University of Windsor

PDC261118A

NOTICE OF MEETING
There will be a meeting of the
PROGRAM DEVELOPMENT COMMITTEE (PDC)
Wednesday November 18, 2026, 10:00am-11:30am
Location: Room 209 Assumption Hall or MS Teams
AGENDA

1	**Approval of Agenda**		
2	**Minutes of the Meeting of October 22, 2026**		**Approval** PDC261022M
3	**Business Arising from the Minutes**		
4	**Outstanding Business**		
	4.1	**Sino-Canadian Transnational Education (TNE) Establishing Joint Programs in China**	**Chris Busch-**Information PDC261118-4.1
5	**Reports/New Business**		
	***5.1**	**Education – Minor Program Changes (Form C)**	**Ken Montgomery-**Approval PDC261118-5.1
	***5.2**	**Music – Minor Program Changes (Form C)**	**Nicholas Papador**-Approval PDC261118-5.2
	***5.3**	**Accelerated BScN Program**	**Edward Cruz-**Information PDC261118-5.3
	***5.4**	**Mechanical Engineering – Summary of Minor Course and Calendar Changes (Form E)**	**Vesselin Stoilov -**Information PDC261118-5.4
	***5.6**	**Kinesiology (Graduate) – New Course Proposal (Form D)**	**Adriana Duquette-**Approval PDC261118-5.6
	***5.7**	**Kinesiology (Graduate) – Minor Program Changes (Form C)**	**Adriana Duquette-**Approval PDC261118-5.7
	***5.8**	**Kinesiology – Minor Program Changes (Form C)**	**Adriana Duquette-**Approval PDC261118-5.8
	***5.9**	**Language, Literature and Culture - Summary of Minor Course and Calendar Changes (Form E)**	**Tanja Collet-Najem**-Information PDC261118-5.9
	***5.10**	**Communication, Media and Film – Program Learning Outcomes**	**Kyle Asquith**-Information PDC261118-5.10
	***5.11**	**Kinesiology – Summary of Minor Course and Calendar Changes (Form E)**	**Adriana Duquette-**Information PDC261118-5.11
	***5.12**	**Kinesiology (Graduate) – Course Learning Outcomes**	**Adriana Duquette-**Information PDC261118-5.12

5.13 **Master of Engineering in Mechatronic Systems Engineering (with/without Co-op) New Program Proposal (Form A) and New Course Proposals** — **Darryl Danelon-**Approval PDC261118-5.13

CONFIDENTIAL ITEM *(This will be send in a separate package/email)*

5.13a **External Reviewers' Report, AAU/Head's Response, and Dean's Response** — **Darryl Danelon** -Information PDC261118-5.13a

6 **Question Period/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

4.1: **Sino-Canadian Transnational Education (TNE)**

Item for: **Discussion**

Forwarded by: **Chris Busch, Associate Vice-President, Global Engagement**

Background/Purpose:

- The University of Windsor is working with the Computer Science, Business, and Engineering, on the development of transnational education (TNE) partnerships in China, expanding program access to students abroad, strengthening teaching and research, and diversifying enrolment and revenue.
- The purpose of this report is to brief PDC members on the proposed partnerships, as well as to advise that these are still subject to required approvals, and that the required PDC Form Bs will be coming forward to Senate via PDC, if/when approved by the respective Councils.
- *See attached.*

Sino-Canadian Transnational Education
Stakeholder briefing • BUCEA and BTBU proposals

The University of Windsor is developing two academic partnerships in Beijing to extend access to its programs, deepen teaching and research relationships, and diversify enrolment and revenue. Both proposals remain subject to required approvals.

What is transnational education?
Transnational education (TNE) enables students to pursue a university's credential while some or all instruction occurs outside that university's home country. It can combine partner and visiting-faculty teaching, shared curricula, and opportunities to study in Canada. A joint institute is a multi-program academic unit within a partner university, with agreed governance and responsibilities. The Windsor proposals involve collaborative academic delivery and oversight that extend beyond conventional transfer agreements.

What Windsor is proposing
BUCEA — Beijing University of Civil Engineering and Architecture.
A joint institute offering four undergraduate Engineering programs through a 4+0 model: four years of study in Beijing, with optional Windsor mobility. Proposed areas are Environmental Engineering, Automotive Engineering, Mechatronic Engineering and Environmental Engineering, mapped to corresponding Windsor Engineering degrees. A Windsor study year would not be compulsory for this model.

BTBU — Beijing Technology and Business University.
A joint institute with three undergraduate programs using a 3+1 model: three years in Beijing and the final year in Windsor, subject to approved progression requirements. These comprise two Computer Science pathways, including Software Engineering, and Business Data Analytics and Supply Chain Management. A proposed Master of Management specialization in International Accounting and Finance uses a 2+0 model, with two years in Beijing.

Why these partnerships matter
- *Wider access and enrolment diversification.* Students can access a Windsor education without relocating for an entire degree. BTBU's 3+1 model also creates a structured pathway to the Windsor campus.

- *Academic and research opportunity.* Sustained faculty relationships can support joint research, publications, graduate connections, reciprocal mobility and international teaching experience.

- *Resources for the academic mission.* The proposed financial approach provides for delivery costs and reinvestment. Partners provide local infrastructure, reducing the need for Windsor capital investment.

- *Long-term institutional value.* Well-supported partnerships can strengthen Windsor's international relationships, visibility and alumni networks while complementing campus-based education.

The role of UWindsor faculty in the institutes
UWindsor faculty will be central to the institutes' academic direction and quality. Through their academic units and University governance processes, faculty shape curricula, establish learning outcomes and assessment expectations, review instructor qualifications, and evaluate student achievement. Their involvement will help ensure that programs delivered through the institutes meet the standards expected of a Windsor education.

Participation can extend beyond teaching in China. Opportunities include academic oversight, collaboration with partner instructors, joint research, and student supervision. Faculty who wish to teach within the institutes may also gain international teaching experience and build sustained relationships with colleagues at BUCEA and BTBU.

Teaching in China will be voluntary. Teaching arrangements will be developed through applicable collective agreements and University processes, with attention to workload, compensation, travel and safety, and maintaining teaching capacity in Windsor. This approach reflects OECD/UNESCO guidance that "*the active and constructive*

contributions of academic staff are indispensable" to quality cross-border education.

Protecting the Windsor degree
Protecting the academic quality and reputation of a University of Windsor degree is central to both proposals. Students studying through the institutes will be required to meet approved Windsor academic standards and degree requirements.

The proposed safeguards place academic oversight, quality assurance and accountability at the centre of delivery:

- *Windsor retains academic authority*. UWindsor's academic units and governance bodies retain responsibility for approving its curricula, academic standards and degree requirements. Joint institute governance coordinates implementation within that authority; it does not replace Senate or established academic approval processes.

- *Faculty oversee academic quality.* UWindsor academic units will, or have already, review curriculum alignment, learning outcomes, instructor qualifications, assessment practices, and access to appropriate laboratories and learning resources.

- *Quality is monitored throughout delivery.* Ongoing academic review will draw on student performance, assessment results and access to academic records to identify concerns and require corrective action. Cooperation agreements provide arrangements that support students in completing their studies if a partnership ends.

- *Degree recognition and professional accreditation are distinct.* Graduates will earn a Windsor degree upon meeting approved requirements. Overseas delivery does not automatically carry the same professional accreditation—for example, BUCEA programs would not inherit Engineers Canada accreditation held by Windsor's campus-based programs. The degree remains a Windsor academic credential, with acceptance for further study, employment or licensure subject to applicable requirements in Canada and abroad.

- *Established practices support academic standards.* Windsor's proposed institutes will use approved curricula, faculty oversight and clear partnership responsibilities to maintain academic standards and address differences between educational systems.

These safeguards will be demonstrated through academic approval and implementation planning and will be maintained throughout the life of each institute.

Who is responsible
UWindsor. Academic units and Faculties lead program design, instructor standards, assessment and academic review. Windsor retains responsibility for its awards and quality assurance, supported by the Program Development Committee, Senate and the applicable graduate and institutional quality processes.

Chinese partners. BUCEA and BTBU provide local facilities, administration, partner teaching and support, and lead host-country regulatory processes. Recruitment and admissions arrangements respect the approved requirements of each awarding institution.

Shared governance. Joint bodies coordinate delivery and monitor performance within each university's authority. Global Engagement supports partnership development and coordination.

Comparable Canadian university activity
Canadian universities already deliver degree programs with Chinese partners. The examples below demonstrate comparable forms of collaboration, although their curricula, credentials and delivery arrangements differ from Windsor's proposals.

Canadian university	Example of delivery with a Chinese partner
Dalhousie	A 4+0 Joint College with Fujian Agriculture and Forestry University allows students to complete degrees in China, with Dalhousie curriculum and instruction. Eligible graduates receive degrees from both institutions.
Thompson Rivers	A 4+0 Bachelor of Business Administration with Tianjin University of Technology, established in 2002, delivers the full TRU program in China through faculty from both universities.
UBC	The International MBA with Shanghai Jiao Tong University offers graduate Business study in Shanghai, with a study and professional-development visit to Vancouver.
Waterloo	The Materials and Nanosciences partnership with Beijing Jiaotong University uses a 2+1+1 model, including Waterloo courses taught in China and a required year in Waterloo, leading to dual degrees for eligible graduates.

Consultation and next steps

The planning target is Senate consideration in January 2027 to support a proposed launch later in 2027. Chinese regulatory approval, Windsor academic approval and implementation readiness are distinct requirements. Stakeholder engagement is underway, with engagement owners leading discussions with academic councils, governance committees, unions and student groups, supported by the TNE team. Stakeholders are invited to test the academic case, identify required safeguards and resources, and raise concerns early.

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CHE 中国高等教育
CHINA HIGHER ED

Embassy of Finland
Beijing



ESTABLISHING JOINT PROGRAMS IN CHINA

PUBLISHED BY CHE IN CONJUNCTION WITH
THE EMBASSY OF FINLAND BEIJING
JUNE 2021

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05 TRENDS & STATUS OF RECENT APPROVED MOE JOINT PROGRAMS

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01 REPORT OBJECTIVE

This report examines the history, current status and trends of joint programs in China by comparing Transnational Education Programs (TNE) including Credit Transfer, Joint Programs, Joint Institutes, and China Campuses, and by examining the motivations and incentives for both parties to enter such relationships. It explains the Chinese Ministry of Education (MoE)'s approval process, reviewal principles and the degree recognition system, as well as financial models, and tax and legal obligations. A snapshot of sampled approvals in terms of country of origin, discipline, and structure (2+2, 3+1) is also provided.

The report provides fundamental knowledge for education professionals to understand the landscape within which they operate and equips them with the most up-to-date information to capture opportunities, while minimizing risks when making major TNE program decisions.



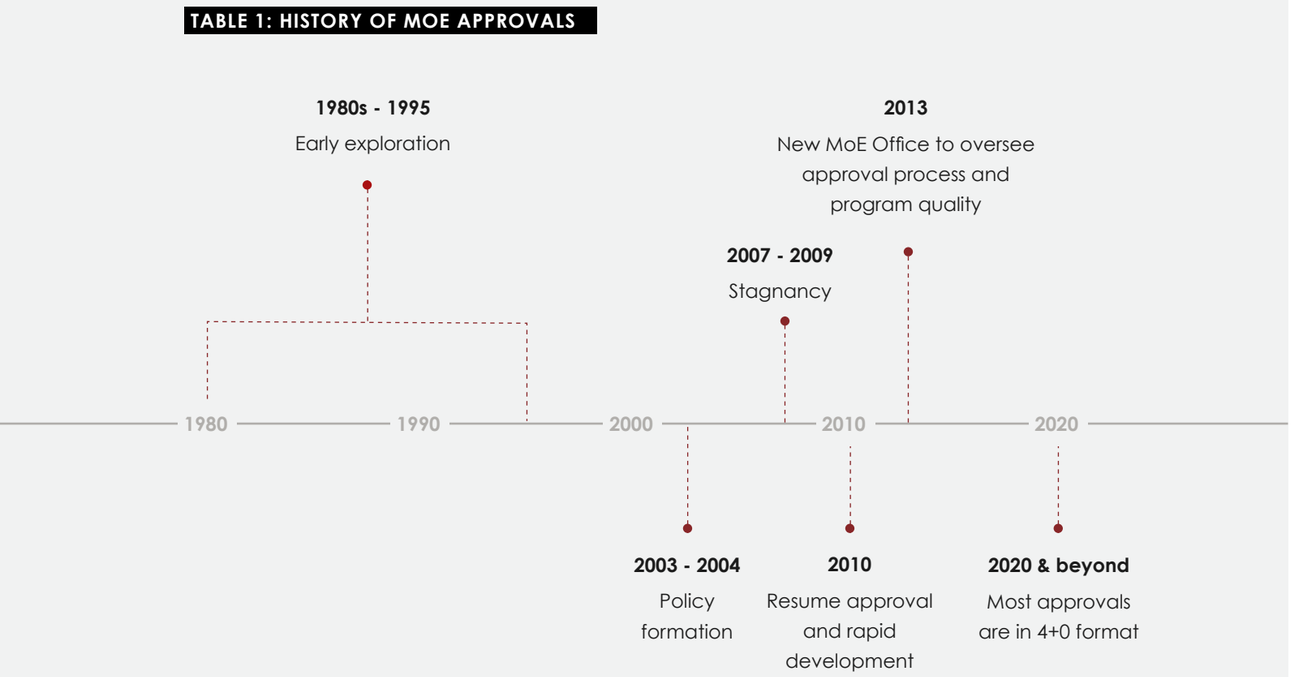
02 TRANSNATIONAL EDUCATION PROGRAMS (TNE)

2.1 DEFINITIONS

According to the Chinese Ministry of Education (MoE), a joint education program (JEP) is defined as a degree program jointly hosted by both a domestic education institution and a foreign education institution, whereby the foreign institution provides a minimum of one third of the curriculum and teaching resources.

Joint programs enable students to obtain an undergraduate or postgraduate degree, certificate or credits, from either or both domestic and foreign universities, without having to study abroad.

TABLE 1: HISTORY OF MOE APPROVALS



2.2 CREDIT TRANSFER VS. JOINT PROGRAM

Credit Transfer Programs (CTP) – sometimes referred to as Articulation Programs or Bridging Courses – can be differentiated from Joint Education Programs (JEP) by the following attributes:

- CTPs are an agreement made between two or more educational institutions, based on their course mapping. CTPs recognise certain studies undertaken at Chinese universities, and provide credits in the event that students continue their studies at a foreign institute.
- CTPs do not require the MoE's approval, but an endorsement from the MoE is still expected.
- The international institution can only recruit from the Chinese institution's existing cohort.
- CTPs require minimal input from international institutions and are flexible in terms of curriculum and teaching; while JEPs require the international institution to provide a third of the total teaching resources as a minimum.
- CTP agreements are often not bilateral but multilateral, with multiple parties giving Chinese students a number of study abroad options.
- A CTP agreement can be signed as soon as both parties reach an agreement, while the establishment of JEPs can take up to one or two years.
- CTPs often take the form of two years at the Chinese institution followed by two years at the foreign university (2+2); while joint programs require most, if not all, studies be conducted in China.
- It is possible to have a Credit Transfer component within any Joint Program if the Chinese student wishes to transfer to an offshore campus to complete his/her studies overseas. However a student in a credit transfer program will not be be able to join another joint program structure.

Table 2: Comparison of Joint Program and Credit Transfer Programs

COMPARISON POINT	JOINT PROGRAM	CREDIT TRANSFER PROGRAM
Foreign Teaching Requirements	Foreign teaching input is highly visible and significant, one-third of the curriculum and teaching resources is required from abroad	Often there is no curriculum input by foreign parties; foreign teaching may be absent or very limited, with the exception of the language courses.
Government approval	MOE approval is required	MOE approval is not required
Time frame	Can take up to one year to set up.	Can be established as soon as both institutions have approved it.
Partnership Exclusivity	Students enrolled into joint programs must study within the joint program structure.	Studying in one particular foreign university is often one of the options for students enrolled in a Credit Transfer program.
Students recruiting	Program recruitment is through Gaokao or other open recruiting methods from society	The program can only recruit from Chinese university's existing students pool
Course format + Graduate outcome	In most cases only 3+1 structure is permitted; more often it is a 4+0 structure to allow students to complete the course without going abroad	Following a 2+2 or 3+1 format, only a subset of enrolled students will meet entry requirements to continue their study in a foreign university; others will complete their course in China

2.3 JOINT PROGRAM VS. JOINT INSTITUTE VS. CHINA CAMPUS

A Joint Institute is a collaboration established between one Chinese education institution and its international partner(s) at the faculty level, often containing three or more joint programs. The coordinated administrative structure of a joint institute allows multiple joint programs to be run. At the end of 2020, there were a total of 84 joint institutes in China, nearly half of which were established after 2019.

Most joint institutes operate within a Chinese university campus and are, legally a sub-division under their Chinese university partners. There are however eleven independent legal education entities in China. These "China campuses" of international institutions enjoy a relatively high level of independence both in their physical operation and their legal status.

- New York University, Shanghai
- Xian Jiaotong Liverpool, Suzhou
- The Chinese University of Hong Kong, Shenzhen
- Israel Institute of Technology, Guangdong
- Cheung Kong Graduate School of Business, Beijing
- Kean University, Wenzhou
- Duke University, Kunshan
- University of Nottingham, Ningbo
- BNU-HK Baptist University United Int. College, Zhuhai
- BIT-Moscow University, Shenzhen
- China Europe International Business School

2.4 WHY ESTABLISH A JOINT EDUCATION PROGRAM (JEP) AND JOINT EDUCATION INSTITUTE (JEI) IN CHINA

① **Collaboration Foundation**

② **Market Access & Presence**

③ **Scalable Recruiment**

④ **Research Scope & Opportunity**

⑤ **Access to Industry**

A JEP/JEI provides a framework for closer collaboration of institutions and stipulates resource commitment from both parties. Joint programs are more likely to remain on the agenda of senior management meetings of both parties.

All the MoE approved JEPs/JEIs are listed on the MoE website http://jsj.moe.gov.cn/ (Chinese language only). The website is a starting point for many Chinese students and families when making their study decisions and brings higher visibility not only to the joint program itself, but also to each individual institution on the website.

At the undergraduate level, most recruitment is part of the Gaokao system, which is the most reliable path to achieve scalable recruitment in China and has long-lasting benefits.

Partnerships formed through JEPs often extend beyond the programs themselves, resulting in joint research and industry collaborations, with potential to leverage the overall network of the Chinese partner institution.

2.5 KEY MOTIVATIONS FOR CHINESE INSTITUTIONS ENTERING JOINT PROGRAMS

2.5.1 MOTIVATIONS

Approx. 1/3rd of the 2,000 Chinese universities and VET (Vocational Education and Training) providers are currently involved in at least one joint program, driven by the following motivations:

- Strong senior level connections (at university, or local government level)
- Strong interest driven by faculty staff
- Opportunity to improve the internal academic capacity of the Chinese university
- As a way of differentiating, increasing their competitiveness in the market, and better positioning themselves for higher student recruitment numbers and higher tuition fees
- An opportunity to meet administrative targets set by the local government, earning political achievement bonuses for the university leadership.
- Increased opportunity for international staff exchanges
- Providing more student scholarships

2.5.2 BARRIERS FOR THE CHINESE INSTITUTION

- Fewer suitable existing connections at either university level or faculty level
- Too many existing joint programs. The new proposal does not have any unique offering
- No internal champion to drive the program from concept through to approval
- Proposed program does not add value to the Chinese university (program is too insignificant, has an uncertain future, or does not bring prestige or revenue to the Chinese university)
- Unease with terms and conditions specified by foreign universities. For example, ownership of intellectual property
- Mismatch in partner university aims and objectives.

2.6 BARRIERS AND CONSIDERATIONS TO ENTERING JEP/JEI ARRANGEMENT BY AN INTERNATIONAL INSTITUTION

2.6.1 BARRIERS FOR THE INTERNATIONAL INSTITUTION

- Lack of understanding of JEP policies, regulations and operational realities at both the senior management and the faculty level
- Management forming a belief that the institution does not have sufficient teaching resources to meet the 1/3rd foreign input requirement and is reluctant to find alternative solutions
- Concern about intellectual property issues
- Management treating JEPs as a "slow investment return" compared to Credit Transfer and Recruiting through Agents, without appropriate internal financial models and figures to compare the costs for the three options
- Lack of experienced in-house HR resources to drive the process
- Not knowing how and where to start the process
- Fear of failure

2.6.2 KEY CONSIDERATIONS WHEN FINDING A SUITABLE CHINESE PARTNER

- Understanding the Chinese university's ranking, reputation, student background and quality
- Understanding the institution's overall internationalisation level and the capability of the particular faculty with which you are going to work
- Their internal approval and operation structure
- Understanding the local competition through feasibility studies
- Conducting due diligence on the potential Chinese partner.

