	☐	☐
field work	☐	☐
industry/community consulting project	☐	☐
interactive simulations	☐	☐
internship – full-time	☐	☐
internship – part-time	☐	☐
professional practicum	☐	☐
research project	☐	☐
study abroad	☐	☐
Labs	☐	☐

A.2 Are any of the courses being deleted currently required in one or more programs? *(if no courses are being deleted, check "No".)*

____ Yes [A minor program change proposal (PDC Form C) or major program change proposal (PDC Form B) must be submitted with the summary of minor course and calendar changes (PDC Form E)]

_X__ No

If yes, list all courses that are being deleted and the programs in which they are currently required:

PROGRAM DEVELOPMENT COMMITTEE
SUMMARY OF MINOR COURSE AND CALENDAR CHANGES
FORM E

B. Learning Outcomes for the Courses Listed above <u>where there are no official learning outcomes for the course</u>.

POLS-2640 and POLS-2670 - Learning outcomes were last updated May 24, 2019
POLS-4950 - Learning outcomes were last updated November 14, 2014

University of Windsor
Program Development Committee

*5.33 **Science - Summary of Minor Course and Calendar Changes**

Item for: **Information**

Forwarded by: **Faculty of Science**

Form History *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

Date of Modification	Approval Body Modifying	Reason for Modification

INSTRUCTIONS ARE PROVIDED IN SHADED AREAS. DO NOT WRITE IN SHADED AREAS.

ALL SECTIONS OF THIS FORM ***MUST*** BE COMPLETED. **LEARNING OUTCOMES MUST BE PROVIDED FOR LISTED COURSES WHERE** THERE ARE **NO OFFICIAL LEARNING OUTCOMES FOR THE COURSE** IN THE PDC/SENATE RECORD (check the CuMA database at https://ctl2.uwindsor.ca/cuma/public/)

Confirmation of Consultation with AAUs That Will Be Affected, in Major Ways, by the Changes

AAU Consulted	AAU Head/Directors	Date Consulted	Supportive	
			Yes	No

Please specify to which calendar *[Undergraduate or Graduate]* **the changes will be made. Include the effective date*** *[Fall, Winter, Spring, 20XX]***.** **(subject to timely and clear submission)* **These changes require no new resources.**	Fall 2026, Undergraduate Calendar

A. Proposed Course Calendar Revisions

Please provide the current and the proposed new course information by cutting and pasting from the current undergraduate or graduate online calendar (www.uwindsor.ca/secretariat/calendars) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining.

For contact hour/laboratory requirement changes which do not always appear in the calendar, please type in the current information and clearly mark deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining.

Example: **CHEM-1001. University Senates ~~– Role and Power~~** This course explores the history, role, and power of Senates in Canadian universities. ~~(Also offered as BIOC-1001.)~~ (Prerequisite: CHEM-1000.) ~~2 lecture hours and 1 tutorial hour per week~~ **3 lecture hours/week**

SCIE-1000. Communicating Science in the Wider World

~~Through the lenses of UWindsor's "grand challenges" (Environment, Health, Advanced Materials and Big Data),~~ s**S**tudents will learn fundamental written and oral communication skills using both online and face-to-face methods. Lessons, labs, group work, and writing and presentation**s** ~~assignment~~ will be incorporated in increasing literacy, numeracy and critical thinking skills**, while focusing on the range of science research at the University**. ~~(1 lecture hours and 2 laboratory hours per week)~~ **(Lecture and tutorial hours total 3 hours per week.)**

PROGRAM DEVELOPMENT COMMITTEE
SUMMARY OF MINOR COURSE AND CALENDAR CHANGES
FORM E

A.1 Experiential Learning Categories

Does the proposed course revision include the addition or deletion of an experiential learning component? For definitions go to: https://www.uwindsor.ca/cces/1423/experiential-learning-definitions

☒ **No** - the revision(s) does (do) not include the addition or deletion of experiential learning component(s).