2.6.3 HOW TO IDENTIFY A SUITABLE CHINESE INSTITUTION PARTNER

Ways in which foreign universities identify their Chinese university partners may include:

- Via an existing relationship that has been formed during joint research/publishing efforts, student/staff exchanges or personal connections within a faculty
- Selecting potential Chinese partners that have similar strengths or who focus in a particular field of study
- Geographic location and ranking considerations
- Understanding the complex relationship between a standard faculty which is fully owned by the institution, as opposed to an independent institute which is often partially owned by the institution

2.7 THE MOE'S APPROVAL & RENEWAL PROCESS

2.7.1 THE STANDARD APPROVAL PROCESS

Joint program applications are subject to three levels of approval by the following parties:

FOREIGN UNIVERSITY → **CHINESE INSTITUTION**

Upon successful internal approval, the application will then be submitted to the provincial education bureau.

→ **PROVINCIAL EDUCATION BUREAU**

Upon successful approval, the application, together with the provincial government's recommendations will then be submitted to the MoE.

→ **MOE**

The MoE had delegated the approval of VET level of Joint Programs and Institutes fully to the Provincial Education Bureaus; and indicated its willingness to further decentralize approval authorization. However, to date the MoE is still responsible for final approvals.

2.7.2 REASONS WHY APPLICATIONS ARE REJECTED

After individual faculty approval, Joint program applications can be rejected at three levels: at the university level, at the regional education bureau level and by the MoE for several reasons:

- Non-encouraged majors (i.e. business, marketing, accounting, etc.)
- Lack of quality resources from foreign institutions, such as lower ranking, insufficient teaching and curriculum input
- The Chinese university does not have existing capacity for such a major
- Insufficient content in the collaboration agreement (e.g. unclear statement for the handling of dispute resolution, etc.)
- High number of applications received at the provincial level, but due to the restricted number of applications that can be submitted up to the MoE, some applications may never get passed upwards from the provincial level
- University needs to screen its internal applications, so it will only transmit applications with the best chance for the higher authority's approval.
- In principle, education providers that apply for a 2nd joint program, must attach an MoE evaluation report of its first JEP as part of its application. In other words, the MoE is expected to have sufficient time to assess the quality of the first joint program before it approves a 2nd.

2.7.3 THE RENEWAL PROCESS

All approved joint programs must be renewed after the first teaching cycle or first cohort of graduates.

The renewal is largely a self-assessment process combined with some selected onsite auditing based on criteria published by the MoE in 2004 including:

- The legality of the JEP – whether or not it has been involved in compulsory education and the special education of military and police forces as well as religion and politics
- Whether the formation of the board or committee and the appointment of senior management has been confirmed by regulations
- Whether or not the program has protected the rights and interests of staff members and students
- Satisfactory auditing of required documentation including internal management guidelines, teaching staff qualifications, curriculum outlines as well as the approval of tuition and tax lodgements.



2.8 QUALIFICATIONS & DEGREE RECOGNITIONS

2.8.1. DEGREE QUALIFICATIONS

Graduates from TNE programs can receive qualifications in a number of different configurations. The table below presents different level of commitments and value propositions by each of the partner institutions.

Table 3. Configuration of Degrees and Certificates by TNE Programs

QUALIFICATIONS	CHINESE EDUCATION PROVIDER		INTERNATIONAL EDUCATION PROVIDER		CONDITION
	DEGREE	CERTIFICATE	DEGREE	CERTIFICATE	
Dual Degrees	Yes		Yes		
Single Degree	Yes				
			Yes		
Degree + Certificate	Yes			Yes	MoE approval is required
		Yes	Yes		MoE approval is NOT required



2.8.2 WHO PERFORMS DEGREE RECOGNITION?

The Chinese Service Centre for Scholarly Exchange (CSCSE) is an affiliate organization of MoE - it is tasked with verifying and giving accreditation to degrees awarded overseas. This entity also provides degree recognition for international students who have received a Chinese degree and later apply to study outside China. Applications can be lodged online, through agents or onsite at their Beijing office.

There are two types of degree accreditation conducted by CSCSE:

① Accreditation of degrees for students who **obtained their degree abroad** (i.e. enrolled in a foreign university and studied abroad). This will be first processed at the local Chinese consulate, then it will be submitted to the CSCSE upon the student's return to China.

② Accreditation of a foreign degree that was obtained through a **joint program**.

CSCSE's accreditation policy has remained somewhat ambiguous. There are several categories of accreditation and rejection. They are listed below, in order of likelihood of accreditation:

- Programs (both undergraduate and postgraduate) that are approved by MoE will be accredited
- Quota students who enrolled into non-MoE endorsed credit transfer programs have many precedents of getting their overseas degree accredited
- Technically, students who receive credit for their overseas study require a minimum stay of one year abroad, and the foreign degree obtained must be credited by the authorities in that country, which must also have a bilateral agreement with the Chinese Ministry of Education.

2.8.3. WHY CHINESE STUDENTS NEED DEGREE RECOGNITION

Gaining accreditation in China is beneficial to Chinese graduates who received degrees from abroad for the following reasons::

- It is a pre-requisite for seeking employment in the government sector or state-owned organisations (including enterprises, institutions and universities)
- It is essential for those wishing to gain preferential treatment under China's household registration (i.e. the "hukou") system which determines the city you can reside in and receive government services and benefits.
- It is a requirement for applying for benefits such as funding support for a new start-up business. Funds are offered by local governments and industry zones to selected overseas returnees.

03 LEGAL OBLIGATIONS & SOCIAL RESPONSIBILITY

China has experienced decades of legislative vacuum in a wide range of areas. To resolve this issue, China constantly issues "regulations" to fulfil urgent needs. However, some of these "regulations" issued by various administrative departments can be conflicting, too generalized or lacking in consistency.

3.1 LEGAL GROUND

- 1995 Sino-Foreign Cooperative Education Temporary Measures
- 1998 The Higher Education Law of the People's Republic of China (CFCRs)
- 2003 Sino-Foreign Cooperative Education Regulations
- 2004 The Implementing Details
- 2017 Foreign NGO Law
- 2020 Measures for the Hiring and Management of Foreign Teachers (Draft for Solicitation of Comments)
- Others: Company Law, Contract Law, Intellectual Property Law, Advertising Law & Employment Law

3.2 EXPECTATIONS

JEPs & JEIs are required to be executed within the legal and regulative framework of the People's Republic of China. This includes maintaining a stable financial position, remaining uninvolved with religions, maintaining an approved tuition fee, recruitment quotas and fulfilling its contractual obligations with all stakeholders. Socially, JEPs and JEIs are expected to take responsibility for students' wellbeing and endeavour to create a better future for the students.

3.3 BREACHES

Legal and administrative measures developed in the last twenty years enable penalties to apply to organizations on both sides, as well as to individuals who breach rules and regulations. They are divided into two major categories: administrative penalties and criminal charges.

The following government departments may be involved in executing any penalties and charges: Education Department, Public Security Bureau, Tax Bureau, Pricing Bureau, Labour Bureau, Commerce Bureau, Intellectual Property Bureau, Arbitration authorities and Courts.

3.3.1 PENALTIES FOR ORGANISATIONS:

- Administrative sanctions
- Fines
- Recruiting permit revoked
- For those charged with a criminal offence, a sanction will be imposed to prevent them establishing joint programs for ten years.

3.3.2 PENALTIES FOR INDIVIDUALS:

- Demotion within the Chinese university or government departments
- A ten-year ban on joining any boards
- Criminal charges

3.3.3 ADMINISTRATIVE PENALTIES MAY APPLY FOR THE FOLLOWING BREACHES

- Poor quality programs and disorganised management
- Licenses or degrees issued to those who do not meet the required standards
- Inaccurate course promotion to the public and misleading the public
- Recruiting prior to MoE approval
- Charging tuition higher than what has been approved

3.3.4 CRIMINAL OFFENCES MAY APPLY FOR THE FOLLOWINGS:

- Corruption
- Trading licenses and degrees as commodities
- Providing fake documentation

3.4 COMMONLY ASKED LEGAL QUESTIONS

The most commonly asked questions include: the language (Chinese vs. other) of the contract, arbitration vs. court system, legal jurisdiction and intellectual property issues. These concerns should be raised with legal professionals who are familiar with the Chinese legal system and practices.

For independent legal entities, there are additional legal obligations and complexities. Tangible and intangible investment, share structure, conformation of the Board, hiring and firing of senior management, borrowing and default legality are all concerns outside the scope of this report.

04 FINANCIAL MODEL, TUITION AND PRC TAXES

4.1 FINANCIAL MODEL

4.1.1 FINANCIAL MODEL FOR JEPS/JEIS

- Revenue sharing model: both parties agree on a revenue sharing model beforehand, based on their own structure and the evaluation of each party's contribution
- Each institution largely manages its own costs and minimises its financial exposure in the joint entity. Under this model, the international institution normally receives a fixed fee to minimise its risk. This is the most commonly adopted method in recent years
- In some cases, it may be possible to receive government subsidies including scholarships, free rental and tax preferential status in the first few years of establishment.

4.1.2 FINANCIAL MODEL FOR CREDIT TRANSFER ARRANGEMENTS

- In most cases, credit transfer programs involve none or very little money exchange between the two countries' institution; however, to ensure the forex conversion rate meets expectations, the international institutions may consider meeting the cost of their own staff travel, or pay for this via a 3rd party.
- In some cases, both parties may agree upon a "joining fee" to screen students' willingness and financial ability to pay for studying abroad, and to motivate students to exert greater academic efforts in order to meet the credit transfer requirements. This also helps to increase the motivation of the operators.

4.2 TUITION & PRICING STRUCTURE

All joint programs' costs should be submitted to the Local Commodity Pricing Bureau (Wu Jia), who will determine the final tuition based on the costs, the local consumption level and the outcome of the institutions' bilateral negotiations.

Table 4. Tuitions Range of Joint Programs in China (per annum) in Euro

	LOWEST TIER	MID-TIER	HIGH TIER	HIGHEST TIER
Tuition	€1,300 - 3,200	€3,200 - 6,500	€6500+	€39,000 - 75,000

Most international institutions find their China teaching component only shows at best a narrow profit margin, with breaking even being a common goal. The benefit for foreign partners is converting more students to study at their home campus to complete bachelor studies or continue their post-graduate studies.

4.3 LOCAL TAXES

Chinese local taxes apply in three areas:

① **The joint program/institute itself as an operating organization**

② **International staff who are based in or frequently travel to China**

③ **Payments made by the joint program/institute to the international partner**

4.3.1 THE TAX LANDSCAPE FOR JEP/JEI

China charges two types of taxes: VAT and profit tax. The tax applied to JEPs/JEIs depends on the nature of the Chinese and international party (public vs. private, quota students or non-quota students, issuing degree or certificate, etc.). The key determinant is the dialogue between the Chinese partner and its local tax bureau, as regional policies can differ significantly. In 2020, the state tax bureau issued VAT exemptions to all Chinese degree programs, despite some programs having been charged tax previously.

4.3.2 TAX FOR INDIVIDUAL INTERNATIONAL STAFF MEMBERS

Any international staff members who spend more than 183 days in China will be considered as Chinese tax residents, regardless of whether their salary was received in China or overseas. Preferential tax treaties have been offered for staff working on JEPs/JEIs, with tax rebates on housing expenses, children's education and language study. This rebate, however, will be revoked after 2022.

4.3.3 REPATRIATION

There are two reasons for fund repatriation (transfer of funds by the joint program to the international partner):

① **Curriculum royalties**

② **Payment to personnel**

Taxes will be paid by the Chinese institution to tax bureaus in their city / provinces. The international institution should understand its overall tax obligations to ensure a fair and lasting relationship. The most common tax rate on royalties is 10%, while personal individual income tax is on a sliding scale from 3% to 45%. In the event that a non-tax resident receives payment directly from the Chinese entity, a 90 day China residency rule applies.

05 TRENDS AND THE STATUS OF CURRENT MOE APPROVED PROGRAMS

Currently there are over 2,000 joint programs operating in China. Approximately half of them are at degree education level or above and half are at diploma (VET) level, with over 600 Chinese institutions and 800 international education providers being involved. There were 700,000 Chinese students studying aboard before the pandemic and at least 550,000 Chinese students are enrolled in a joint study program in China at any given time.

Over 200 joint programs have been voluntarily terminated. The MoE approves two batches of around 30 joint programs/institutes each year in March and September. We use a sampled study of the MoE's 134 "double top tier universities [1]" to understand the dynamics of Joint Programs today.

TABLE 6. MOST POPULAR JOINT PROGRAMS BY DISCIPLINE*

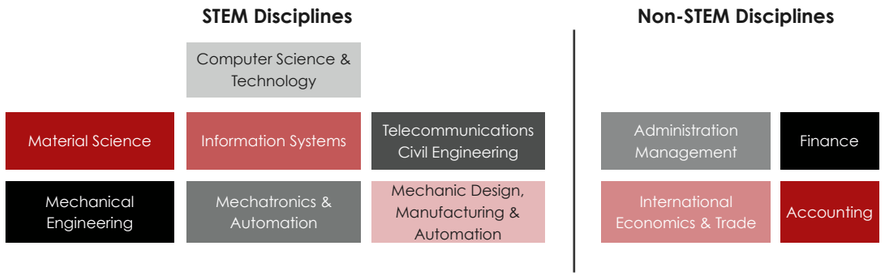
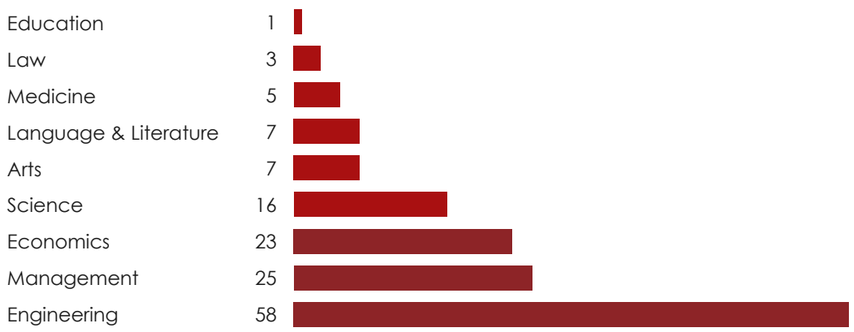


TABLE 5. JOINT PROGRAMS BY FIELDS*



[1] Double Top Tier Universities are a ranking given by the MoE to top universities and/or to top quality courses with the aim of growing these courses/universities to reach top global rankings. These universities are in the process of replacing the previous university categories – the 985 universities and the 211 universities, none of which are looking at individual courses.

*based on sample studies on "Double Top Tier Universities". Source: EOL

TABLE 7. JOINT PROGRAMS BY COUNTRY OF ORIGIN (OF INTERNATIONAL INSTITUTION)

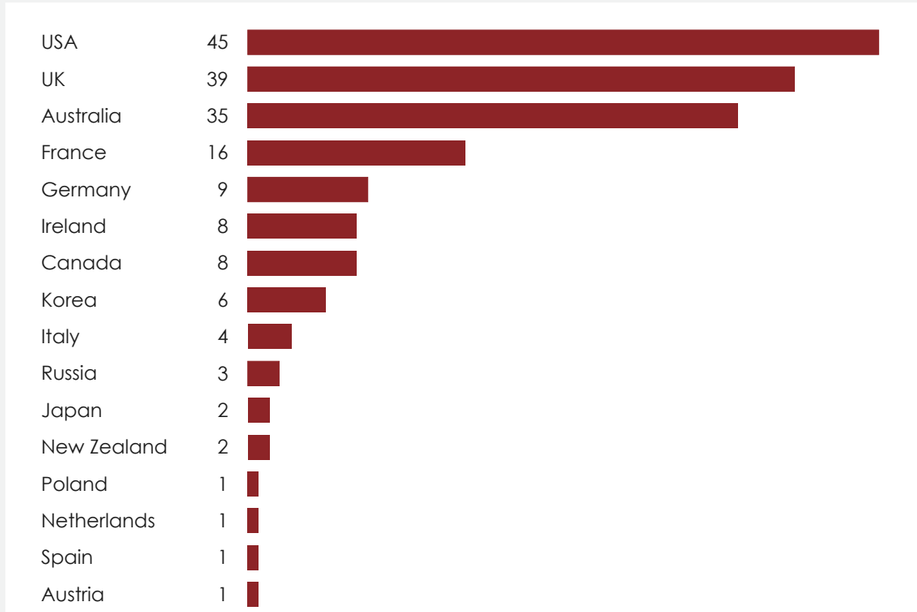
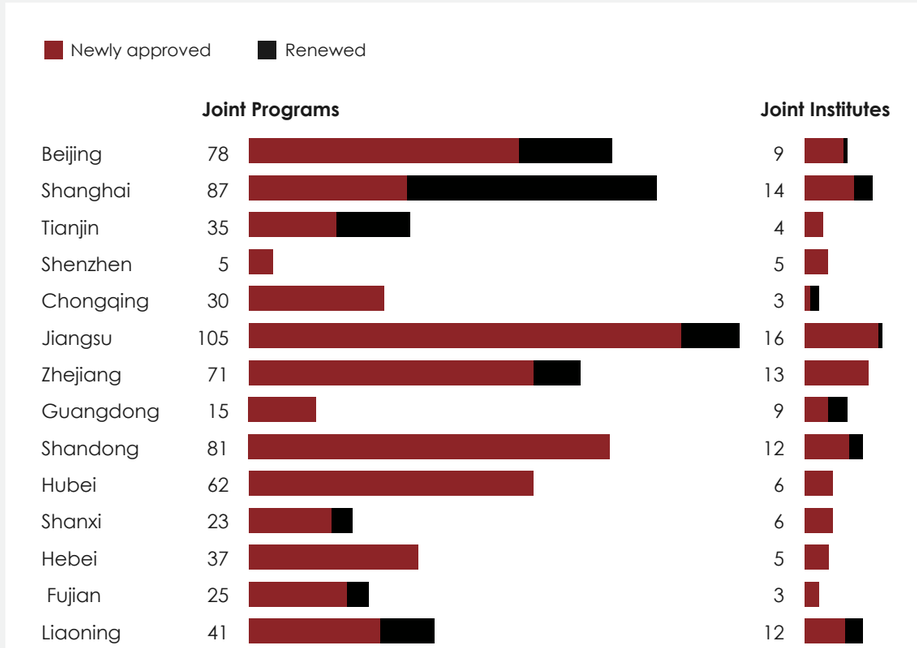


TABLE 8. SNAPSHOT OF APPROVALS BY THE MOE (AS OF MAY 2021)



06 SUMMARY & CONCLUSION

Both joint programs and joint institutes can be successful choices in today's environment, whether through revenue-sharing or conversion of students to offshore campuses. Key factors for success are:

- Identifying and screening opportunities carefully
- Strong buy-in and support from senior management and faculties
- An experienced execution team with local knowledge

CREDIT TRANSFER VS. JOINT PROGRAM

Credit Transfer is the most appropriate for high-ranking universities or highly sought after courses. Joint Programs take a long time to establish but can potentially serve both institutions for decades.

Table 9. Pros and Cons of Joint Program and Credit Transfer

	INVESTMENT	OPERATIONAL COSTS	MOE APPROVAL	RECRUITING CERTAINTY
Credit Transfer	Minimum	Unpredictable	Not required	Low
Joint Programs	1/3 of the teaching and curriculum contribution	More predictable	Required	Certain

CURRICULUM DESIGN

Designing a successful joint program curriculum requires a good understanding of the target student cohort, particularly language requirements, prerequisite knowledge and interest in domestic or global content, among others.

LOCATION

Whether you are considering top tier cities, lesser-known places or special trade-free zones, there is no one answer for the best location. Each opportunity needs to be assessed on a case-by-case basis, taking into consideration local market competition, the partners' reputation and know-how and the administrative operational environment.



THIRD PARTY INVOLVEMENT

Third parties have been involved in the establishment of TNE programs in the last two decades. A third party may add value to the initial stage or have an ongoing operational involvement. It is important that education providers fully understand the role the third party plays in the structure, and that education providers maintain control and require full transparency.

FEASIBILITY AND DUE DILIGENCE

It is important to allocate time and resources to conduct feasibility and due diligence research to understand the operating environment as well as your Chinese partners' history, reputation and capability.

LEGAL AND TAX

This report is only able to provide a glance of the complexity of legal and tax issues; It is highly recommended to engage professionals who have experience in China.

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University of Windsor
Program Development Committee

*5.1: **Education – Minor Program Changes (Form C)**

Item for: **Approval**

Forwarded by: **Faculty of Education**

MOTION : That the Concurrent General Bachelor of Arts/Bachelor of Education/Diploma in Early Childhood Education be discontinued .^

^*Subject to approval of the expenditures required*.

Rationale/Approvals:

- The proposal been approved by the Faculty of Education Council.
- *See attached*.

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

TITLE OF PROGRAM(S)/CERTIFICATE(S):	Concurrent General Bachelor of Arts/Bachelor of Education/Diploma in Early Childhood Education
DEPARTMENT(S)/SCHOOL(S):	Concurrent program administered jointly by the participating academic unit(s) and the Faculty of Education
FACULTY(IES):	Faculty of Arts, Humanities and Social Sciences; Faculty of Education (in cooperation with St. Clair College)

Proposed change(s) effective as of* [Fall, Winter, Spring]: **(subject to timely and clear submission)*	Spring 2027

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)]

☒ 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.

~~**Concurrent General Bachelor of Arts (Psychology)/Bachelor of Education/Diploma in Early Childhood Education** As of Fall 2014, there are no new admissions to this program.~~

~~The Concurrent Bachelor of Arts Bachelor of Education/Diploma in Early Childhood Education Program is offered jointly over five years by the Faculty of Arts and Social Sciences, and the Faculty of Education, in Co-operation with St. Clair College. The aim is to provide the opportunity and preparation to individuals who wish to teach at the preschool and Primary-Junior levels. Graduates of this program will receive two degrees and a diploma and will acquire the necessary skills and knowledge to fulfill the requirements for certification by the Ontario College of Teachers.~~

~~Degree Requirements~~
~~All students are required to complete the thirty-course requirement of the University of Windsor General B.A. degree program, in addition to the Education courses EDUC-5203, EDUC-5204, EDUC-5205, EDUC-5209, EDUC-5311, EDUC-5312, EDUC-5313, EDUC-5314, EDUC-5315, EDUC-5316, EDUC-5317, EDUC-5318, and Practice Teaching (EDUC-5491, EDUC-5492, EDUC-5493, and EDUC-5494. The St. Clair College Early Childhood Education component will consist of the following courses, ECE 100C, ECE 106C, ECE 117C, ECE 120C, ECE 130C, ECE 209C, ECE 210C, ECE 216C, ECE 230C, ECE 310C, ECE 408C, ECE 409C, ECE 411C, and field placements. Requirements can also be met for teaching in the Roman Catholic school system by taking EDUC-5200.~~

~~Suggested Course Sequence~~
~~Course sequencing is subject to change. Contact the Faculty of Education each semester for details.~~
~~FIRST YEAR~~
~~Fall Term: five B.A. courses~~
~~Winter Term: five B.A. courses~~
~~SECOND YEAR~~
~~Fall Term: four BA courses; the BEd course EDUC-5203 (Educational Psychology), EDUC-5491 (full-year course)~~

~~Winter Term: ECE 100C, ECE 117C, ECE 120C, ECE 130C, ECE 210C, ECE 409C, and ECE 106; EDUC-5491 (full-year course)~~
~~Spring Term: two weeks of E.C.E. preschool field placement and two weeks of B.Ed. JK/SK practice teaching (EDUC-5491 (full-year course))~~
~~THIRD YEAR~~
~~Fall Term: three B.A. courses; the BEd courses EDUC-5314, and EDUC-5315; EDUC-5492 (full-year course)~~
~~Winter Term: three B.A. courses; the BEd courses EDUC-5311, EDUC-5313, EDUC-5316 and EDUC-5317; EDUC-5492 (full-year course)~~
~~Spring Term: four weeks of B.Ed. Junior grades practice teaching (EDUC-5492) (full-year course)~~
~~FOURTH YEAR~~
~~Fall Term: ECE 209C, ECE 230C, ECE 310C, ECE 408C, ECE 411C, ECE 216C and 4-week field placement; EDUC-5493 (full-year course)~~
~~Winter: four B.A. courses; the B.Ed. course EDUC-5204, EDUC-5493 (full-year course)~~
~~Spring: four weeks of E.C.E. Infant/Toddler field placement~~
~~FIFTH YEAR~~
~~Fall Term: three BA. courses; the BEd courses EDUC-5209; EDUC-5312; EDUC-5318; EDUC-5494 (full-year course)~~
~~Winter Term: three BA courses; the BEd course EDUC-5205; EDUC-5494 (full-year course)~~
~~Spring Term: 4 weeks of BEd Primary grades practice teaching (EDUC-5494 (full-year course)~~
~~Courses used to calculate the BA major average are: as listed for the General BA program.~~
~~Courses used to calculate the Education major average are: All required Education courses.~~

~~Standing Required for Continuation~~
~~Students must comply with the general university regulations, and with the academic regulations of their particular BA program. In addition, candidates who obtain three or more final Education course grades below 65% will not be recommended for certification. Candidates who are unsuccessful in practice teaching or obtain a grade of F in any course will not be recommended for either a degree or certification. Students may repeat only one B.Ed. course, excluding EDUC-5491, EDUC-5492, EDUC-5493, EDUC-5494, for upgrading throughout the program. Any deviation from the prescribed sequence of courses must be approved by the Dean of the Faculty of Education.~~

~~Graduation~~
~~Graduates of the program receive both the Bachelor of Arts and the Bachelor of Education (General) degrees from the University of Windsor, and the Diploma in Early Childhood Education from St. Clair College. The Faculty of Education does not issue a teaching certificate. The Ontario Certificate of Qualification is issued by the Ontario College of Teachers upon recommendation of the Dean of the Faculty of Education. Only Canadian citizens or Permanent Residents of Canada qualify for this certificate. Under certain conditions, the Ontario College of Teachers may grant a non-Canadian citizen an Interim Certificate of Qualification.~~

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.***

No new resources are needed.

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

B. RATIONALE

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

The Calendar states that there have been no new admissions to this program since Fall 2014. The Faculty's internal Calendar review likewise identified this as an obsolete program that should be removed. Deleting the entry will improve Calendar accuracy and avoid confusion with the active concurrent B.Ed. streams. The change has no effect on the revised three-semester P/J B.Ed. pathway and creates no new program or admission route. The Concurrent Bachelor of Arts/Bachelor of Education/Diploma in Early Childhood Education program and its associated program description, degree requirements, suggested course sequence, standing requirements and graduation provisions are deleted from the Undergraduate Calendar. This deletion is a Calendar clean-up only. It does not affect any active admissions pathway and does not create a replacement Psychology/ECE concurrent stream.It does not effect the current Concurrent BA (Psychology)/Bacher of Education/Diploma in early Childhood Education)

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 resources are required. This is the deletion of an obsolete Calendar entry for a program that has not admitted students since Fall 2014.

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 - no program delivery is associated with this deletion.

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 - undergraduate program deletion.

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 - undergraduate program deletion.

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. No new resources are anticipated.

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.)

Removal of the obsolete entry simplifies the Calendar and removes legacy program/course references. No active resources are being reallocated.

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

University of Windsor
Program Development Committee

*5.2: **Music – Minor Program Changes (Form C)**

Item for: **Approval**

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

MOTION: That the admission and degree requirements for the Honours Bachelor of Arts in Music and Combined Bachelor of Arts in Music 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 School of Creative Arts and the Faculty of Arts, Humanities and Social Sciences Council.
- *See attached.*

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

TITLE OF PROGRAM(S)/CERTIFICATE(S):	**Honours Bachelor of Arts in Music** **Combined Bachelor of Arts in Music**
DEPARTMENT(S)/SCHOOL(S):	**School of Creative Arts**
FACULTY(IES):	**FAHSS**

Proposed change(s) effective as of* [Fall, Winter, Spring]: **(subject to timely and clear submission)*	Fall 2027

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.

MUSIC PROGRAM REGULATIONS

Advanced Standing Examinations: Upon admission to a Music program a student may petition to write advanced standing examinations in MUSC-1120, ~~MUSC-1130~~.

~~Program Approval: BMus students and Concurrent Bachelor of Music (General) Education students must have their programs approved by an advisor on the basis of an audition prior to registration. All applications for graduation will be subject to approval and such approval will be granted only when the academic program completed is identical with that previously approved by the academic advisor in consultation with the student.~~

Concert/Recital Viewing Policy: Attendance at a significant number of live musical performances will enrich students' musical experience and contribute to applied musical and academic success. Therefore, a Concert/Recital Viewing ~~Requirement~~ **assessments may be** ~~is~~ included in select course syllabi. ~~This policy applies to all full-time students in Music programs during each year of registration.~~

AREAS OF STUDY

Requirements for programs in Music make reference to the following groups of courses:

Areas of Study-Academic

History and Literature (Musicology): MUSC-1260, MUSC-1270, MUSC-2270, MUSC-2470, MUSC-3170, MUSC-3270, MUSC-3460, MUSC-4260, MUSC-4360, MUSC-4370, MUSC-4470, MUSC-4940. Theory and Composition: MUSC-1120, MUSC-1130, MUSC-2120, ~~MUSC-2220, MUSC-2230,~~ MUSC-2630, ~~MUSC-3220,~~ ~~MUSC-3230,~~ MUSC-4120, MUSC-4320, MUSC-4360, MUSC-4370, MUSC-4470. Methods and Pedagogy (Music Education): MUSC-2390, MUSC-2480, MUSC-2550, MUSC-2690, MUSC2790, MUSC-2850, MUSC-4580, MUSC-4840, MUSC-4850, MUSP-1100.

Areas of Study-Performance
Ensembles: MUSP-2100, MUSP-2200, MUSP-2400, MUSP-3100.
Performance Instruction: MUSP-2720 (Classical), MUSP-2730 (Jazz/Pop)

For Music programs
Performance Instruction courses offer one-on-one instruction as a 3.00 credit hour course (1-hour lesson a week and weekly masterclass activity). These courses are offered on a cost recovery basis and have an ancillary fee in addition to course tuition.). Course requirements include a fifteen-minute **performance** examination before a faculty ~~jury~~ **adjudication panel (or equivalent assessment assigned by a music faculty coordinator or studio instructor)** at the end of each term ~~of study (or equivalent assigned assessment),~~ as well as the attainment of an appropriate level of achievement. Students should consult ~~the~~ **a** SoCA ~~Performance~~ **Undergraduate** Coordinator **or Music Area Faculty** for specific details regarding curricula for these courses.

~~These courses are available to Bachelor of Music students and students will elect their major instrument at the time of their audition.~~

Honours Bachelor of Arts in Music

Admission Requirements
No audition is required to enrol in this degree though students may require an audition/faculty screening **to obtain a course permission** for performance courses such as ensembles and private lessons.

~~Other Regulations~~
~~Music courses whose second digit is 0 may not count towards this degree.~~

Degree Requirements

Total courses: forty
(a) ~~twenty~~ **eighteen** courses, consisting of MUSC-1120, MUSC-1130, MUSC-2120, MUSC-2130, MUSC-1260, MUSC-1270, MUSC 2480; ~~four~~ **six** Ensemble courses; two courses in **History and Literature (Musicology)** ~~Applied Music (lessons)~~; ~~seven~~ **three** additional Music **Academic** courses **(MUSC)**; ~~including six at the 2000-level or above from History and Literature (Musicology) Theory and Composition and/or Music Education~~.
(b) two courses from Social Sciences;
(c) two courses from Languages or Science;
(d) two courses from any area of study, excluding Arts.
(e) 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) ~~six~~ **ten** courses from any area of study, including Music.
(h) ~~six~~ **four** courses from any area of study, excluding Music ~~(GART-2100 is strongly recommended).~~

Combined BA Honours Music Programs

Admission Requirements
No audition is required to enrol in this degree though students may require an audition/faculty screening to obtain a course permission for performance courses such as ensembles and private lessons.

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

Program Regulations
Students in combined programs must complete all courses used to calculate the major average for both subject areas, and ENGL-1010 and one course with Indigenous content, perspectives, or materials. They must also complete the degree requirements, in the order presented to a total of forty courses. Example: If the total course requirements add up to 43 once the requirements for the second subject area are included, the degree requirements are to be completed in the order presented, until the student reaches a total of 40 courses.

Degree Requirements
Total courses: forty

~~Other Regulations:~~
~~Music courses whose second digit is 0 may not count towards this degree.~~

(a) Music: ~~seventeen~~ **sixteen** courses consisting of MUSC-1120, MUSC-1130, MUSC-1260, MUSC-1270, MUSC-2120, MUSC-2130; four semesters of Ensemble courses; ~~four~~ **three** Academic Music courses (History and Literature, Music Theory/Composition, and/or Music Education); plus three additional Music courses.
(b) Course Requirements-Other Subject: courses used to calculate the major average in the other subject area, as prescribed by that area of study.
(c) 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.);
(d) 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) Other courses, as required, from any area of study to a total of forty courses.

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).

In summer 2026, the School of Creative Arts voted to suspend its Bachelor of Music program as well as the Concurrent Bachelor of Music Education/Education. These programs require access each semester to instrumental ensembles and/or methods and pedagogy courses that have not been consistently available due to reduction of faculty, staff, and enrolment as well as the change to the four course per year loading course loading. Extra student intake activities in these programs such as auditions are no longer feasible. Finally, the requirement of cost-recovery private lessons courses for all degree programs made the differences between the BA and BMus programs indistinguishable. The remaining BA(H) and Combined programs will increase in viability with more flexible programming moving forward. However, the current BA sequence restricts students from a depth of practice in applied music performance areas and currently requires more academic music courses (Music Theory and Musicology) than are currently available. This revision of the remaining BA programs

will amalgamate the performance and academic strengths of the previous music streams while seeking to reduce administrative overhead for SoCA's staff and faculty.

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

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.

There are four full-time faculty that teach Music courses. However, one to three are currently teaching each term due to administration roles or other circumstances. Those working in Music any given term is not teaching a full four courses for this reason. The program has and will require a minimum of 2-4 Sessional appointment each term for the program to be competitive and attractive to students. The applied lessons courses requiring a Special Instructor pool of professional musicians is now completely covered on a cost-recovery basis.

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.*

The applied lessons courses (MUSP 2720 and 2730) are cost recovery courses that have ancillary fees in addition to course tuition. Some research grants may support activities in the revised program. Students

receive for-credit and/or experiential learning through activities with the Windsor Symphony Orchestra Choral activities and the Windsor Symphony Community Orchestra.

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 other Music programs at Windsor were in suspended (BMus and Concurrent programs) during the summer of 2026. No having the formal audition events process of the old programs will streamline staff and faculty resources for weekend and ad hoc events. Students can be admitted to the program in a timely manner without the additional administrative steps. The application/admissions process can be handled directly between OUAC and Registrar's Office rather than utilizing multiple faculty and staff resources to schedule and adjudicate the events as well as reporting the audition results to the Registrar's office. Admissions to the program will be quicker and with higher accuracy.

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. However, while there are four faculty that teach Music courses, only one to three are currently teaching each term due to administration roles or other circumstances. There has been freezes in sessional hiring in recent years and it is hoped that increased sessional support will improve the vitality of the program.
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

I. LEARNING OUTCOMES FOR NEW UNDERGRADUATE CERTIFICATE OR NEW CONCURRENT PROGRAM OFFERING

In the following table, provide the specific learning outcomes (degree level expectations) that constitute the overall goals of the program (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.*

Honours Bachelor of Arts in Music (Learning outcomes were last updated March 8, 2024)

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. Recognize and describe a range of melodic, harmonic, rhythmic and formal structures in diverse music styles and time periods. (Also applies to E.) **Assess formal and conceptual materials from Music and another discipline.**	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. Access, retrieve, and evaluate information through written analysis and criticism in Music and their other field of concentration.	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 DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
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**
Define technical and analytical problems in musical culture, performances and ensemble rehearsal settings.		
C. **Critically evaluate and apply relevant theory in Music and another field of study.** **Demonstrate problem-solving in the practice, rehearsal, and performance of music in collaborative settings.** ~~Integrate musical theory, historical, and philosophical approaches to articulate technical and analytical components of culture as seen through a musical lens and musical performances.~~ ~~Practice individually and rehearse in an ensemble setting to identify techniques and approaches to improve performance.~~	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. ~~Analyze musical texts and scores using integral and theoretical methodologies.~~ **Apply relevant vocabulary, techniques, and methods from both Music and another discipline.** Employ applied musical literacy/numeracy skills to their voice/instrument to develop performance practice in an independent and ensemble setting.	D. literacy and numeracy skills	4.Communication Skills 5. Awareness of Limits of Knowledge

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
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**
E. Proficiently engage in group activities such as music ensembles and collaborative research projects to cultivate team building and experiential learning for professional music career settings. Identify and apply models of professional responsibility in rehearsal, performance, and academic settings.	E. responsible behavior to self, others and society	5. Awareness of Limits of Knowledge 6. Autonomy and Professional Capacity
F. ~~Effectively communicate both verbally and musically in ensemble settings and academic musical environments.(Also applies to G)~~ Demonstrate interpersonal, communication, research, and presentation skills in music and another area of study. (Also applies to G.)	F. interpersonal and communications skills	4. Communication Skills 6. Autonomy and Professional Capacity
G. **Independently engage in research and performance to meet professional goals in music and other areas.** ~~Develop leadership and mentoring skills through in-course settings such as conducting and ensemble sectionals.~~	G. teamwork, and personal and group leadership skills	4. Communication Skills 6. Autonomy and Professional Capacity
H. Demonstrate musicianship, technical proficiency, interpretation and understanding in performance and academic research.	H. creativity and aesthetic appreciation	2. Knowledge of Methodologies 3. Application of Knowledge 6. Autonomy and Professional Capacity
I. Learn independently through performance and **study/**research to meet	I. the ability and desire for continuous learning	6. Autonomy and Professional Capacity

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
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**
individual professional goals **in music and another major study concentration.**		

Combined Honours Bachelor of Arts in Music (Learning outcomes were last updated March 8, 2024)

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. Recognize and describe a range of melodic, harmonic, rhythmic and formal structures in diverse music styles and time periods. (Also applies to E.) Assess formal and conceptual materials from Music and another discipline.	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. Access, retrieve, and evaluate information through written analysis and criticism in Music and their other field of concentration. Define technical and analytical problems in musical culture, performances and ensemble rehearsal settings.	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. Critically evaluate and apply relevant theory in Music and another field of study. Demonstrate problem-solving in the practice, rehearsal, and performance of music in collaborative settings.	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
MINOR PROGRAM CHANGES
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. Apply relevant vocabulary, techniques, and methods from both Music and another discipline. Employ applied musical literacy/numeracy skills to their voice/instrument to develop performance practice in an independent and ensemble setting.	D. literacy and numeracy skills	4.Communication Skills 5. Awareness of Limits of Knowledge
E. Proficiently engage in group activities such as music ensembles and collaborative research projects to cultivate team building and experiential learning for professional music career settings. Identify and apply models of professional responsibility in rehearsal, performance, and academic settings.	E. responsible behavior to self, others and society	6. Awareness of Limits of Knowledge 6. Autonomy and Professional Capacity
F. Demonstrate interpersonal, communication, research, and presentation skills in music and another area of study. (Also applies to G.)	F. interpersonal and communications skills	4. Communication Skills 6. Autonomy and Professional Capacity
G. ~~Effectively communicate both verbally, non-verbally, and musically in ensemble settings.~~ **Independently engage in research and performance to meet professional goals in music and other areas.**	G. teamwork, and personal and group leadership skills	4. Communication Skills 6. Autonomy and Professional Capacity
H. Demonstrate musicianship, technical proficiency, interpretation and understanding in performance and academic research.	H. creativity and aesthetic appreciation	2. Knowledge of Methodologies 3. Application of Knowledge 6. Autonomy and Professional Capacity

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
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**
I. Learn independently through performance and study/research to meet individual professional goals in music and another major study concentration.	I. the ability and desire for continuous learning	6. Autonomy and Professional Capacity

University of Windsor
Program Development Committee

*5.3: **Nursing – Offering Accelerated BScN**

Item for: **Information**

Forwarded by: **Dean, Faculty of Nursing**

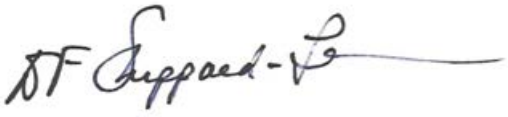
MEMORANDUM

To: Program Development Committee (PDC)

Date: October 6, 2026

Effective January 1, 2027, the Faculty of Nursing will be offering an accelerated option for completion of the BScN. The accelerated BScN pathway compresses the four-year program into three years.