☐ **Yes** - the revision(s) include(s) the addition or deletion of experiential learning component(s). Check all that apply:

Experiential Learning Categories	Addition	Deletion
applied research	☐	☐
Capstone	☐	☐
Clinic	☐	☐
co-op	☐	☐
community service learning	☐	☐
creative performance or exhibit (*for visual and performing arts*)	☐	☐
Entrepreneurship	☐	☐
field experience or site visit	☐	☐
field work	☐	☐
industry/community consulting project	☐	☐
interactive simulations	☐	☐
internship – full-time	☐	☐
internship – part-time	☐	☐
professional practicum	☐	☐
research project	☐	☐
study abroad	☐	☐
Labs	☐	☐

A.2 **Are any of the courses being deleted currently required in one or more programs?** *(if no courses are being deleted, check "No".)*

____ Yes [A minor program change proposal (PDC Form C) or major program change proposal (PDC Form B) must be submitted with the summary of minor course and calendar changes (PDC Form E)]

_x___ No

If yes, list all courses that are being deleted and the programs in which they are currently required: N/A

B. Learning Outcomes for the Courses Listed above where there are no official learning outcomes for the course.

Please complete the following table. State the specific learning outcomes that make up the goal of the course (what will students know and be able to do at the end of this course?) and link the learning outcomes to the Characteristics of a University of Windsor Graduate outlined in "To Greater Heights" by listing them in the appropriate rows. Please note that a learning outcome may link to more than one of the specified Characteristics of a University of Windsor Graduate, and that a single course might not touch on each of the Characteristics. ***If a specific learning outcome is not applicable for the course, please enter N/A or not applicable.*** *Proposers are strongly encouraged to contact the Centre for Teaching and Learning for assistance with the articulation of learning outcomes.*

N/A

University of Windsor
Program Development Committee

*5.34 **Women's and Gender Studies - Summary of Minor Course and Calendar Changes (Form E)**

Item for: **Information**

Forwarded by: **Faculty of Arts Humanities and Social Sciences**

Form History *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

Date of Modification	Approval Body Modifying	Reason for Modification

INSTRUCTIONS ARE PROVIDED IN SHADED AREAS. DO NOT WRITE IN SHADED AREAS.

ALL SECTIONS OF THIS FORM ***MUST*** BE COMPLETED. **LEARNING OUTCOMES MUST BE PROVIDED FOR LISTED COURSES WHERE** THERE ARE **NO OFFICIAL LEARNING OUTCOMES FOR THE COURSE** IN THE PDC/SENATE RECORD (check the CuMA database at https://ctl2.uwindsor.ca/cuma/public/)

Confirmation of Consultation with AAUs That Will Be Affected, in Major Ways, by the Changes

AAU Consulted	AAU Head/Directors	Date Consulted	Supportive	
			Yes	No

Please specify to which calendar *[Undergraduate or Graduate]* **the changes will be made. Include the effective date*** *[Fall, Winter, Spring, 20XX]***.** **(subject to timely and clear submission)* **These changes require no new resources.**	Undergraduate Fall 2026

A. Proposed Course Calendar Revisions

Please provide the current and the proposed new course information by cutting and pasting from the current undergraduate or graduate online calendar (www.uwindsor.ca/secretariat/calendars) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining. For contact hour/laboratory requirement changes which do not always appear in the calendar, please type in the current information and clearly mark deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining. Example: **CHEM-1001. University Senates ~~– Role and Power~~** This course explores the history, role, and power of Senates in Canadian universities. ~~(Also offered as BIOC 1001.)~~ (Prerequisite: CHEM-1000.) ~~2 lecture hours and 1 tutorial hour per week~~ **3 lecture hours/week**

ICWG-3060. **Feminist Inquiry** ~~Frameworks for Feminist Research~~
An exploration of the diverse approaches to feminist research in a variety of fields. Students will examine the core questions and approaches that various disciplines bring to the study of women. (Prerequisites: Two courses at the 2000-level or above from Women's and Gender Studies or consent of the instructor.)

ICWG-4100. Power, Resistance, Protest
This course explores how theories of power, resistance, and social change shape protest ethics and strategy. Students will learn how structuralist and poststructuralist ideas about power transform how feminists and antiracists conceptualize protest and the role of protest in a larger political movement or campaign within a democratic state. Large public protest is never an end in itself and is always the culmination of much social change work, such as public education, letter writing, consciousness-raising, lobbying, boycotts, and other campaign strategies. Students will work to put their research and politics into action, designing and implementing key components of a political campaign

illustrating what they are learning about effective protest design and strategy. (Prerequisite: ~~ICWG-2510 or HIST-2510~~ **ICWG-1000 or ICDS-2010** and one 3000-level Women's and Gender Studies **or Disability Studies** course, or consent of the instructor.)

A.1 Experiential Learning Categories

Does the proposed course revision include the addition or deletion of an experiential learning component? For definitions go to: https://www.uwindsor.ca/cces/1423/experiential-learning-definitions

☒ **No** - the revision(s) does (do) not include the addition or deletion of experiential learning component(s).