The compressed sequence retains all courses from the original 4-year Honours BScN program. The reduction from 4 to 3 years is achieved by converting the three inter-session/summer breaks into active instructional and clinical terms (Terms 3, 6, and 9). No courses have been eliminated. Consolidated Practicums and integrated clinical blocks are strategically placed in Summer terms to capitalize on full-time availability. (see Appendix for accelerated sequencing)



Debbie Sheppard-LeMoine
Dean, Faculty of Nursing

Appendix

Bachelor of Science in Nursing (BScN) Honours Program
Suggested Compressed (Accelerated) 3-Year Course Sequence (Year-Round Delivery)

YEAR 1 | *Nurse as Professional*

Term 1	Term 2	Term 3
NURS 1110: Professional Nursing I: Introduction to the Profession of Nursing **NURS 1210:** Human Anatomy & Physiology I (theory & lab) **NURS 1511:** Experiential Learning Lab I **NURS 1900:** Writing for the Professional Nurse **BIOM 1073:** Introductory Medical Microbiology	**NURS 1120:** Professional Nursing II: Nursing within Canada's Healthcare System **NURS 1220:** Human Anatomy & Physiology II (theory & lab) **NURS 1310:** Pharmacology & Medication Management I **NURS 1410:** Holistic Health Assessment I **NURS 1512:** Clinical Practicum I **NURS 1521:** Experiential Learning Lab II	⚑*Year-round delivery: replaces traditional inter-session break* **NURS 1612:** Consolidated Practicum I (2 weeks, full-time daily clinical) **NURS 2320:** Pharmacology & Medication Management II **NURS 2420:** Holistic Health Assessment II **NURS 2531:** Experiential Learning Lab III **PSYC 3390:** Health Psychology

YEAR 2 | *Nurse as Collaborator & Change Agent*

Term 4	Term 5	Term 6
NURS 2522: Clinical Practicum II **NURS 2810:** Adult Health & Health Alterations I **SOSC 2500:** Basic Quantitative Methods in Social Science OR **STAT 2910:** Statistics for the Sciences **NURS 3950:** Nursing Research **NURS 3960:** Community Health Nursing	**NURS 2532:** Clinical Practicum III **NURS 2541:** Experiential Learning Lab IV **NURS 2820:** Adult Health & Health Alterations II **NURS 2920:** Maternal and Newborn Care **NURS 2930:** Mental Health Nursing **NURS 3130:** Professional Nursing III: Leadership and Management in Nursing	⚑*Year-round delivery: accelerated clinical block* **NURS 2622:** Consolidated Practicum II (2 weeks, full-time daily clinical) **NURS 3542:** Clinical Practicum IV **NURS 3551:** Experiential Learning Lab V **NURS 3830:** Adult Health & Health Alterations III **NURS 3940:** Nursing Care of Infants, Children, and Youth

YEAR 3 | *Nurse as Change Agent & Coordinator*

Term 7	Term 8	Term 9
NURS 3552: Clinical Practicum V **NURS 3561:** Experiential Learning Lab VI **NURS 3840:** Adult Health & Health Alterations IV **NURS 3970:** Health Issues in Gerontology **NURS 4XXX:** Indigenous Health	**NURS 4140:** Professional Nursing IV: Transition to Practice **NURS 4571:** Experiential Learning Lab VII **NURS 4980:** Palliative and End of Life Care **NURS 4990:** Issues in Global and Planetary Health **NURS 49XX:** Nursing Specialty Option **NURS 3632:** Consolidated Practicum III (2 weeks, full-time daily clinical)	⚑*Final integrated clinical block — capstone term* **NURS 4562:** Integrated Clinical Practicum: Community (192 hours) **NURS 4572:** Integrated Clinical Practicum: Hospital (192 hours) + Integrated Rounds

Note: *This compressed sequence assumes year-round faculty availability, clinical site agreements for summer placements, and student enrollment in all three terms per year. Course prerequisites must be reviewed prior to full implementation. This document is for planning purposes only.*

University of Windsor
Program Development Committee

*5.4 **Mechanical Engineering – Summary of Minor Course and Calendar Changes (Form E)**

Item for: **Information**

Forwarded by: **Faculty of Engineering**

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 Winter 2027

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**

~~GENG~~ MECH-3201.Engineering Design III
A project-based learning experience where students are exposed to a series of open-ended design projects that will develop both technical and professional skills. The emphasis will be on the engineering design process, which consists of: problem formulation, functional requirements and constraints, conceptual design through CAD, selection of design, communication of the design solution, prototype construction, testing, iteration, and reporting. Includes group work to develop personal, teamwork, leadership, and task completion skills as part of the design process. (Prerequisite: Engineering students only. ~~GENG 2201~~ , **must complete all first- and second-year courses, as well as MECH 3223, MECH 3211, and at least one of MECH 3233 or MECH 3212**) (6 hours weekly)

MECH-3220. Fluid Mechanics II
Navier-Stokes equations and some exact solutions, external flows boundary layer over a flat plate, drag forces; turbulent flows in pipes and mixing length theory, flow measurement, compressible flows and introduction to potential flows. (Prerequisite: MECH-3233 **and MATH 2790**.) (3 lecture, 2 laboratory/tutorial hours a week.)

MECH-3221. Control Theory
Control system concepts, linear modelling and analysis of response and stability of physical systems, complex variables and Laplace transforms, frequency, and transient response analysis and performance specifications. (Prerequisites: ~~MATH-2780 and MATH-2790~~ **MATH 2780, MATH 2790, MECH 3223, MECH 3220, and MECH 3228**.) (3 lecture hours, 1 tutorial hour a week.)

MECH-3224. Engineering Measurements
Basic concepts in instrumentation; error analysis; instrumentation and measurement systems including sensors, transducers, signal conditioning and display; computer-based data acquisition and analysis. (Prerequisite: ~~GENG-2102 or STAT-2910~~ **MECH 3223 and GENG 2220**.) (3 lecture, 3 laboratory/tutorial hours a week.)

MECH-3228. Heat Transfer
Introduction to the three heat transfer modes: conduction, convection, and radiation. Application of heat exchange equipment. (Prerequisite: MATH-2790 ~~and semester 6 or higher standing~~ **, MECH 3212, and MECH 3233**.) (3 lecture, 2 laboratory hours a 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 <u>where there are no official learning outcomes for the course</u>.

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.*

~~GENG~~ <u>MECH</u>-3201.Engineering Design III (Learning outcomes were last updated May 12, 2023)
MECH-3224. Engineering Measurements (Learning outcomes were last updated May 14, 2025)

COURSE NUMBER AND TITLE: MECH 3220 Fluid Mechanics II *These are new learning outcomes*	
Course Learning Outcomes *This is a sentence completion exercise.* <u>At the end of the course, the successful student will know and be able to:</u>	**Characteristics of a University of Windsor Graduate** <u>A U of Windsor graduate will have the ability to demonstrate:</u>
A. Analyze Pressure Variation in Static Fluids. Analyze Pipe Flow and Losses.	A. the acquisition, application and integration of knowledge
B. Apply Continuity and Linear Momentum Equations Measure flow velocity and pressure.	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C. Apply Dimensional Analysis and Pi Theorem	C. critical thinking and problem-solving skills
D. Calculate/apply Forces on Submerged Surfaces.	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

PROGRAM DEVELOPMENT COMMITTEE
SUMMARY OF MINOR COURSE AND CALENDAR CHANGES
FORM E

COURSE NUMBER AND TITLE: MECH-3221. Control Theory *These are new 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. Convert mathematical models between various forms, such as higher order differential equations, state space, transfer functions, and block diagrams.	A. the acquisition, application and integration of knowledge
B. Develop mathematical models of mechanical, electrical, electro-mechanical, fluid, and thermal systems	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C. Determine the behaviour characteristics of various systems using appropriate mathematical analysis. Design feedback control systems to modify system behaviour as required.	C. critical thinking and problem-solving skills
D. Implement mathematical models on a computer using MATLAB/Simulink or a similar computing language	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

COURSE NUMBER AND TITLE: MECH-3228 Heat Transfer *These are new 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 and differentiate the three modes of heat transfer Explain the operation of typical Heat Exchangers	A. the acquisition, application and integration of knowledge
B. Explain why an experimental methodology is appropriate for a given problem Use simulation software to design heat transfer systems and obtain solutions to heat transfer problems Interpret experimental results to formulate valid conclusions	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C. Solve heat exchanger problems and interpret the results Solve heat transfer problems Generate design solutions for a problem	C. critical thinking and problem-solving skills

D. Conduct simple heat transfer labs, analyze the data, and explain the underlying working heat transfer mode.	D. literacy and numeracy skills
E.	E. responsible behaviour to self, others and society
F. Work independently to analyze, evaluate, and summarize information for design projects.	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

*5.6: **Kinesiology (Graduate) – New Course Proposal (Form D)**

Item for: **Approval**

Forwarded by: **Faculty of Human Kinetics**

MOTION: That the following course be approved:^
KINE-8320 Advanced Human Factors

^Subject to approval of the expenditures required.

Rationale/Approvals:

- The new course proposal has been approved by the Faculty of Human Kinetics Council and the Faculty of Graduate Studies Council (October 28, 2026).
- *See attached.*

PROGRAM DEVELOPMENT COMMITTEE
NEW COURSE PROPOSALS
FORM D

TITLE OF PROGRAM(S)/CERTIFICATE(S):	**Master of Science (Kinesiology and Health Studies)**
DEPARTMENT(S)/SCHOOL(S):	**Kinesiology**
FACULTY(IES):	**Human Kinetics**

Proposed change(s) effective as of* [Fall, Winter, Spring]: **(subject to timely and clear submission)*	Winter, 2027

A. NEW COURSE PROFILE

Course # and Title: KINE-8320. Advanced Human Factors

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.

This course examines advanced theories, methods, and applications in human factors, focusing on human cognition, performance, and interaction with complex systems. Emphasis is placed on critical analysis of primary research literature, experimental design, human error, decision making, workload, and human–automation interaction. Students will engage in a combination of traditional face-to-face lectures, seminar-style discussions and develop original research or design projects that contribute to the field of human factors. The course is relevant for human factors and ergonomics graduate students interested in government, industry, or academic careers across the human factors spectrum. (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	18	18			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]***

******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:

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 goal of this course is to provide graduate students with an advanced understanding of human factors principles grounded in theory, empirical research, and methodological rigor. As technology becomes increasingly complex and integrated into human activity, there is a critical need for professionals who can analyze, design, and evaluate systems that support human performance, safety, and well-being.

This course prepares students to:

- Critically engage with human factors research literature
- Apply theoretical frameworks to complex human–system interactions
- Design and evaluate rigorous human factors studies
- Contribute original research or design solutions

It supports graduate training in fields such as engineering, psychology, health sciences, and human-computer interaction.

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 of Human Kinetics is committed to building and sustaining a stronger, more meaningful inclusive partnerships with Indigenous students, scholars, and communities. As such, we have answered the above questions to the best of our abilities. While we understand that this is a continuous and ongoing process, below is an overview of activities.

With specific reference to this course, consideration has been given to incorporating Indigenous (First Nations, Métis, and Inuit) content and perspectives through course material that integrates Indigenous ways of knowing, community-informed approaches, and holistic views of human–environment interaction. Readings and case studies highlight Indigenous-led research and culturally responsive design, encouraging critical reflection on conventional human factors methods and supporting more inclusive, ethical, and context-sensitive practices. Contents from the following resources will be included to develop course materials:

- Smith, L. T. (2021). Decolonizing methodologies: Research and indigenous peoples.
- Wurst, C., & Chen, H. Y. W. (2025). Faces of oppression: future directions for ergonomics and human factors. *Ergonomics*, *68*(6), 844-856.

From a program- and faculty-wide perspective:

- We introduced a new program learning outcomes (senate approved: May 9, 2024) for the BSML and BScKHS undergraduate degree programs:
  - Recognize the nature and value of diversity across the spectrum (cognition, behaviour, physiology, region/nationality, socioeconomic status, race, ethnicity, Indigeneity, religion, sex, gender and gender identity, sexual orientation, ability, language, and/or age) where they work, live, and play.
- Based on the Indigenous content review of course content (completed in 2020), several instructors have modified and began including more Indigenous content into their courses. For example, KINE-1000, which is a core course for both degree (BSML and BScKHS) students, includes Indigenous content related to the medicine wheel.
- Both the Toldo Lancer Centre and Kinesiology signage boards have Land acknowledgements
- Over the recent years, several events have occurred:
  - Toldo Lancer Centre hosted the Alumni and Student Pow Wow (May 2, 2026; May 11-13, 2023)
  - Rain Whited, a member of the Oneida Nation of the Thames and former player for the Windsor Warlocks, Windsor Clippers and Wallaceburg Red Devils, provided a workshop entitled “Lacrosse is Medicine”. He also provided a guest lecture in KINE-2250 (Ethics in Sport and Physical Activity) before the event with local First Nation, Métis and Inuit high school students as well as university staff and students in attendance (as part of the Nanadagikenim-Seek to Know grant). (https://windsorstar.com/news/local-news/lacrosse)

- Lancer Hockey provided support to First nations communities in British Columbia (https://golancers.ca/news/2022/5/24/mens-hockey-lancer-hockey-to-provide-humanitarian-support-to-first-nations-communities-in-british-columbia.aspx and https://golancers.ca/news/2022/9/30/mens-hockey-lancers-reflect-on-eye-opening-trip-of-truth-and-reconciliation.aspx)
- Lancer Hockey co-hosted Indian Horse at the Windsor International Film Festival in 2022 (https://www.uwindsor.ca/aboriginal-education-centre/372/indian-horse-windsor-international-film-festival)
- In 2021, The Department of Kinesiology Hosted a lecture entitled "Fire Keepers and the Fire Within" by Stanford Zhupkooum White in support of Orange Shirt Day. (https://www.uwindsor.ca/dailynews/2021-09-23/indigenous-knowledge-keeper-share-his-journey)
- In 2019 and 2022, Kinesiology hosted Indigenous workshops in coaching. (https://www.cbc.ca/news/canada/windsor/indigenous-athlete-workshop-windsor-1.5360850)
- Hosted a traditional Blanket Exercise for all faculty and staff guided by local Indigenous friends.
- Lancer Men's Football team had an Indigenous educational session with Dr. Bev Jacobs and Kat Pasquach in honour of Orange Shirt Day in 2023.

- Dr. Paraschak (Faculty of Human Kinetics emeritus professor) has been a lead writer on a Wikipedia project (TRC Call to Action #87) ensuring better international public knowledge online about elite Indigenous athletes in Canada (n ~ 200). (https://en.wikipedia.org/wiki/Wikipedia:Wiki_Ed/University_of_Windsor/Sport_and_Aboriginal_Peoples_in_Canada_(Fall_2017)) and https://www.cbc.ca/news/canada/windsor/indigenous-athletes-database-1.4840477
- We have supported HK student partnerships in activities to promote and support health and exercise in Indigenous communities (e.g., MOVEmber event open to Indigenous students from the GECDSB).
- Established a VOICES of Excellence Scholarship valued at $1000 to support Black and/or Indigenous students entering Human Kinetics.

Specific to the TRC and University Principles documents that relate to physical activity and sport (#87-91), we have been working on #87-89:

- 87. We call upon all levels of government, in collaboration with Aboriginal peoples, sports halls of fame, and other relevant organizations, to provide public education that tells the national story of Aboriginal athletes in history.
  - In addition to the program- and faculty-wide initiatives listed above, a sculpture of the "one-armed reach" by Simeoni Hakuluk and accompanying picture of Louie Nutaradlatuk performing the one-armed reach is on display in the HK atrium.
  - In collaboration with other colleagues, Dr. Paraschak helped create a website entitled Indigenous Sport History (https://indigenoussporthistory.ca), which includes an overview of Indigenous Sport, profiles Indigenous athletes including Michael Linklater, Richard Peter, and Colette Bourgonje, highlights the Rec and Read/Indigenous Youth Mentorship program, and provides links to newsworthy articles. Additionally, a twitter (X) account has been set up and all have been encouraged to follow (@IndigSportHist).
- 88. We call upon all levels of government to take action to ensure long-term Aboriginal athlete development and growth, and continued support for the North American Indigenous Games, including funding to host the games and for provincial and territorial team preparation and travel.
  - See above re Lancer Hockey
- 89. We call upon the federal government to amend the Physical Activity and Sport Act to support reconciliation by ensuring that policies to promote physical activity as a fundamental element of health and well-being, reduce barriers to sports participation, increase the pursuit of excellence in sport, and build capacity in the Canadian sport system, are inclusive of Aboriginal peoples.
- KINE:4520 (Sport Policy and Governance) is an upper year Honours Bachelor of Sport Management and Leadership course that includes content regarding the government's role in setting sport and recreation priorities (how some individuals may benefit over others), the history of sport policy in Canada and changing political ideologies, and a review of sport policies (including the Policy on Aboriginal Peoples' Participation in Sport).

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

- This is something that is continually discussed in both the working group on EDII in the curriculum and our EDII committee. While we recently approved new program learning outcomes at the undergraduate level, we expect to continue discussions about how to bring in additional content at the graduate level.

Finally, several literatures, sources, or Indigenous Knowledge Holders have been consulted and have taken more forms and includes the following:

- A few instructors have consulted with the University of Windsor's Indigenous Curriculum and Pedagogy Project Coordinator to discuss ideas surrounding the inclusion of Indigenous content into the curriculum. For example,
- Several faculty have relied on literature searches for Indigenous-related content. For example,
    - KINE-1000 has used literature searches, readings, and discussions with a health promotor at an Inter-Tribal Health Authority related to teachings about the social determinants of health and the Medicine Wheel.
    - KINE-2300 has consulted the TRC website https://www.rcaanc-cirnac.gc.ca/eng/1524505883755/1557512006268 for the sport-/physical activity-related Calls to Action.
    - KINE-2450 has collected and presented marketing-related examples of what sport organizations are doing to reach/leverage Indigenous communities.
    - KINE-2500 has integrated examples from organizations such as the Aboriginal Sport Circle, the Aboriginal Sport and Wellness Council of Ontario, the Canada Games Council, and community level organizations that provide sport and recreation opportunities for the Indigenous community. Moreover, the instructor has relied mostly on sport industry reports, blogs, policy documents for insight into the organizational realities of organizations focused on Indigenous sport and in relation to the sport system as a whole.
    - KINE-4610 has used literature review and discussions with medical and chronic disease management specialists.
    - KINE-4900 has included local and out of town Indigenous lecturers for these courses and consulted with the Aboriginal Education Centre to determine experiential learning opportunities, including in a sweat (sweat lodge) experience for students with a Knowledge Keeper, Indigenous speakers have discussed the Medicine Wheel, Healing Aspects of Cedar and they have discussed how Indigenous Medicine is part of collaborative health care at Windsor Regional Hospital.

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. Integrate advanced theories and concepts in human factors to analyze and evaluate human performance in complex systems and environments.	A. the acquisition, application and integration of knowledge

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:
B. Formulate researchable human factors problems and systematically access, evaluate, and synthesize primary scholarly literature to address them. B. Design methodologically sound human factors studies using appropriate qualitative, quantitative, or mixed methods approaches.	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C. Critically assess human factors theories, methods, and empirical findings, and apply them to solve complex design and performance-related problems.	C. critical thinking and problem-solving skills
	D. literacy and numeracy skills
	E. responsible behaviour to self, others and society
F. Effectively communicate complex human factors concepts, research results, and design recommendations through written reports, oral presentations, and scholarly discussion.	F. interpersonal and communications skills
G. Collaborate in seminar discussions, peer reviews, and group activities, demonstrating leadership and constructive engagement in academic and applied contexts.	G. teamwork, and personal and group leadership skills
H. Develop innovative and human-centered design solutions that reflect creativity, usability, and thoughtful consideration of user experience and interaction.	H. creativity and aesthetic appreciation
I. Identify emerging trends, knowledge gaps, and opportunities for continued professional and scholarly development in human factors.	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	10	10	10	10

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?

There will be little to no impact, as the course will be included in the regular rotation of courses offered to MSc-KHS 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 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 <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)

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 course will be primarily taught by Dr. Biondi, who has expertise in the area, and will be on his regular rotation of courses offered.

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.

Dr. Biondi is an Associate Professor in the Department of Kinesiology. He has 10+ years of experience teaching, researching, and conducting applied human factors work in academia and industry. After receiving his PhD in Cognitive Science he has worked as a human factors engineer in the automotive industry, as a research scientist at the University of Utah, and a professor at the University of Windsor working on themes including human-machine interaction, human-AI autonomy, driver state detection, driver distraction, and workplace performance. This course will be offered as part of his regular rotation of courses offered and will not impact his graduate supervision.