☐ **Yes** - the revision(s) include(s) the addition or deletion of experiential learning component(s). Check all that apply:

Experiential Learning Categories	**Addition**	**Deletion**
applied research	☐	☐
Capstone	☐	☐
Clinic	☐	☐
co-op	☐	☐
community service learning	☐	☐
creative performance or exhibit (*for visual and performing arts*)	☐	☐
Entrepreneurship	☐	☐
field experience or site visit	☐	☐
field work	☐	☐
industry/community consulting project	☐	☐
interactive simulations	☐	☐
internship – full-time	☐	☐
internship – part-time	☐	☐
professional practicum	☐	☐
research project	☐	☐
study abroad	☐	☐
Labs	☐	☐

A.2 Are any of the courses being deleted currently required in one or more programs? *(if no courses are being deleted, check "No".)*

____ Yes [A minor program change proposal (PDC Form C) or major program change proposal (PDC Form B) must be submitted with the summary of minor course and calendar changes (PDC Form E)]

_x___ No

If yes, list all courses that are being deleted and the programs in which they are currently required:

B. Learning Outcomes for the Courses Listed above where there are no official learning outcomes for the course.

ICWG-3060. Frameworks for Feminist Research (Learning Outcomes were last updated: January 15, 2025)

ICWG-4100. Power, Resistance, Protest (Learning Outcomes were last updated: January 15, 2025)

University of Windsor
Program Development Committee

*5.35 **Nursing (Graduate) Minor Program Change (Form C)**

Item for: **Approval**

Forwarded by: **Faculty of Nursing**

MOTION: That the Primary Health Care Nurse Practitioner (PHCNP) Graduate Diploma be renamed *Ontario Nurse Practitioner Education Consortium (ONPEC).^'^^*

^Subject to approval of the expenditures required.
^^ Pending Graduate Council approval

Rationale/Approvals:

- The changes have been approved by the Faculty of Nursing Council.
- Effective July 1, 2026- The College of Nurses of Ontario is making the nurse practitioner a generalist program and removing the previous primary care designation. Given this, all Universities are required to remove the PHC from their degrees.
- *See attached.*

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

TITLE OF PROGRAM(S)/CERTIFICATE(S):	**Primary Health Care Nurse Practitioner (PHCNP) Program**
DEPARTMENT(S)/SCHOOL(S):	**University of Windsor**
FACULTY(IES):	**Faculty of Nursing**

Proposed change(s) effective as of* [Fall, Winter, Spring]: **(subject to timely and clear submission)*	*Title change starting July 1, 2026 to Ontario Nurse Practitioner Education Consortium (ONPEC)* Graduate Fall 2026

Does the minor program change include new courses?:

____ Yes [All new course proposals must be submitted on PDC Form Ds and submitted for approval with the minor program change proposal (PDC Form C)]

___X_ No. If yes, list all new courses:

A.1 PROGRAM REQUIREMENT CHANGES

Please provide the current program requirements and the proposed new program requirements by cutting and pasting from the current undergraduate or graduate web calendar (www.uwindsor.ca/secretariat/calendars) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining. Example: Degree requirements: WXYZ-1000, ~~WXYZ-1010~~, WXYZ-1100, WXYZ-2100, WXYZ-3100, WXYZ-4100, plus three additional courses at the **3000-level or** 4000-level.

N/A

A.2 MINOR COURSE CHANGES REQUIRING ADDITIONAL RESOURCES OR AFFECTING DEGREE REQUIREMENTS -

*If this is a minor course and calendar change (usually noted on a Form E) requiring additional resources or affecting degree requirements, please provide the current course information and the proposed new course information by cutting and pasting from the current undergraduate or graduate web calendar and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with **bolding** and underlining. Examples of minor course changes include: deleting courses, course description changes, pre/anti/co- requisite changes, contact hour/lab requirement changes, course title changes, renumbering courses, and/or cross-listing courses. Minor course calendar changes, which do not require additional resources or do not affect degree requirements, should be submitted on a **Form E.-***

N/A

B. RATIONALE

Please provide a rationale for the proposed change(s).

The College of Nurses of Ontario is making the nurse practitioner a generalist program and removing the previous primary care designation. Given this, all Universities are required to remove the PHC from their degrees. Ontario's transition to a single Nurse Practitioner (NP) classification reflects a shift toward a more flexible and responsive healthcare workforce. By removing the previous "Primary Health Care NP (PHCNP)" designation and educating new NPs as generalists, the system emphasizes broad, entry-level competencies that prepare graduates to work across diverse clinical settings.