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

<u>C.4 Anticipated New Resources</u> (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

<u>C.5 Planned Reallocation of Resources and Cost-Savings</u>

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

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:	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

University of Windsor
Program Development Committee

*5.7 **Kinesiology – Minor Program Change (Form C)**

Item for: **Approval**

Forwarded by: **Faculty of Human Kinetics**

MOTION : That the degree requirements for the MSc Kinesiology and Health Studies be changed in accordance with the program/course change forms.^

^*Subject to approval of the expenditures required*.

Rationale/Approvals:

- The proposal been approved by the Faculty of Human Kinetics Council and the Faculty of Graduate Studies Council (October 28, 2026).
- *See attached*.

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

TITLE OF PROGRAM(S)/CERTIFICATE(S):	**MSc Kinesiology and Health Studies**
DEPARTMENT(S)/SCHOOL(S):	**Kinesiology**
FACULTY(IES):	**Human Kinetics**

Proposed change(s) effective as of* [Fall, Winter, Spring]: **(subject to timely and clear submission)*	Winter 2027

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: KINE-8320 Advanced Human Factors

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 Science (Kinesiology and Health Studies)
[..]

Program Requirements (Thesis)
1.Three courses from:
KINE-8000. Sport Leadership
KINE-8020. Organizational Behaviour in Sport Organizations
KINE-8040. Advanced Topics in the Psychology of Sport and Exercise
KINE-8050. Social Issues in Sport Management
KINE-8070. Quantitative Analysis in Kinesiology
KINE-8100. Directed Study*
KINE-8110. Group Dynamics in Sport and Exercise
KINE-8210. Clinical Exercise Physiology
KINE-8220. Instrumentation and Modeling in Kinesiology
KINE-8230. Applied Biomechanics of Human Performance
KINE-8240. Biomechanics in the Work Place
KINE-8250. Motor Skill Acquisition
KINE-8260. Motor Control of Human Performance
KINE-8270. Advanced Exercise Assessment
KINE-8280. Neuromuscular Physiology
KINE-8290. The Physiology of Sex Differences in Sport, Exercise and Health
KINE-8300. Skeletal Muscle Pathophysiology
KINE-8310. Healthy Aging

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

KINE-8320. Advanced Human Factors
KINE-8620. Research Methods
KINE-8630. RStudio for Data Science
KINE-8940. Selected Topics

[..]

Program Requirements (Internship)
1. Five courses from:
KINE-8000. Sport Leadership
KINE-8020. Organizational Behavior in Sport Organizations
KINE-8040. Advanced Topics in the Psychology of Sport and Exercise
KINE-8050. Social Issues in Sport Management
KINE-8070. Quantitative Analysis in Kinesiology
KINE-8100. Directed Study*
KINE-8110. Group Dynamics in Sport and Exercise
KINE-8210. Clinical Exercise Physiology
KINE-8220. Instrumentation and Modeling in Kinesiology
KINE-8230. Applied Biomechanics of Human Performance
KINE-8240. Biomechanics in the Work Place
KINE-8250. Motor Skill Acquisition
KINE-8260. Motor Control of Human Performance
KINE-8270. Advanced Exercise Assessment
KINE-8280. Neuromuscular Physiology
KINE-8290. The Physiology of Sex Differences in Sport, Exercise and Health
KINE-8300. Skeletal Muscle Pathophysiology
KINE-8310. Healthy Aging
KINE-8320. Advanced Human Factors
KINE-8620. Research Methods
KINE-8630. RStudio for Data Science
KINE-8940. Selected Topics

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).

KINE-8320 Advanced Human Factors is a new graduate level course.

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

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
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

University of Windsor
Program Development Committee

*5.8 **Kinesiology – Minor Program Change (Form C)**

Item for: **Approval**

Forwarded by: **Faculty of Human Kinetics**

MOTION : That the degree requirements for the Kinesiology programs be changed in accordance with the program/course change forms.^

^*Subject to approval of the expenditures required*.

Rationale/Approvals:
- The proposal been approved by the Faculty of Human Kinetics Council.
- *See attached*.

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

TITLE OF PROGRAM(S)/CERTIFICATE(S):	• Honours Bachelor of Science (Kinesiology and Health Studies) (with/without thesis) (with/without Co-op) • Honours Bachelor of Sport Management and Leadership (with/without thesis) (with/without Co-op) • Honours Bachelor of Sport Management and Leadership for Graduates of Lambton College's Sport and Recreation Management Diploma (with/without thesis) • Honours Bachelor of Sport Management and Leadership for Graduates of Durham College's Advanced Diploma in Sport Management Diploma (with/without thesis) • Honours Bachelor of Sport Management and Leadership for Graduates of St. Clair College's Sport and Recreation Management Diploma (with/without thesis) • Honours Bachelor of Sport Management and Leadership (Degree Completion) for Graduates of Saskatchewan Polytechnic Business Sport Management (with/without thesis) • Honours Bachelor of Science (Kinesiology and Health Studies) for Graduates of St. Clair College's Occupational Therapist Assistant/Physiotherapist Assistant Program (with/without thesis)
DEPARTMENT(S)/SCHOOL(S):	**Department of Kinesiology**
FACULTY(IES):	**Human Kinetics**

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.

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

Honours Bachelor of Science (Kinesiology and Health Studies)
(with/without thesis) (with/without Co-op)

Degree Requirements
[.....]
Kinesiology and Health Studies Course (SELECT 10 COURSES)
o KINE-3010. The Use and Abuse of Drugs
o KINE-3020. Exercise Psychology
o KINE-3030. Imagery Effects on Performance
o KINE-3060. Obesity and Eating Disorders
o KINE-3100. Motor Learning and Control
o KINE-3330. Applied Sport Psychology
o KINE-3501. Practical Strategies for Social Change: Intervening to Prevent Sexual Violence
o KINE-3600. Respiratory Physiology
o KINE-3610. Musculoskeletal Physiology
o KINE-3630. Cognitive Ergonomics
o KINE-3150. Scientific Principles of Strength and Conditioning
o KINE-3770. Sport Tactics and Strategies
o KINE-3800. Global Perspectives in Human Kinetics
o KINE-4000. Human Movement and Aging
o KINE-4040. Population Health
o KINE-4080. Dynamics of Skill Acquisition
o KINE-4100. Adapted Physical Activity
o KINE-4150. Fundamentals and Application of Sport Science
o KINE-4330. Selected Topics in Sport Leadership
o KINE-4530. Perceptual Motor Development
o KINE-4580. The Endocrine System in Sport, Exercise and Health
o KINE-4600. Cardiovascular Physiology
o KINE-4610. Clinical Exercise Rehabilitation
o KINE-4620. Exercise in Extreme Environments
o KINE-4630. Applied Neurophysiology
o KINE-4640. The Pathophysiology of Pain
o KINE-4650. Advanced Physical Ergonomics and Injury Prevention
o KINE-4660. Cardiac Rehabilitation
o KINE-4670. User Experience
o KINE-4710. Sports Therapy
o KINE-4750. Individual Studies[1,3]
o KINE-4760. Principles of Coaching
o KINE-4770. Outdoor Recreation
o KINE-4780. Undergraduate Thesis[1,2] (6 credits)
o KINE-4800. Advanced Biomechanics
o KINE-4850. Group Dynamics in Sport
o KINE-4900. Special Topics in Kinesiology and Health Studies
o KINE-4980. Internship (4 months)[1,3]

[1] Students can take a maximum of 12 credits from KINE-4750, KINE-4780, and KINE-4980
[2] KINE-4780 is a 6-credit course, and as such, students successfully completing KINE-4780 will be required to take only 8 of the Kinesiology and Health Studies elective courses listed in section (b).
[3] KINE-4750 can be taken a maximum of 2 times (KINE-4750-01 and -02). KINE-4980 can be taken a maximum of 2 times (KINE-4980-01 and -02).

[.....]

Honours Bachelor of Sport Management and Leadership (with/without thesis) (with/without Co-op)
Degree Requirements
[.....]
Sport Management and Leadership Courses (SELECT 7 COURSES)
o KINE-3330. Applied Sport Psychology
o KINE-3501. Practical Strategies for Social Change: Intervening to Prevent Sexual Violence
oKINE-3510. Sport Event Management
o KINE-3530. Sport Facility Management
o KINE-3570. Community Sport
o KINE-3550. Socio-Economics Aspects of Sport and Leisure
o KINE-3770. Sport Tactics and Strategies
o KINE-3800. Global Perspectives in Human Kinetics
o KINE-4040. Population Health
o KINE-4400. History of Sport in Canada
o KINE-4410. Sport in America
o KINE-4420. Sport Sponsorship
o KINE-4430. Social Responsibility in Sport
o KINE-4440. Consumer Behaviour
o KINE-4520. Sport Policy and Governance
o KINE-4550. Global Issues in Sport Management
o KINE-4560. Sport Communication
o KINE-4570. Hockey in Canada
o KINE-4730. The Social Construction of Leisure
o KINE-4750. Individual Studies[1,3]
o KINE-4760. Principles of Coaching
o KINE-4770. Outdoor Recreation
o KINE-4780. Undergraduate Thesis[1,2] (6 credits)
o KINE-4850. Group Dynamics in Sport
o KINE-4890. Special Topics in Sport Management and Leadership
o KINE-4980. Internship (4 months) [1,3]
[1] Students can take a maximum of 12 credits from KINE-4750, KINE-4780, and KINE-4980
[*2]KINE-4780 is a 6-credit course, and as such, students successfully completing KINE-4780 will be required to take only 5 of the Sport Management and Leadership elective courses listed in section (b).
[3]KINE-4750 can be taken a maximum of 2 times (KINE-4750-01 and -02). KINE-4980 can be taken a maximum of 2 times (KINE-4980-01 and -02).

[.....]

Honours Bachelor of Sport Management and Leadership for Graduates of Lambton College's Sport and Recreation Management Diploma (with/without thesis)
Degree Requirements
[.....]
b) Sport Management and Leadership Courses (SELECT 6 COURSES)
o KINE-3330. Applied Sport Psychology
o KINE-3501. Practical Strategies for Social Change: Intervening to Prevent Sexual Violence

o KINE-3510. Sport Event Management
o KINE-3530. Sport Facility Management
o KINE-3550. Socio-Economics Aspects of Sport and Leisure
o KINE-3770. Sport Tactics and Strategies
o KINE-3800. Global Perspectives in Human Kinetics
o KINE-4040. Population Health
o KINE-4400. History of Sport in Canada
o KINE-4410. Sport in America
o KINE-4420. Sport Sponsorship
o KINE-4430. Social Responsibility in Sport
o KINE-4440. Consumer Behaviour
o KINE-4520. Sport Policy and Governance
o KINE-4550. Global Issues in Sport Management
o KINE-4560. Sport Communication
o KINE-4570. Hockey in Canada
o KINE-4730. The Social Construction of Leisure
o KINE-4750. Individual Studies[1,3]
o KINE-4760. Principles of Coaching
o KINE-4770. Outdoor Recreation
o KINE-4780. Undergraduate Thesis[1,2] (6 credits)
o KINE-4850. Group Dynamics in Sport
o KINE-4890. Special Topics in Sport Management and Leadership
o KINE-4980. Internship (4 months) [1,3]

[1] Students can take a maximum of 12 credits from KINE-4750, KINE-4780, and KINE-4980
[2]KINE-4780 is a 6-credit course, and as such, students successfully completing KINE-4780 will be required to take only 4 of the Sport Management and Leadership elective courses listed in section (b).
[3]KINE-4750 can be taken a maximum of 2 times (KINE-4750-01 and -02). KINE-4980 can be taken a maximum of 2 times (KINE-4980-01 and -02).

[.....]

Honours Bachelor of Sport Management and Leadership for Graduates
of Durham College's Advanced Diploma in Sport Management Diploma
(with/without thesis)

[.....]

b) Sport Management and Leadership Courses (SELECT 5 COURSES)
o KINE-3330. Applied Sport Psychology
o KINE-3501. Practical Strategies for Social Change: Intervening to Prevent Sexual Violence
o KINE-3510. Sport Event Management
o KINE-3550. Socio-Economics Aspects of Sport and Leisure
o KINE-3770. Sport Tactics and Strategies
o KINE-3800. Global Perspectives in Human Kinetics
o KINE-4040. Population Health
o KINE-4400. History of Sport in Canada
o KINE-4410. Sport in America
o KINE-4420. Sport Sponsorship
o KINE-4430. Social Responsibility in Sport
o KINE-4440. Consumer Behaviour
o KINE-4520. Sport Policy and Governance
o KINE-4550. Global Issues in Sport Management

o KINE-4560. Sport Communication
o KINE-4570. Hockey in Canada
o KINE-4730. The Social Construction of Leisure
o KINE-4750. Individual Studies[1,3]
o KINE-4760. Principles of Coaching
o KINE-4770. Outdoor Recreation
o KINE-4780. Undergraduate Thesis[1,2] (6 credits)
o KINE-4850. Group Dynamics in Sport
o KINE-4890. Special Topics in Sport Management and Leadership
o KINE-4980. Internship (4 months)[1,3]
[1] Students can take a maximum of 12 credits from KINE-4750, KINE-4780, and KINE-4980
[2]KINE-4780 is a 6-credit course, and as such, students successfully completing KINE-4780 will be required to take only 3 of the Sport Management and Leadership elective courses listed in section (b).
[3]KINE-4750 can be taken a maximum of 2 times (KINE-4750-01 and -02). KINE-4980 can be taken a maximum of 2 times (KINE-4980-01 and -02).
[.....]

Honours Bachelor of Sport Management and Leadership for Graduates
of St. Clair College's Sport and Recreation Management Diploma
(with/without thesis)
Degree Requirements
[.....]
b) Sport Management and Leadership (SELECT 6 COURSES)
o KINE-3330. Applied Sport Psychology
o KINE-3501. Practical Strategies for Social Change: Intervening to Prevent Sexual Violence
o KINE-3510. Sport Event Management
o KINE-3550. Socio-Economics Aspects of Sport and Leisure
o KINE-3770. Sport Tactics and Strategies
o KINE-3800. Global Perspectives in Human Kinetics
o KINE-4040. Population Health
o KINE-4400. History of Sport in Canada
o KINE-4410. Sport in America
o KINE-4420. Sport Sponsorship
o KINE-4430. Social Responsibility in Sport
o KINE-4440. Consumer Behaviour
o KINE-4520. Sport Policy and Governance
o KINE-4550. Global Issues in Sport Management
o KINE-4560. Sport Communication
o KINE-4570. Hockey in Canada
o KINE-4730. The Social Construction of Leisure
o KINE-4750. Individual Studies[1,3]
o KINE-4760. Principles of Coaching
o KINE-4770. Outdoor Recreation
o KINE-4780. Undergraduate Thesis[1,2] (6 credits)
o KINE-4850. Group Dynamics in Sport
o KINE-4890. Special Topics in Sport Management and Leadership
o KINE-4980. Internship (4 months)[1,3]
[1] Students can take a maximum of 12 credits from KINE-4750, KINE-4780, and KINE-4980
[2]KINE-4780 is a 6-credit course, and as such, students successfully completing KINE-4780 will be required to take only 4 of the Sport Management and Leadership elective courses listed in section (b).

[3]KINE-4750 can be taken a maximum of 2 times (KINE-4750-01 and -02). KINE-4980 can be taken a maximum of 2 times (KINE-4980-01 and -02).

[.....]

Honours Bachelor of Sport Management and Leadership (Degree Completion) for Graduates of Saskatchewan Polytechnic Business Sport Management (with/without thesis)
Degree requirements
[.....]
(b) Sport Management and Leadership Courses Take 4 courses from
o KINE-3330. Applied Sport Psychology
o KINE-3501. Practical Strategies for Social Change: Intervening to Prevent Sexual Violence
o KINE-3530. Sport Facility Management
o KINE-3550. Socio-Economics Aspects of Sport and Leisure
o KINE-3770. Sport Tactics and Strategies
o KINE-3800. Global Perspectives in Human Kinetics
o KINE-4040. Population Health
o KINE-4400. History of Sport in Canada
o KINE-4410. Sport in America
o KINE-4420. Sport Sponsorship
o KINE-4430. Social Responsibility in Sport
o KINE-4440. Consumer Behaviour
o KINE-4520. Sport Policy and Governance
o KINE-4550. Global Issues in Sport Management
o KINE-4560. Sport Communication
o KINE-4570. Hockey in Canada
o KINE-4730. The Social Construction of Leisure
o KINE-4750. Individual Studies[1,3] ~~(01, 02)~~
o KINE-4760. Principles of Coaching
o KINE-4770. Outdoor Recreation
o KINE-4780. Undergraduate Thesis[1,2] (6 units)
o KINE-4850. Group Dynamics in Sport
o KINE-4890. Special Topics in Sport Management and Leadership
o KINE-4980. Internship (4 months) [1,3]
[1] Students can take a maximum of 12 credits from KINE-4750, KINE-4780, and KINE-4980
[2]KINE-4780 is a 6-credit course, and as such, students successfully completing KINE-4780 will be required to take only 2 of the Sport Management and Leadership elective courses listed in section (b).
[3]KINE-4750 can be taken a maximum of 2 times (KINE-4750-01 and -02). KINE-4980 can be taken a maximum of 2 times (KINE-4980-01 and -02).
[.....]

Honours Bachelor of Science (Kinesiology and Health Studies) for Graduates of St. Clair College's Fitness and Health Promotion Diploma (with/without thesis)
Degree requirements
[.....]

(b) Kinesiology and Health Studies courses (SELECT 6 COURSES):

- o KINE-3010. Use and Abuse of Drugs
- o KINE-3020. Exercise Psychology
- o KINE-3030. Imagery Effects on Performance
- o KINE-3060. Obesity and Eating Disorders
- o KINE-3100. Motor Learning and Control
- o KINE-3330. Applied Sport Psychology
- o KINE-3501. Practical Strategies for Social Change: Intervening to Prevent Sexual Violence
- o KINE-3600. Respiratory Physiology
- o KINE-3610. Musculoskeletal Physiology
- o KINE-3630. Cognitive Ergonomics
- o KINE-3770. Sport Tactics and Strategies
- o KINE-3800. Global Perspectives in Human Kinetics
- o KINE-4000. Human Movement and Aging
- o KINE-4040. Population Health
- o KINE-4080. Dynamics of Skill Acquisition
- o KINE-4100. Adapted Physical Activity
- o KINE-4530. Perceptual-Motor Development
- o KINE-4580. The Endocrine System in Sport, Exercise and Health
- o KINE-4600. Cardiovascular Physiology
- o KINE-4610. Clinical Exercise Rehabilitation
- o KINE-4620. Exercise in Extreme Environments
- o KINE-4630. Applied Neurophysiology
- o KINE-4640. The Pathophysiology of Pain
- o KINE-4650. Advanced Physical Ergonomics and Injury Prevention
- o KINE-4660. Cardiac Rehabilitation
- o KINE-4670. User Experience
- o KINE-4710. Sports Therapy
- o KINE-4750. Individual Studies[1,3]
- o KINE-4760. Principles of Coaching
- o KINE-4770. Outdoor Recreation
- o KINE-4780. Undergraduate Thesis[1,2] (6 credits)
- o KINE-4800. Advanced Biomechanics
- o KINE-4850. Group Dynamics in Sport
- o KINE-4900. Special Topics in Kinesiology and Health Studies

[1] Students can take a maximum of 9 credits from KINE-4750 and KINE-4780.
[2]KINE-4780 is a 6-credit course, and as such, students successfully completing KINE-4780 will be required to
take only 4 of the Kinesiology and Health Studies courses listed in section (b).
[3]KINE-4750 can be taken a maximum of 2 times (KINE-4750-01 and -02).
[.....]

Honours Bachelor of Science (Kinesiology and Health Studies) for
Graduates of St. Clair College's Occupational Therapist
Assistant/Physiotherapist Assistant Program (with/without thesis)
Degree Requirements
[.....]
Kinesiology and Health Studies Course (SELECT 8 COURSES)
o KINE-3010. The Use and Abuse of Drugs

o KINE-3020. Exercise Psychology
o KINE-3030. Imagery Effects on Performance
o KINE-3060. Obesity and Eating Disorders
o KINE-3100. Motor Learning and Control
o KINE-3330. Applied Sport Psychology
o KINE-3501. Practical Strategies for Social Change: Intervening to Prevent Sexual Violence
o KINE-3600. Respiratory Physiology
o KINE-3610. Musculoskeletal Physiology
o KINE-3630. Cognitive Ergonomics
o KINE-3150. Scientific Principles of Strength and Conditioning
o KINE-3770. Sport Tactics and Strategies
o KINE-3800. Global Perspectives in Human Kinetics
o KINE-4000. Human Movement and Aging
o KINE-4040. Population Health
o KINE-4080. Dynamics of Skill Acquisition
o KINE-4100. Adapted Physical Activity
o KINE-4150. Fundamentals and Application of Sport Science
o KINE-4330. Selected Topics in Sport Leadership
o KINE-4530. Perceptual Motor Development
o KINE-4580. The Endocrine System in Sport, Exercise and Health
o KINE-4600. Cardiovascular Physiology
o KINE-4610. Clinical Exercise Rehabilitation
o KINE-4620. Exercise in Extreme Environments
o KINE-4630. Applied Neurophysiology
o KINE-4640. The Pathophysiology of Pain
o KINE-4650. Advanced Physical Ergonomics and Injury Prevention
o KINE-4660. Cardiac Rehabilitation
o KINE-4670. User Experience
o KINE-4710. Sports Therapy
o KINE-4750. Individual Studies[1,3]
o KINE-4760. Principles of Coaching
o KINE-4770. Outdoor Recreation
o KINE-4780. Undergraduate Thesis[1,2] (6 credits)
o KINE-4800. Advanced Biomechanics
o KINE-4850. Group Dynamics in Sport
o KINE-4900. Special Topics in Kinesiology and Health Studies
o KINE-4980. Internship (4 months) [1,3]

[1] Students can take a maximum of 12 credits from KINE-4750, KINE-4780, and KINE-4980
[±2]KINE-4780 is a 6-credit course, and as such, students successfully completing KINE-4780 will be required to take only 6 of the Kinesiology and Health Studies elective courses listed in section (b).
[3]KINE-4750 can be taken a maximum of 2 times (KINE-4750-01 and -02). KINE-4980 can be taken a maximum of 2 times (KINE-4980-01 and -02).
[.....]

Honours Bachelor of Science (Kinesiology and Health Studies) for Graduates of Fanshawe College's Fitness and Health Promotion Diploma (with/without thesis)

Degree Requirements
[.....]

(b) Kinesiology and Health Studies courses (SELECT 6 COURSES):

- KINE-3010. Use and Abuse of Drugs
- KINE-3020. Exercise Psychology
- KINE-3030. Imagery Effects on Performance
- KINE-3060. Obesity and Eating Disorders
- KINE-3100. Motor Learning and Control
- KINE-3330. Applied Sport Psychology
- KINE-3501. Practical Strategies for Social Change: Intervening to Prevent Sexual Violence
- KINE-3600. Respiratory Physiology
- KINE-3610. Musculoskeletal Physiology
- KINE-3630. Cognitive Ergonomics
- KINE-3770. Sport Tactics and Strategies
- KINE-3800. Global Perspectives in Human Kinetics
- KINE-4000. Human Movement and Aging
- KINE-4040. Population Health
- KINE-4080. Dynamics of Skill Acquisition
- KINE-4100. Adapted Physical Activity
- KINE-4530. Perceptual-Motor Development
- KINE-4580. The Endocrine System in Sport, Exercise and Health
- KINE-4600. Cardiovascular Physiology
- KINE-4610. Clinical Exercise Rehabilitation
- KINE-4620. Exercise in Extreme Environments
- KINE-4630. Applied Neurophysiology
- KINE-4640.The Pathophysiology of Pain
- KINE-4650. Advanced Physical Ergonomics and Injury Prevention
- KINE-4660. Cardiac Rehabilitation
- KINE-4670. User Experience
- KINE-4710. Sports Therapy
- KINE-4750. Individual Studies[1,3]
- KINE-4760. Principles of Coaching
- KINE-4770. Outdoor Recreation
- KINE-4780. Undergraduate Thesis[1,2] (6 credits)
- KINE-4800. Advanced Biomechanics
- KINE-4850. Group Dynamics in Sport
- KINE-4900. Special Topics in Kinesiology and Health Studies

[1] Students can take a maximum of 9 credits from KINE-4750 and KINE-4780.
[2]KINE-4780 is a 6-credit course, and as such, students successfully completing KINE-4780 will be required to
take only 4 of the Kinesiology and Health Studies courses listed in section (b).
[3]KINE-4750 can be taken a maximum of 2 times (KINE-4750-01 and -02).

[.....]

Honours Bachelor of Science (Kinesiology and Health Studies) degree completion with Mohawk College Occupational Therapist Assistant/Physiotherapist Assistant Program
Degree Requirements
[.....]

(b) Kinesiology and Health Studies courses (SELECT 6 COURSES):

- KINE-2620. Human Factors and Performance
- KINE-3010. Use and Abuse of Drugs

- KINE-3020. Exercise Psychology
- KINE-3030. Imagery Effects on Performance
- KINE-3060. Obesity and Eating Disorders
- KINE-3100. Motor Learning and Control
- KINE-3330. Applied Sport Psychology
- KINE-3501. Practical Strategies for Social Change: Intervening to Prevent Sexual Violence
- KINE-3600. Respiratory Physiology
- KINE-3610. Musculoskeletal Physiology
- KINE-3630. Cognitive Ergonomics
- KINE-3150. Scientific Principles of Strength and Conditioning
- KINE-3770. Sport Tactics and Strategies
- KINE-3800. Global Perspectives in Human Kinetics
- KINE-4000. Human Movement and Aging
- KINE-4040. Population Health
- KINE-4080. Dynamics of Skill Acquisition
- KINE-4100. Adapted Physical Activity
- KINE-4150. Fundamentals and Application of Sport Science
- KINE-4330. Selected Topics in Sport Leadership
- KINE-4530. Perceptual-Motor Development
- KINE-4580. The Endocrine System in Sport, Exercise and Health
- KINE-4600. Cardiovascular Physiology
- KINE-4610. Clinical Exercise Rehabilitation
- KINE-4620. Exercise in Extreme Environments
- KINE-4630. Applied Neurophysiology
- KINE-4640. The Pathophysiology of Pain
- KINE-4650. Advanced Physical Ergonomics and Injury Prevention
- KINE-4660. Cardiac Rehabilitation
- KINE-4670. User Experience
- KINE-4710. Sports Therapy
- KINE-4760. Principles of Coaching
- KINE-4770. Outdoor Recreation
- KINE-4780. Undergraduate Thesis[1,2] (6 credits)
- KINE-4800. Advanced Biomechanics
- KINE-4850. Group Dynamics in Sport
- KINE-4900. Special Topics in Kinesiology and Health Studies
- KINE-4980. Internship (4 months)[1,3]

[1] Students can take a maximum of 12 credits from KINE-4780 and KINE-4980.

[2]KINE-4780 is a 6-credit course, and as such, students successfully completing KINE-4780 will be required to take only 4 of the Kinesiology and Health Studies courses listed in section (b).

[3]KINE-4980 can be taken a maximum of 2 times (KINE-4980-01 and -02).

[.....]

~~*KINE-4780 is a 6-credit course, and as such, students successfully completing KINE-4780 will be required to take only 5 of the Kinesiology and Health Studies elective courses listed in section (b).~~

[.....]

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

Honours Bachelor of Sport Management and Leadership degree completion pathway for Graduates of Georgian College Business Administration Program with Sport Administration Stream

[.....]

c) Sport Management and Leadership Courses (SELECT 2 COURSES):

- o KINE-3330. Applied Sport Psychology
- o KINE-3501. Practical Strategies for Social Change: Intervening and Prevent Sexual Violence
- o KINE-3510. Sport Event Management
- o KINE-3550. Socio-Economics Aspects of Sport and Leisure
- o KINE-3570. Community Sport
- o KINE-3770. Sport Tactics and Strategies
- o KINE-3800. Global Perspectives in Human Kinetics
- o KINE-4040. Population Health
- o KINE-4400. History of Sport in Canada
- o KINE-4410. Sport in America
- o KINE-4430. Social Responsibility in Sport
- o KINE -4440. Consumer Behaviour
- o KINE-4520. Sport Policy and Governance
- o KINE-4550. Global Issues in Sport Management
- o KINE-4560. Sport Communication
- o KINE-4570. Hockey in Canada
- o KINE-4750. ~~Independent~~ **Individual** Studies[1,3]
- o KINE-4760. Principles of Coaching
- o KINE-4770. Outdoor Recreation
- o KINE-4780. Undergrad Thesis[1] **(6 credits)**
- o KINE-4850. Group Dynamics in Sport

[1] Students can take a maximum of 9 credits from KINE-4750 and KINE-4780.

[2]KINE-4780 is a 6-credit course, and as such, students successfully completing KINE-4780 will be required to
take none of the Sport Management and Leadership courses listed in section (c).

[3]KINE-4750 can be taken a maximum of 2 times (KINE-4750-01 and -02).

~~*[1]KINE-4780 is a 6-credit course, and as such, students successfully completing KINE-4780 will be required to take none of the Sport Management and Leadership elective courses listed in section (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

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

B. RATIONALE

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

KINE-4750 (Individual Studies), KINE-4780 (Undergraduate Thesis), and KINE-4980 (Internship) are valuable components of our undergraduate degrees. Restrictions currently exist to limit research-intensive experiences (e.g., only one section of KINE-4750 can be taken with KINE-4780), however, a maximum of 12 credits (4 courses) strikes an appropriate balance. This will provide flexibility and meaningful hands-on learning opportunities while ensuring experiential learning complements, rather than replaces, the structured academic curriculum.

Changes were made recently, but the extra note[3] provides more clarity to students. Additionally, when the original changes were made, there were a few degree completion programs that were omitted from the document. This completes the undergraduate calendar 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 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

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

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

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

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

University of Windsor
Program Development Committee

*5.9: **Language, Literature and Culture – Summary of Minor Course and Calendar Changes (Form E)**

Item for: **Information**

Forwarded by: **Faculty of Arts Humanities and Social Sciences**

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.**	Winter 2027

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**

LING-2210. Language and Linguistics.
An introduction to the scientific study of language, specifically focused on language structure. (Required of all Modern Languages majors and can be taken in the first year of study. Recommended for students interested in Speech Pathology. Should preferably be taken after LING-2200.) **(3 lecture hours and 1 Lab hour a week). (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 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.*

Learning outcomes were last updated Feb 13,2025

University of Windsor
Program Development Committee

*5.10: **Communication, Media and Film – Program Learning Outcomes**

Item for: **Information**

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

The following program learning outcomes are being revised:

- Honours BA in Communication, Media and Film (without/with co-op)
- Combined Honours BA in Communication, Media and Film
- General BA in Communication, Media and Film
- BFA in Film Production
- *See attached*

PROGRAM TITLE:Honours BA in Communication, Media & Film (without/with 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**
Critically appraise the social, cultural, political and economic implications of current and emerging media technologies/platforms/institutions for communicative practices and everyday life (see also I) Apply and integrate knowledge of theory, research, and communication practices to the contemporary media environment **Define and explain key terms and concepts associated with film production** **Critically reflect on current and historical issues in Canadian-Indigenous relations** **Identify how Indigenous and other non-Western perspectives inform and benefit communication and media theory (see also C and E)** [With co-op] Integrate theory with workplace practice	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
~~Employ a range of qualitative and quantitative methods in original, independent and group research projects (see also A)~~ ~~Define and explain key terms and concepts associated with the research process~~ ~~Identify and explain the epistemological and ontological foundations of a range of quantitative and qualitative methods in the discipline~~ Evaluate the relevance and appropriateness of different methodological approaches in specific contexts Explain ethical issues as they relate to the research process (see also 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

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**
Access databases and evaluate digital resources for credibility and relevance (see also A) **Propose, plan and produce focused research papers or creative projects relevant to a selected topic (see also C and D)** ~~Collect, analyze and interpret data (see also C and D)~~ [With co-op] Demonstrate workplace professional and employment readiness knowledge and skills such as: The acquisition, application and integration of knowledge; Research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy); Critical thinking and problem solving skills; Responsible behaviour to self, others and society; Interpersonal and communications skills; Teamwork and leadership skills (Also applies to C, D, F, G.)		
~~Apply relevant theoretical/disciplinary concepts to interpretations of a variety of communicative practices, media institutions and media artefacts (see also A)~~ ~~Compare and assess competing claims of key theoretical approaches/frameworks (both historical and contemporary) in the discipline (see also A)~~ **Compare and evaluate various theoretical/scholarly approaches to the study of contemporary media culture (see also A)** **Critically analyze films and other media texts in relation to cultural, historical, political, and socio-economic contexts (see also E, I)** **Identify multiple layers of meaning in media texts** [With co-op] Identify the characteristics of, and competently operate within, work environments at various levels	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 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**
[With co-op] Identify the roles and responsibilities within the various aspects of organizations and the relationship between the various departments within them		
~~Analyze and integrate abstract literary and numerical discourses as they apply to the field of communication~~ ~~Formulate and execute a basic research project, including collection of qualitative and/or quantitative data from primary sources (see also B)~~ **Communicate through a variety of modes (see also F)** [With co-op] Reflect on personal growth and achievement in development of workplace skills	D. literacy and numeracy skills	4.Communication Skills 5. Awareness of Limits of Knowledge
~~Recognize~~ **Identify** and apply ethical standards of behaviour in various communications contexts ~~Explain and adhere to principles consistent with established standards of academic integrity~~ Communicate and interact collegially in group~~/class~~ settings (see also F) [With co-op] Facilitate constructive and Co-operative approaches to teamwork activities [With co-op] Demonstrate increased maturity, responsibility, and self-management	E. responsible behaviour to self, others and society	5. Awareness of Limits of Knowledge 6. Autonomy and Professional Capacity
Apply effective oral and written (and visual, where applicable) communicative skills in the preparation of content for a range of audiences **Engage in constructive critique of self and peer works** [With co-op] Contribute to positive and professional workplace cultures	F. interpersonal and communications skills	4. Communication Skills 6. Autonomy and Professional Capacity
~~Demonstrate the ability to~~ **W**ork creatively and collegially in teams~~, particularly on production~~	G. teamwork, and personal and	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**
~~projects,~~ from conception to completion (see also E and F) Prepare and implement individual and group projects (see also C, E and F) [With co-op] Participate in professional networking events and reflect on effective strategies for fostering contacts [With co-op] Observe and identify teamwork protocols and dynamics for teamwork	group leadership skills	
~~Identify and apply aesthetic strategies/methods/techniques central to effective communication practices (see also A and C)~~ **Employ visual storytelling skills** Assess, evaluate and integrate different aesthetic approaches to the meaning-making process (see also A and C)	H. creativity and aesthetic appreciation	2. Knowledge of Methodologies 3. Application of Knowledge 6. Autonomy and Professional Capacity
~~Explain and analyze the role of media in the framing and representation of contemporary issues and current events~~ **Critically appraise their own engagement with media culture and reflect on how it shapes their perceptions of self and others** Explain the centrality of media literacy skills in relation to critical citizenship and participation in democratic processes (see also **E** ~~D~~) **Consider how their own everyday engagement with digital media is shaped by social, economic, and political dimensions (see also C)** [With co-op] Reflect on academic and career goals, as well as individual strengths, weaknesses, and preferences.	I. the ability and desire for continuous learning	6. Autonomy and Professional Capacity

PROGRAM TITLE: Combined Honours BA in Communication, Media & Film

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**
Critically appraise the social, cultural, political and economic implications of current and emerging media technologies/platforms/institutions for communicative practices and everyday life (see also I) Apply and integrate knowledge of theory, research, and communication practices to the contemporary media environment **Define and explain key terms and concepts associated with film production** **Critically reflect on current and historical issues in Canadian-Indigenous relations** **Identify how Indigenous and other non-Western perspectives inform and benefit communication and media theory (see also C and E)** Integrate theories and perspectives from another discipline to the critical study of media and culture	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
~~Employ a range of qualitative and quantitative methods in original, independent and group research projects (see also A)~~ ~~Define and explain key terms and concepts associated with the research process~~ ~~Identify and explain the epistemological and ontological foundations of a range of quantitative and qualitative methods~~ Evaluate the relevance and appropriateness of different methodological approaches, including those from another discipline, in specific contexts Explain ethical issues as they relate to the research process (see also 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

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**
Access databases and evaluate digital resources for credibility and relevance (see also A) **Propose, plan and produce focused research papers or creative projects relevant to a selected topic (see also C and D)** ~~Collect, analyze and interpret data (see also C and D)~~		
~~Apply relevant theoretical/disciplinary concepts to interpretations of a variety of communicative practices, media institutions and media artefacts (see also A)~~ ~~Compare and assess competing claims of interdisciplinary theoretical approaches/frameworks (both historical and contemporary) (see also A)~~ **Compare and evaluate interdisciplinary theoretical/scholarly approaches to the study of contemporary media culture (see also A)** **Identify multiple layers of meaning in media texts**	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
~~Analyze and integrate abstract literary and numerical discourses as they apply to the field of communication~~ **Communicate through a variety of modes (see also F)**	D. literacy and numeracy skills	4.Communication Skills 5. Awareness of Limits of Knowledge
~~Recognize~~ **Identify** and apply ethical standards of behaviour in various communications contexts ~~Explain and adhere to principles consistent with established standards of academic integrity.~~ **Communicate and interact collegially in group settings (see also F)**	E. responsible behaviour to self, others and society	5. Awareness of Limits of Knowledge 6. Autonomy and Professional Capacity
Apply effective oral and written (and visual, where applicable) communicative skills in the preparation of content for a range of audiences.	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**
Engage in constructive critique of self and peer works		
Work creatively and collegially in teams~~, particularly on production projects,~~ from conception to completion (see also E and F) Prepare and implement individual and group projects (see also C, E, and F)	G. teamwork, and personal and group leadership skills	4. Communication Skills 6. Autonomy and Professional Capacity
~~Identify and apply aesthetic strategies/methods/techniques central to effective communication practices (see also A and C)~~ **Employ visual storytelling skills** Assess, evaluate and integrate different aesthetic approaches to the meaning-making process (see also A and C)	H. creativity and aesthetic appreciation	2. Knowledge of Methodologies 3. Application of Knowledge 6. Autonomy and Professional Capacity
~~Explain and analyze the role of media in the framing and representation of contemporary issues and current events~~ **Critically appraise their own engagement with media culture and reflect on how it shapes their perceptions of self and others** Explain the centrality of media literacy skills in relation to critical citizenship and participation in democratic processes (see also **E** ~~D~~) **Consider how their own everyday engagement with digital media is shaped by social, economic, and political dimensions (see also C)**	I. the ability and desire for continuous learning	6. Autonomy and Professional Capacity

PROGRAM TITLE:General BA in Communication, Media & Film

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 the social, cultural, political and economic implications of current and emerging media technologies/platforms/ institutions for communicative practices and everyday life (see also I) **Define and explain key terms and concepts associated with film production** **Critically reflect on current and historical issues in Canadian-Indigenous relations** **Identify how Indigenous and other non-Western perspectives inform and benefit communication and media theory (see also C and E)**	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
~~Define and explain key terms and concepts associated with the research process~~ Explain ethical issues as they relate to the research process (see also E) Access databases and evaluate digital resources for credibility and relevance (see also A)	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 relevant theoretical/disciplinary concepts to interpretations of a variety of communicative practices, media institutions and media artefacts (see also A)~~ ~~Recognize competing claims of key theoretical approaches/frameworks (both historical and contemporary) in the discipline (see also A)~~ **Identify and explain various theoretical/scholarly approaches to the study of contemporary media culture (see also A)** **Critically analyze films and other media texts in relation to cultural, historical, political, and socio-economic contexts (see also E, I)**	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 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**
Identify multiple layers of meaning in media texts		
~~Analyze and integrate literary and numerical discourses as they apply to the field of communication~~ **Communicate through a variety of modes (see also F)**	D. literacy and numeracy skills	4.Communication Skills 5. Awareness of Limits of Knowledge
~~Recognize~~ **Identify** ethical standards of behaviour in various communications contexts ~~Explain and adhere to principles consistent with established standards of academic integrity~~ Communicate and interact collegially in group~~/class~~ settings (see also F)	E. responsible behaviour to self, others and society	5. Awareness of Limits of Knowledge 6. Autonomy and Professional Capacity
Apply effective oral and written (and visual, where applicable) communicative skills in the preparation of content for a range of audiences	F. interpersonal and communications skills	4. Communication Skills 6. Autonomy and Professional Capacity
~~Demonstrate the ability to~~ **W**ork creatively and collegially in teams~~, particularly on production projects,~~ from conception to completion (see also E and F) Prepare individual and group projects (see also C, E, and F)	G. teamwork, and personal and group leadership skills	4. Communication Skills 6. Autonomy and Professional Capacity
~~Identify and apply aesthetic strategies/methods/techniques central to effective communication practices (see also A and C)~~ **Employ visual storytelling skills** Discuss different aesthetic approaches to the meaning-making process (see also A and C)	H. creativity and aesthetic appreciation	2. Knowledge of Methodologies 3. Application of Knowledge 6. Autonomy and Professional Capacity
~~Explain and analyze the role of media in the framing and representation of contemporary issues and current events~~ **Critically appraise their own engagement with media culture and reflect on how it shapes their perceptions of self and others**	I. the ability and desire for continuous learning	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**
Consider how their own everyday engagement with digital media is shaped by social, economic, and political dimensions (see also C)		