C. RESOURCES *-N/A*

C.1 Resources In Support of the Revised Program and Resource Implications for Other Campus Units or Programs (QAF section 2.1.2.6)

Describe, in general terms, all faculty and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the revised program. Please do not name specific individuals in this section. Describe the impact of the planned utilization of existing human, physical and financial resources (within and outside the unit) on other existing programs in the department or at the university.

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

Provide an assessment of the reliance of the revised program on existing resources from <u>other</u> campus units and include evidence that there are adequate resources available and committed to the revised program to sustain the quality of scholarship produced by undergraduate students as well as graduate students' scholarship and research activities. Consider, for example: faculty resources (within and outside the unit), existing courses (within and outside the unit), equipment or facilities outside the proposer's control, external resources requiring maintenance or upgrading using external resources, staff support, library, teaching and learning support, information technology support, laboratory access, student support services,space, equipment, facilities, GA/TA

N/A

C.1.1 Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program (QAF section 2.1.2.6) -*N/A*

Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the revised program and the associate plans to ensure the sustainability of the revised program and quality of the student experience.

N/A

C.2 Graduate Faculty Qualifications and Supervisory Loads (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7) -*N/A*

Explain how supervisory loads will be distributed, and describe the qualifications and appointment status of faculty who will provide instruction and supervision in the revised program.

N/A

C.3 Financial Assistance for Graduate Students (where appropriate) (FOR GRADUATE PROGRAMS ONLY) (QAF section 2.1.2.7) -*N/A*

Where appropriate to the revised program, provide evidence that financial assistance for graduate students will be sufficient to ensure adequate quality and numbers of students.

N/A

<u>C.4 Anticipated New Resources</u> (QAF sections 2.1.2.6) -*N/A*

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the revised program.*

N/A

<u>C.5 Planned Reallocation of Resources and Cost-Savings</u> -*N/A*

Describe all opportunities for <u>internal reallocation of resources and cost savings</u> identified and pursued by the area/department in support of the revised program. (e.g., streamlining existing programs and courses, deleting courses, etc.)

N/A

<u>C.6 Additional Resources Required – Resources Requested</u> (QAF section 2.1.2.6f) -*N/A*

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to run the revised program. If not applicable, write n/a.*

Faculty:	N/A
Staff:	N/A
GA/TAs:	N/A

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

C.6.1 Additional Institutional Resources and Services Required by all Affected Areas or Departments (QAF section 2.1.2.6f) -*N/A*

*Describe all **additional institutional resources and services** required by all affected areas or departments to run the revised program, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance. If not applicable, write n/a.*

Library Resources and Services:	N/A
Teaching and Learning Support:	N/A
Student Support Services:	N/A
Space and Facilities:	N/A
Equipment (and Maintenance):	N/A

D.1 Form History *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

Date of Modification	Approval Body Modifying	Reason for Modification

University of Windsor
Program Development Committee

*5.36 **Nursing (Graduate) - Summary of Minor Course and Calendar Changes (Form E)^**

Item for: **Information**

Forwarded by: **Faculty of Nursing**

^Pending Graduate Council approval

Form History *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

Date of Modification	Approval Body Modifying	Reason for Modification

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ALL SECTIONS OF THIS FORM ***MUST*** BE COMPLETED. **LEARNING OUTCOMES MUST BE PROVIDED FOR LISTED COURSES WHERE** THERE ARE **NO OFFICIAL LEARNING OUTCOMES FOR THE COURSE** IN THE PDC/SENATE RECORD (check the CuMA database at https://ctl2.uwindsor.ca/cuma/public/)

Confirmation of Consultation with AAUs That Will Be Affected, in Major Ways, by the Changes

AAU Consulted	AAU Head/Directors	Date Consulted	Supportive	
			Yes	No

Please specify to which calendar *[Undergraduate or Graduate]* **the changes will be made. Include the effective date*** *[Fall, Winter, Spring, 20XX]***.** **(subject to timely and clear submission)* **These changes require no new resources.**	Graduate Fall 2026