PROGRAM TITLE: **BFA in Film Production**
DEPARTMENT/FACULTY: **Department of Communication, Media & Film**

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 program (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.*

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 sophisticated creative, craft, and technical skills throughout pre-production, production, **and** postproduction~~, and distribution~~ (see also H) Apply concepts of visual and oral storytelling, including the use of cinematic techniques, such as lighting, shot angles, etc., to achieve desired effects (see also B and C) Use and explain the specialized vocabulary associated throughout all phases of cinematic production and associated with the analysis of film (see also B and C) Compare and evaluate various theoretical frameworks used to study film and filmic techniques (see also B and C) Employ relevant theories that shape the creative process and that may influence audience perceptions (see also B and C) Integrate feedback to improve work (see also D, F and G) **Critically reflect on current and historical issues in Canadian-Indigenous relations (see also 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
Design ~~a~~ project proposal**s** that addresses each phase of the production process Conduct relevant background research on the subject matter/focus of ~~the~~ film**s** in the pre-production phase and integrate this knowledge in the subsequent production process ~~Assemble, organize and examine data related to potential target~~	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**
~~audiences/demographics to maximize exposure~~ Research the nature and scope of the Canadian film and television industry and identify employment pathways and opportunities (see also I)		
Integrate conceptual knowledge and practical skills **(e.g., cinematography, editing, etc.)** appropriate to content creation for various genres, such as animation, documentary, experimental, and fiction **Critically analyze films in relation to cultural, historical, political, and socio-economic contexts (see also E, I)** ~~Critically assess the aesthetics, themes, and narrative structure of film texts, including their own works, those of their peers, and others in industry (see also E, F, and G)~~ ~~Assess, manage and troubleshoot creative, craft, and interpersonal problems as they arise during all phases of production (see also E, F, and G)~~	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
Formulate, execute, and finalize ~~a~~ budget plan**s** based on a consideration of the various components of all phases of production (see also B) ~~Use business communication skills to disseminate information successfully for the completion of a project (see also B)~~ Articulate a production pitch (see also B **and F**) Research and design an industry-standard project proposal, budget, production, and marketing plan that	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.* 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**
addresses each production phase (see also B) **Communicate through a variety of modes (see also F)** ~~Read, write, and verbally reflect upon film texts in creative and scholarly formats and contexts~~ ~~Express film ideas effectively, verbally and in writing, this may include pitches, synopses, and/or screenplays~~		
~~Produce ethically responsible content (see also A, B, C, F and G)~~ Explain ~~and demonstrate~~ the ethical responsibility of media makers with everyone with whom they are in contact in all phases of production, such as crew members, stakeholders, the public, subject(s), audience, etc. (see also A, B, **and** C~~, F and G~~) ~~Explain and demonstrate the Canadian Creative Industries Code of Conduct that is dedicated to preventing and reducing harassment, discrimination, bullying and violence within Canada's creative industries (see also A, B, C, F and G)~~ ~~Explain the differences between copyright, trademark, and fair-dealing~~	E. responsible behaviour to self, others and society	5. Awareness of Limits of Knowledge 6. Autonomy and Professional Capacity
Work creatively, collegially, and respectfully on projects, maintaining professional manners in all media and in all forms of interpersonal relations ~~including face-to-face, writing, online, texting, phone, etc.~~	F. interpersonal and communications skills	4. Communication Skills 6. Autonomy and Professional Capacity
Actively support the vision of peers and the execution of their project	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.* 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**
Assume leadership in a variety of roles when working on a collaborative production environment		
Express and create an artistic vision within reasonable financial and material constraints Produce original scripts for projects ~~Analyze and engage effectively with the creative process.~~ Evaluate the merits of film texts and articulate how they inform their own creative work	H. creativity and aesthetic appreciation	2. Knowledge of Methodologies 3. Application of Knowledge 6. Autonomy and Professional Capacity
Articulate fundamental principles of ethical, technical, **and** creative dimensions of film ~~Keep current in ongoing developments in the industry.~~	I. the ability and desire for continuous learning	6. Autonomy and Professional Capacity

University of Windsor
Program Development Committee

*5.11: **Human Kinetics – Summary of Minor Course and Calendar Changes (Form E)**

Item for: **Information**

Forwarded by: **Faculty of Human Kinetics**

ALL SECTIONS OF THIS FORM *MUST* BE COMPLETED. PDC FORMS WITH SECTIONS THAT HAVE NOT BEEN COMPLETED WILL BE SENT BACK.

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
Kinesiology	Dr. David Andrews	October 30, 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 Winter 2027

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: **GOVN-1001. University Senates ~~– Role and Power~~** This course explores the history, role, and responsibilities 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**

KINE-4510. ~~Sport and the Law~~**. The Legal Environment of Sport.**
~~Introduces students to the principles of law as they relate to Human Kinetics. The principles of law will be related to sport or athletic administration, and to instruction and supervision as it relates to physical and health and field activities, interscholastic and intercollegiate programs, as well as, other recreational and leisure pursuits.~~ **This course examines sport law through a managerial lens, focusing on how legal principles shape the decisions, responsibilities, and strategies of sport organizations, leagues, governing bodies, athletes, and commercial stakeholders. Students will examine the legal environment surrounding both sport participation and sport consumption, with a focus on connecting legal concepts to real-world sport industry challenges.**

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).

PROGRAM DEVELOPMENT COMMITTEE
SUMMARY OF MINOR COURSE AND CALENDAR CHANGES
FORM E

☐ **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:

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

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.*

PROGRAM DEVELOPMENT COMMITTEE
SUMMARY OF MINOR COURSE AND CALENDAR CHANGES
FORM E

LEARNING OUTCOMES TABLE

COMPLETE THIS TABLE FOR EACH COURSE THAT DOES NOT HAVE OFFICIAL LEARNING OUTCOMES. (check the CuMA database at https://ctl2.uwindsor.ca/cuma/public/)	
COURSE NUMBER AND TITLE: KINE-4510. ~~Sport and the Law~~. The Legal Environment of Sport. *These are new 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 the legal principles and regulatory frameworks that shape the sport industry. (Also applies to B, C, F)	A. the acquisition, application and integration of knowledge
B. Analyze legal issues arising from sport participation and sport consumption. (Also applies to A, C, D)	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C. Evaluate the legal responsibilities and potential liabilities of sport organizations and their managers. (Also applies to A, B, D, E, F) Assess contemporary legal controversies and emerging issues in sport. (Also applies to B, E, F) Develop legally defensible solutions to organizational challenges (Also applies to A, B, D, E, F, G)	C. critical thinking and problem-solving skills
D.	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

University of Windsor
Program Development Committee

5.12: **Human Kinetics (Graduate) – Course Learning Outcomes**

Item for: **Information**

Forwarded by: **Faculty of Human Kinetics**

This document contains the following learning outcomes:
KINE-1030. Kinesiology and Health Studies Perspectives
KINE-2990. Co-op Work Experience I
KINE-3820. Practice, Theory, and Analysis of Golf.
KINE 3830 Practice, Theory, and Analysis of Hockey
KINE-3990. Co-op Work Experience II.
KINE-4990. Co-op Work Experience III

COURSE NUMBER AND TITLE: KINE-1030. Kinesiology and Health Studies Perspectives	
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. Integrate key aspects regarding the history of Kinesiology (Also applies to C) Interpret, identify, and distinguish the various sub-disciplines of Kinesiology from the movement science perspectives, mainly those pertaining to: a. Physiology b. Biomechanics and Ergonomics c. Motor Control/Learning/Behaviour d. Psychology of Exercise, Sport, and Physical Activity (Also applies to C) Recognize various careers that are related to the various sub-disciplines of Kinesiology from the movement science perspectives (Also applies to C)	A. the acquisition, application and integration of knowledge
B. Evaluate examples based on the various sub-disciplines of Kinesiology.	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C.	C. critical thinking and problem-solving skills
D.	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

COURSE NUMBER AND TITLE: KINE-2990. Co-op Work Experience I	
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. Integrate Kinesiology or Sport Management and Leadership theories within workplace practice (Also applies to C) Identify basic workplace skills and assess how they align with personal competencies their personal competencies with these skills.	A. the acquisition, application and integration of knowledge
B. Create a list of relevant Kinesiology or Sport Management and Leadership professionals in their field of interest.	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C. Effectively target resumes/cover letters and tailor interviews for specific job opportunities (Also applies to F)	C. critical thinking and problem-solving skills
D.	D. literacy and numeracy skills
E.	E. responsible behaviour to self, others and society
F. Articulate the norms of the workplace culture and meet those norms. Identify multiple networking contacts comprised of colleagues, supervisors, and/or associated contacts in the field. (Also applies to G)	F. interpersonal and communications skills
G.	G. teamwork, and personal and group leadership skills
H.	H. creativity and aesthetic appreciation
I. Articulate personal preferences related to possible academic and career plans.	I. the ability and desire for continuous learning

COURSE NUMBER AND TITLE: KINE-3820. Practice, Theory, and Analysis of Golf	
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. Identify, explain, and demonstrate technical golf skills and strategies Identify, explain, and demonstrate golf tactics, error detection and correction Identify and explain course management Develop and implement practice plans that are age and developmentally appropriate (Also applies to B and C) Identify and explain the rules and etiquette of golf.	A. the acquisition, application and integration of knowledge

B.	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C. Apply knowledge of fundamental golf skills, tactics, error detection and correction to player evaluation and development	C. critical thinking and problem-solving skills
D.	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

COURSE NUMBER AND TITLE: KINE 3830 Practice, Theory, and Analysis of Hockey	
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. Identify, explain, and demonstrate technical hockey skills and strategies Identify, explain, and demonstrate individual and team hockey tactics Identify and explain team systems Develop and implement practice plans that are age and developmentally appropriate (Also applies to B and C) Identify and explain the rules of hockey.	A. the acquisition, application and integration of knowledge
B. Develop and implement practice plans that are age and developmentally appropriate (Also applies to A and C)	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C. Apply knowledge of fundamental hockey skills and tactics to player evaluation and development. Develop and implement practice plans that are age and developmentally appropriate (Also applies to A and B)	C. critical thinking and problem-solving skills
D.	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

COURSE NUMBER AND TITLE: KINE-3990. Co-op Work Experience II.	
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. Provide concrete examples of workplace integration of Kinesiology or Sport Management and Leadership theories, and how these can be used to improve their performance (Also applies to B)	A. the acquisition, application and integration of knowledge
B. Clearly articulate potential career options and develop appropriate plans to effectively pursue these options (Also applies to C, F, and I).	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C.	C. critical thinking and problem-solving skills
D.	D. literacy and numeracy skills
E.	E. responsible behaviour to self, others and society
F. Critically reflect on current strengths and weaknesses, and develop a plan to enhance strengths and address weaknesses. (Also applies to I) Communicate effectively in written and oral formats while interacting with co-workers and clients. (Also applies to G)	F. interpersonal and communications skills
G. Utilize self-, peer- and performance- assessments to improve performance.	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: KINE-4990. Co-op Work Experience III.	
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:
Demonstrate specific competencies, professional skills and technical knowledge related to their job description and tasks (Also applies to B, C, and D) Access, analyze and synthesize information and apply it to new situations (Also applies to B and C)	A. the acquisition, application and integration of knowledge

Transfer their understanding of current industry practices, issues, technologies, and skills to their career goals (Also applies to B, C, and I).	
B.	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C.	C. critical thinking and problem-solving skills
D.	D. literacy and numeracy skills
E.	E. responsible behaviour to self, others and society
F. Build a network of a colleagues, supervisors and associated contacts based on their placement in their career field (Also applies to G) Articulate personal growth arising from their experience in the workplace and the community Communicate effectively in written and oral formats while interacting with co-workers and clients. (Also applies to G)	F. interpersonal and communications skills
G. Utilize self-, peer- and performance- assessments to improve performance.	G. teamwork, and personal and group leadership skills
H.	H. creativity and aesthetic appreciation
I. Clearly define their career path and create an action plan for achieving this career	I. the ability and desire for continuous learning

University of Windsor
PDC Advisory Group

1.0 Master of Engineering in Mechatronic Systems Engineering (with/without Co-operative Education) New Program Proposal (Form A) and New Course Proposals (Form D)

Item for: **Approval**

Forwarded by: **Faculty of Engineering**

MOTION: That the Master of Engineering in Mechatronic Systems Engineering (with/without Co-operative Education) New Program Proposal (Form A) and the following new course proposals be approved, in accordance with the program/course change forms:^

TRON-8010. Advanced Industrial Controls
TRON-8020. Advanced Robotics
TRON-8030. Artificial Intelligence and Machine Learning

^*Subject to approval of the expenditures required.*

Rationale/Approvals:

- The new program proposal has been approved by the Electrical and Computer Engineering/Mechanical, Automotive and Materials Engineering Council, the Faculty of Engineering Coordinating Council (September 10, 2026), the Faculty of Graduate Studies (October 28th, 2026) and the Provost.
- Provost Comments: *This looks very good and very exciting for the university. I appreciate the comments on the reviewer comments and highlighting items we have to keep a "heads up" for in the Provost's Office.*
- As per the provincial Quality Assurance Framework, proposals for new programs must undergo external review prior to approval at the AAU level. The external reviewers for the program were Derek Wright (University of Waterloo) and Donatus (Don) Oguamanam (Toronto Metropolitan University) who conducted an on-site review on September 14-15th, 2026. The internal facilitator was Gregg French (University of Windsor).
- The External Reviewers' Report, Departmental Response, Dean's Response to the Reviewers' Report, and appendices (Faculty CVs) were included as part of the new program proposal.
- *See attached.*

PROGRAM DEVELOPMENT COMMITTEE
NEW PROGRAM PROPOSAL
FORM A

New Program Steering Committee/Provost Approval to Develop New Program Proposal

Date of New Program Steering Committee/Provost approval to proceed with development of the new program proposal:	March 23, 2026

A. Basic Program Information

Faculty(ies)	Faculty of Engineering
Department(s)/School(s)	Electrical and Computer Engineering/Mechanical, Automotive and Materials Engineering
Name of Program as it Will Appear on the Diploma (*e.g.*, Bachelor of Arts Honours Psychology with thesis)	Master of Engineering in Mechatronic Systems Engineering with or without Co-operative Education
Proposed Year of Offering* [Fall, Winter, Spring]: **(subject to timely and clear submission)*	Fall 2027
Mode of Delivery:	In Person and Field Learning
Planned steady-state Student Enrolment (per section B.4.2)	15-20 students per intake
Normal Duration for Completion:	3-5 semesters
Will the program run on a cost-recovery basis?	No

Overall Program Plan

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

Please provide a brief statement about the direction, relevance and importance of the new program. Describe the overall aim and intended impact of the proposed new program. Describe the consistency of the proposed new 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)

Mechatronic Systems Engineering (MSE) is a multidisciplinary field at the intersection of mechanical, electrical, and computer engineering principles to design, develop, and integrate advanced technologies into systems. Mechatronic systems are all around us. Industrial robots, drive-by-wire automobiles, autonomous air/land/underwater vehicles, modern household appliances, medical resonance image (MRI) machines, smart structures, cybernetics: all these systems depend on the expertise of mechatronics engineers. Systems of Mechatronic Systems (SoMSy) take this field even further, integrating multiple systems across environments such as smart cities and grids, smart assembly lines with robots, sensors and supervisory control systems, and even smart disaster management systems. These systems represent a more connected, sustainable, and efficient future that is already taking shape.

Mechatronic systems are already revolutionizing industries, making them more competitive and sustainable. At their heart, they are a fulcrum to foster innovation, reduce operational costs, enhance product quality, and contribute to sustainable practices by optimizing processes and improving energy efficiency. Mechatronics systems are all around us and growing at an unprecedented pace as our world becomes increasingly automated. Our proposed Master of Engineering in Mechatronic Systems program will meet the increased demand for highly trained mechatronics engineers. Graduates of the program will contribute to advancing technology and industry, tackling current and future engineering challenges at the intersection of these disciplines.

The course-based program envisions a pathway for both undergraduate students wishing to pursue immediate

graduate studies and working professionals who want to grow their career prospects with an advanced credential, to meet the needs of Industry 4.0. As recent major industrial investments change the regional employment landscape, the program will produce professionals ready to innovate to meet the moment and compete on the national and global stage. Graduates will be ready to keep pace with the rapidly advancing real world applications of mechatronics engineering, not in labs but on the ground, implementing and refining the latest technologies, including artificial intelligence, with the creativity and agility necessary to move from theoretical to practical.

The program meets the *Aspire* strategic priority of "ensuring a high quality, relevant teaching, learning and student experience for everyone". Its curriculum will address some of the most critical challenges facing us today, including sustainability, generative artificial intelligence, integrated cyber-physical systems, and network/data security. Curriculum will be locally and globally relevant, with opportunities for students to examine real-world scenarios, access experiential learning, and work with internationally recognized experts. The program is designed to appeal not just to undergraduates considering further studies, but also to working professionals, expanding learning opportunities beyond traditional markets. The program will also engage with the strategic priority "generating local and global impact through partnership and community engagement" as students work with local industry for experiential learning and graduates establish careers with top organizations.

B.2 Program Content (QAF Section 2.1.2.2)

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

The Master of Engineering in Mechatronic Systems Engineering curriculum has been developed according to Canadian Engineering Accreditation Board (CEAB) recommendations and the Canadian Engineering Qualifications Board (CEQB) syllabus. It consists of three required graduate-level general engineering courses shared with MEng programs in electrical and computer engineering, mechanical engineering, engineering materials, and industrial engineering, and three required and two elective mechatronics specialist courses. The curriculum supports one co-op, which is elective. This sequencing is similar to equivalent programs offered at other institutions. For more detail, see Section B.2.1.

Mechatronic Systems Engineering is an inherently interdisciplinary field, emerging at the intersection of mechanical engineering, electrical engineering, computer science, and control systems; disciplines that, in isolation, cannot fully capture the complexity of modern intelligent machines. From robotic systems and autonomous vehicles to smart manufacturing equipment and medical devices, mechatronic systems demand that engineers think fluidly across traditional boundaries, integrating precision mechanics with embedded electronics, real-time software, and feedback-driven control. A program jointly housed within the Departments of Electrical and Computer Engineering and Mechanical, Automotive and Materials Engineering is uniquely positioned to reflect this reality. Rather than grafting one discipline onto another as an afterthought, such a structure embeds students simultaneously in both intellectual traditions, giving them rigorous grounding in circuit design, signal processing, and computing alongside dynamics, materials, and mechanical systems. This dual departmental home is a deliberate pedagogical statement that the next generation of mechatronics engineers must be equally conversant in materials as they are in automation systems, as well as administrative structure that supports that goal. Graduates of the program will emerge not as specialists borrowed from a neighboring field, but as genuinely hybrid engineers, prepared to lead the design of complex systems where the mechanical, electrical, and computational are inseparable by nature.

Shared general engineering courses ensure that interdisciplinarity also includes a network of peers who will move to other engineering disciplines. Before students delve deeply into the science of mechatronic systems, they will connect and establish relationships with colleagues whose careers will take them in branching directions. A shared foundation and existing network will serve them in their careers as they navigate the gray areas between their disciplines and promotes agility and interdisciplinary thinking. Students will develop an interdisciplinary mindset that combines technical proficiency in both hardware and software with real-world problem solving and systems-level creative thinking.

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 this proposal from existing programs elsewhere, as appropriate.

We identified 13 graduate-level programs in mechatronics across Canada and in Michigan. Four programs are located in Ontario (e.g., Ontario Tech University, University of Waterloo, University of Guelph, and York University); though York offers a Graduate Certificate rather than a degree program, and Waterloo's program is a Master of Applied Science. As such, Ontario Tech and University of Guelph have the only directly comparable programs in Ontario. Given the scant number of similar programs existing in Ontario, offering a graduate degree in Mechatronics systems engineering is both innovative and addresses emerging societal and workforce needs (see B.4 for more information). Mechatronics engineering is an emergent academic discipline with few established conventions. Further details on the environmental scan that identified these programs and their programming can be found in section B.4.3.