A. Proposed Course Calendar Revisions

Please provide the current and the proposed new course information by cutting and pasting from the current undergraduate or graduate online calendar (www.uwindsor.ca/secretariat/calendars) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining.
For contact hour/laboratory requirement changes which do not always appear in the calendar, please type in the current information and clearly mark deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining. Example: **CHEM-1001. University Senates ~~– Role and Power~~** This course explores the history, role, and power of Senates in Canadian universities. ~~(Also offered as BIOC-1001.)~~ (Prerequisite: CHEM-1000.) ~~2 lecture hours and 1 tutorial hour per week~~ **3 lecture hours/week**

NURS-8560. Research Utilization Project: Evidence Based Decision Making in Health Care: Integrating Knowledge into Advanced Practice
This course provides students with the knowledge and skills required to identify and use best evidence in advanced practice roles. The course focuses on developing a relevant evidence-based practice question, and searching appropriate evidence resources. Frameworks for the critical appraisal of quantitative and qualitative studies will be critiqued. Learning is facilitated through seminars, and workshops to address a question emerging from their own practice. Issues related to influencing practice, and health outcomes through evidence, at the level of the individual practitioner and the health care organization are addressed. (Prerequisite: **Enrolled in Ontario Nurse Practitioner Education Consortium (ONPEC) program** ~~COUPN Primary Health Care Nurse Practitioner Certificate~~)

PROGRAM DEVELOPMENT COMMITTEE
SUMMARY OF MINOR COURSE AND CALENDAR CHANGES
FORM E

NURS-8870. Integrative Practicum in Primary Health Care
Synthesize competencies essential to advanced practice nursing to provide primary health care for clients across the life span. Demonstrate autonomy in decision-making, and critical analysis of organizational and system issues that influence scope of practice, professional accountability, and outcomes. (Prerequisites: All **ONPEC** ~~PHCNP~~ courses; NURS-8810, NURS-8820 and NURS-8830.) (3 hours seminar per week; 32 hours clinical per week.)

A.1 Experiential Learning Categories

Does the proposed course revision include the addition or deletion of an experiential learning component? For definitions go to: https://www.uwindsor.ca/cces/1423/experiential-learning-definitions

☐ **No** - the revision(s) does (do) not include the addition or deletion of experiential learning component(s).

☒ **Yes** - the revision(s) include(s) the addition or deletion of experiential learning component(s). Check all that apply:

Experiential Learning Categories	Addition	Deletion
applied research	☐	☐
Capstone	☐	☐
Clinic	☐	☐
co-op	☐	☐
community service learning	☐	☐
creative performance or exhibit (*for visual and performing arts*)	☐	☐
Entrepreneurship	☐	☐
field experience or site visit	☐	☐
field work	☐	☐
industry/community consulting project	☐	☐
interactive simulations	☐	☐
internship – full-time	☐	☐
internship – part-time	☐	☐
professional practicum	☒	☐
research project	☐	☐
study abroad	☐	☐
Labs	☐	☐

A.2 <u>Are any of the courses being deleted currently required in one or more programs?</u> *(if no courses are being deleted, check "No".)*

____ Yes [A minor program change proposal (PDC Form C) or major program change proposal (PDC Form B) must be submitted <u>with</u> the summary of minor course and calendar changes (PDC Form E)]

_X___ No. If yes, list all courses that are being deleted and the programs in which they are currently required:

NURS-8870. Integrative Practicum in Primary Health Care
Learning outcomes were last updated May, 13, 2022

University of Windsor
Program Development Committee

*5.37: **Suspension of Admissions – Master of Social Work/Juris Doctor (MSW/JD)**

Item for: **Information**

Forwarded by: **Dean, Faculty of Arts, Humanities, and Social Sciences**

MEMORANDUM

To: Program Development Committee (PDC)

Date: May 6, 2026

Subject: Suspension of Admissions – MSW/JD dual degree Program

Admissions have been suspended to the MSW/JD dual degree program, effective Fall 2026.

The Faculty of Law and the School of Social Work have completed a joint review of Fall 2026 applications. Two applicants were offered admission but declined, and the remaining applicant will not be advanced. Overall, the applicant pool did not meet the standards expected for the MSW programs.

Over the past eight months, a comprehensive program review involving both Faculties and key administrative units identified persistent challenges affecting operations and the student experience, including course registration, tuition assessment, and access to funding, benefits, and OSAP. These issues stem largely from the program's dual undergraduate and graduate status.

Both Social Work and Law remain committed to supporting the current MSW/JD students

The Faculty of Arts, Humanities and Social Science (FAHSS) Coordinating Council and the Faculty of Law Council will be informed.

Tina Pugliese

Dr. Tina Pugliese, Interim Dean
Faculty of Arts, Humanities and Social Sciences