Innovative Curriculum and Program Delivery

The limited number of programs identified relative to the growing demand for graduates with expertise in robotics, automation, controls, and other elements of Mechatronics suggests a gap in the market that UWindsor is well-positioned to fill in the following ways:

- Windsor's program is situated as a nexus between the more traditional disciplines of mechanical and electrical engineering and will be co-hosted by two departments to ensure deliberate cross-disciplinary study.
- As detailed in section C.2, each student will begin their degree with three graduate level general engineering courses that are shared between several MEng programs, putting them into an early cohort with other disciplines and encouraging interdisciplinary, systems-level thinking. They will then move into mechatronics-specialist courses that are taught by instructors from multiple departments who are disciplinary experts.
- During the environmental scan, it was noted that few programs are offering either required or elective courses that respond to the growing role of generative AI in workplaces where mechatronics graduates are likely to be found. UWindsor's program will include a required course in Artificial Intelligence and Machine Learning to ensure graduates are well-prepared for emerging industrial demand. This course will also support Canada's AI strategy for the manufacturing and robotics priority sector.
- Students enrolled in the program will engage in hands-on, experiential learning using state-of- the-art equipment currently available in the Faculty of Engineering through a mandatory laboratory component of their courses. UWindsor has established a Mechatronics Lab that is used for the BEng Tech stream established in 2018, which will be used for several courses of the proposed program. This lab is equipped with leading-edge technologies such as robotic manipulators (UR and ABB arms), autonomous vehicles (QCar and Turtlebot mobile robots), mechatronic systems (FESTO stations), and programmable logic controllers (Siemens PLCs).
- UWindsor's program will also include flexible scheduling options as well as part-time course load options, which will support working professionals.
- Existing programs at Guelph and ONTech are in Mechatronics Engineering, but the proposed program is Mechatronic Systems Engineering, with the goal of graduates being systems-level thinkers and problem solvers, as emphasized by the Program Learning Outcomes in section C.4.

Co-op Option

Students who elect to complete a co-op will participate in a mandatory job-readiness program (non-credit) offered by the Office of Co-operative Education and Workplace Partnerships. "Transform – Job Marketability Strategies and Techniques" is a modular job readiness program that prepares students to compete in the co-op job competition while also building skills and competencies that students will use in their post-graduate job search and for future employment. Entry into the co-op option is competitive as spaces are limited.

'Transform: Job Marketability Strategies and Techniques' is a mandatory, non-credit course that co-op and internship students must successfully complete to be eligible to remain in the co-op program. This course

provides students with essential job readiness skills that help them to be successful in the job competition, and it provides information regarding co-op specific policies and procedures. The emphasis of the course is on giving students the tools needed to create targeted, relevant resumes and cover letters and guiding students with reference list creation and interview preparation.

As part of this course, students will be able to:

- Identify co-op/internship requirements and expectations.
- Understand strategies involved in a job search, including writing a targeted resume and cover letter.
- Deconstruct a job posting.
- Reflect on skills, abilities and experiences that demonstrate personal brand.
- Create a reference list.
- Apply interview preparation techniques.
- Market oneself to the position and organization targeted.
- Recognize the importance of professional and non-verbal communication in the interview process.

The Office of Cooperative Education works with students throughout their study and work terms to provide tailored resources and other opportunities to engage with the Office of Cooperative Education. This helps students to develop a strong understanding of networking, professionalism, and many other 'work ready' topics. The co-op options are not available to part time students.

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 developing this new 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) or in the course syllabus where appropriate?*

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

Indigenization in the Faculty of Engineering begins at the undergraduate level, where all students engage with presentations designed to expand their understanding of Indigenous people and communities in Canada. 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. These presentations are embedded into two first-year courses: GENG-1101 Engineering 1 provides a presentation about residential schools, Truth and Reconciliation, and colonialism. It assigns a reflection assignment for the first-year program, which is common to all engineering students. GENG 1201 Cornerstone Design requires students to consider the impacts of their designs on the environment and society, giving an appreciation to Indigenous ways of being. Learning is reinforced at the graduate level in the three GENG courses shared by MEng programs.

On July 13, 2023, Mr. Cory Jones, the president and owner of Neegan Burnside Ltd., a majority Indigenous-owned engineering firm, presented a talk, Experiences in Delivering Infrastructure to Canadian Indigenous communities, to all fourth-year Engineering students in the course GENG-4210 Engineering & Society. Mr. Jones' talk provided valuable insight into considerations for what engineers should know when working with Indigenous communities. The talk was also attended by numerous faculty members within Engineering and other faculties on campus.

Students are asked to engage with readings that expand and challenge their views of intellectual property, ethical approaches, and impacts of technology. These include:

- Readings about the IP perspective by IP researchers and academics from texts such as Indigenous and Decolonizing Studies in Education. (2019). L.T. Smith, E. Tuck, K.W. Yang (Eds.);
- Applying Indigenous research methods storying with peoples and communities. (2019). S. Windchief, T. San Pedro (Eds.); Upholding Indigenous economic relationships (2023). S.W. Jobin (2023);
- The social life of standards: Ethnographic methods for local engagement (2022). J.E. Graham, C. Holmes, F. McDonald, R. Darnell, which provides an opportunity for students to learn about the IP perspective.

The relevance for our students is that they can consider the ethical, both social and environmental, impacts of technology and Engineering on IP, the land, and local, national, and global communities. The ability to understand community needs and concerns, whether that of IP or other groups, is important for Engineers and such readings aid students in seeing different perspectives on the impacts of Engineering projects.

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' undergraduate and graduate studies. 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" [3]. This duty lends itself to discussing respect for and collaboration with Indigenous communities when developing infrastructure and processes.

There are numerous resources available regarding working with Indigenous communities that the Engineering program at UWindsor could draw on for best practices advice when working with IP. They range from the introductory, for example Heritage BC's 27 tips on what to say and do: When working effectively with Indigenous Peoples (https://heritagebc.ca/wp-content/uploads/2019/05/27-Tips-on-What-to-Say-and-Do.pdf) and "I spent the first year drinking tea": Exploring Canadian university researchers'

perspectives on community-based participatory research involving Indigenous peoples (https://doi.org/10.1111/j.1541-0064.2012.00432.x); Working with Indigenous Peoples 101 (https://cela.ca/wp-content/uploads/2020/04/1.0How-to-Work-with-Indigenous-Peoples-101-1.pdf), to corporate programs such as the Banff Centre for Arts and Creativity's Indigenous Leadership programs (https://cela.ca/wp-content/uploads/2020/04/1.0How-to-Work-with-Indigenous-Peoples-101-1.pdf), which would be of benefit to faculty.

For the M.Eng. Mechatronic Systems program, particularly in the area specific TRON courses, the courses have been defined with an understanding of the impact of these robotics and automation technologies on diverse cultures, communities and lands. The instructors for these courses have developed awareness of Indigenous histories and perspectives through departmental efforts, University resources, and ongoing professional development. While these subject areas are deeply technical in nature, the instructors will encourage critical reflection on the social and ethical dimensions of mechatronic systems, fostering professional responsibility, accountability, and culturally respectful engineering practice. These considerations will be reflected in course syllabi, particularly in areas related to ethical practice, sustainability, and societal impact. While no specific Indigenous Knowledge Holders have been formally consulted in the development of these courses, the faculty and instructors are open to future collaboration and inclusion of community-informed perspectives.

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

UWindsor sits on the traditional territory of the Three Fires Confederacy of First Nations (TFCoFN), which includes the Ojibwa, the Odawa, and the Potawatomi (https://www.anishinabek.ca/). It would be of benefit to members of the UWindsor community as a whole to learn more about TFCoFN and its history.
This is an area of weakness within the Faculty of Engineering. The initial process was initiated by the Associate Dean Academic, with limited involvement by faculty members. However, changes are being made to raise awareness. Through the Faculty's 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. The Associate Dean, Academic, and the Undergraduate Programs Coordinator, attended the short course "Pulling Together: A Guide for Curriculum Developers."

A Reconciliation project worked on with the Faculty and the TFCoFN would benefit the TFCoFN community drawing on the expertise of the Faculty and the contributions of Engineering students. Projects to be considered, based on the stated needs of the TFCoFN community, could be water purification technology introduced into the community; solar panels and/or wind energy sources for homes and/or community buildings; greenhouses that would increase food security, which is an issue for almost half of the First Nations communities in Canada, and/or projects that teach basic engineering principles to members of the community to be followed up with tours of UWindsor Engineering to inform potential future students about the type of work done by engineers and how their community could benefit.

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" [4]. 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 students on the realities,

histories, cultures and beliefs of Indigenous people in Canada"[5]. 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" [5].

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 but is also engaging in study of best practices at other institutions in Canada. A 2023 internal grant supported research into the current practices within engineering programs across Canada, and a working group was established to explore opportunities to deploy results. This work is ongoing.

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" [3]. In GENG-8000 – Technical Communications, one of the core courses shared across Master of Engineering programs, students are introduced Truth and Reconciliation with a video and facilitated class discussion which was supported by the Faculty's Equity, Diversity and Inclusion Advisor. This introduction is critical, given the percentage of international students with little to no understanding of Indigenous history and current issues in Canada, and how their discipline can serve the TRC Calls to Action. In final projects, instructions reinforce the importance of including Indigenous communities as stakeholders in your assignments wherever appropriate. Moving forward, there are opportunities in GENG-8010 – Engineering Project Management to explore practical contract management with Indigenous communities, aligned with the approach taken in the Practice Evaluation and Knowledge (PEAK) continuing education modules required for professional engineers licensed through Professional Engineers Ontario.

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, this is another area of weakness. The Faculty continues to integrate learning opportunities in the classroom and in professional development spaces for staff and instructors. 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 is an iterative process; we have been learning and improving as the process develops, and we will continue to make changes as we learn. Building relationships with Indigenous professional engineers would be invaluable for the Faculty of 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.

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 understand better what decolonization looks like within engineering. This is a project that will begin with educating ourselves. We are building a basis of knowledge in truth and reconciliation for our student who are both Canadian and international in background to help understand the important considerations of Indigenous stakeholders in an engineering context in GENG-8000, and we are seeking to broaden this through practical education similar to that done in PEO's mandatory PEAK learning modules as it relates to project management with indigenous stakeholders and communities in engineering projects in continuing enhancement of GENG-8010.

References

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3. Government of Ontario. (2023, January 1). "R.R.O. 1990, Regulation 941: GENERAL under Professional Engineers Act, R.S.O. 1990, c. P28." https://www.ontario.ca/laws/regulation/900941.
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5. Universities Canada. "Universities Canada principles on Indigenous education." June 29, 2015. https://www.univcan.ca/wp-content/uploads/2015/11/principles-on-indigenous-education-universities-canada- june-2015.pdf (accessed on 29 August 2023).

A.1 Program Name and Degree Designation/Nomenclature (QAF Section 2.1.2.1; Ministry section 1)

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

Students will graduate with a Master of Engineering in Mechatronic Systems Engineering or a Master of Engineering in Mechatronic Systems Engineering with Co-op. The Master of Engineering, rather than the Master of Applied Science, denotes that this is a course-based masters without a research component. Students who complete the co-op component will graduate with the same degree with the additional designation of co-op listed on their transcript and degree parchment as follows: Master of Engineering in Mechatronic Systems Engineering, Co-operative Education.

Co-op students must meet all the degree requirements as well as the required learning requirements and work term.

A.2 DEMAND FOR THE NEW 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, where appropriate. Provide quantitative evidence of student and market demand for the proposed 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 new 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.*

Two assessments were conducted in support of this proposal: an environmental scan of currently existing programs and a study of student and labour market demand. Additionally, a student survey was conducted to understand Interest in the program among both undergraduate and graduate students currently enrolled at UWindsor. A copy of the survey instrument can be found in Appendix D.

1. Student demand

As the first cohorts of the recently launched BASc in Mechatronic Systems Engineering program move towards degree completion, an appetite is growing for an advanced level of training. To understand student demand for a graduate program in Mechatronic Systems Engineering, a survey of current Engineering undergraduates was conducted. Eighty-three (83) students responded (61 or 73% undergraduate, 19 or 23% graduate, 3 not specified), most of whom (57) were domestic students. Forty-eight percent (48%) of respondents indicated at least some interest in a course-based masters. When asked why they were interested, responses included:

"In many fields of engineering, a master's can count as "experience", and can contribute towards higher wages and better opportunities upon entry into the workforce."

"Competitive job market"

"Qualification for career advancement"

"I want to learn more, and to give myself a better chance at a high paying job. Also would like to meet new people and try to engage in a more in depth academic experience."

"No direction with research, no idea of what do in research and the ambition of continuing education."

"Because it gives you the opportunity to understand the material from the theoretical aspect so you can implement it for the hands-on experience aspect"

For those students who indicated no interest in a course-based masters, the most common reason given was a preference for a research-based program.

When asked about their interest in the field of mechatronics engineering, 59% of respondents had moderate or high interest, while just 24% indicated low or no interest. Current undergraduate students were asked whether they would consider a graduate program in mechatronics engineering. 43% of undergraduate respondents had at least some interest, with 24% of responding that they might consider it, and 19% indicating a strong interest. Current graduate students were asked whether they would have considered such a program if it had been available when they were applying. Among this group interest was higher, with 31% of respondents saying they might have considered it and 58% indicating they probably or definitely would have.

An analysis of enrollment trends across Ontario showed a recent increase in domestic enrollments across mechanical, electrical and design/systems engineering programs. A biannual report on degree completions published by Engineers Canada notes that graduate degree enrolments across engineering disciplines have enjoyed a modest but steady increase over recent years, with an annual growth rate of about 5% between 2017 and 2022. Master's degree completions follow a similar trend over the period. The report also showed that mechanical and electrical engineering were in the top three most in-demand disciplines (Engineers Canada, 2024).

These results indicate a strong appetite among students for a course-based Masters in Mechatronic Systems Engineering, both locally with our undergraduate students, and more broadly across Canada as students face an increasingly competitive job market.

Most domestic students enrolling in an Engineering program at UWindsor live in the area. With the nearest

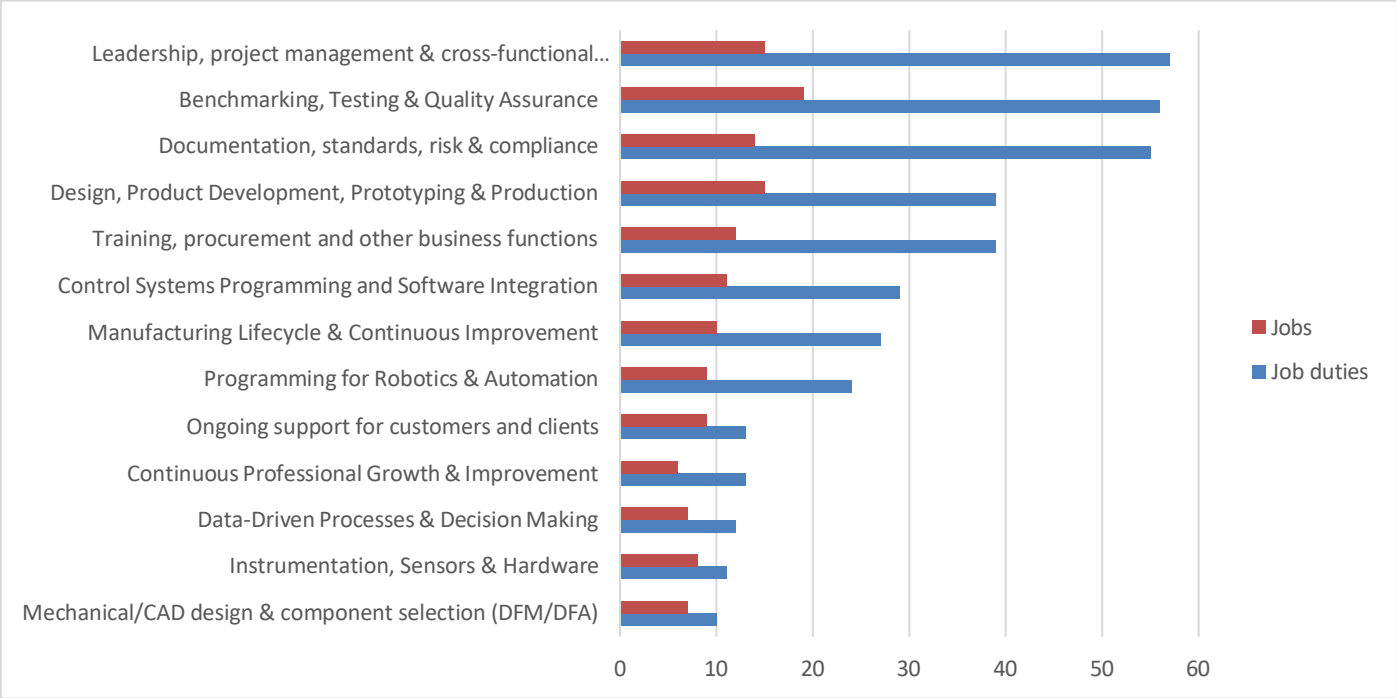
program in mechatronics in Guelph, this program will support students interested in the topic staying in the Windsor-Essex region. Per survey data, many of these students are already enrolled in a UWindsor undergraduate program and can transition smoothly to a graduate program. There is a community interest in keeping these students in the Windsor-Essex region, as local industry grow and innovate (see letters of support in Appendix C) and significant demand for highly skilled graduates in regional industry. The following section details local employment opportunities.

2. Labour market demand

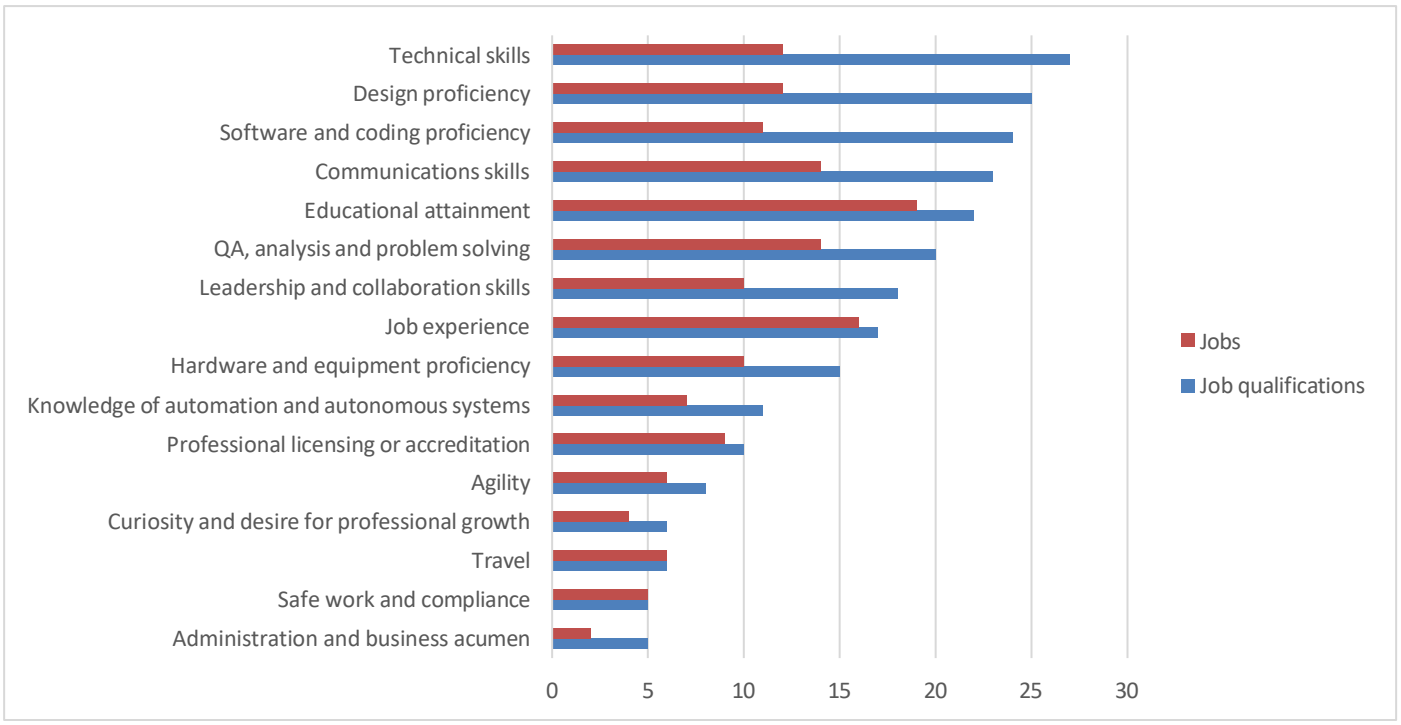
Multiple reports indicate a skills gap between graduates and employers in sectors that can be addressed by a graduate-level mechatronics program. Gaps identified include smart technologies, clean technology, and automation (Randstad, 2024; Royal Bank of Canada, 2022; Wyonch, 2020). Reporting by the C.D. Howe Institute suggests that while density of robotics in manufacturing has increased significantly, Canada still lags industrialized peer nations and has significant potential for innovation in this area (Wyonch, 2020). The Government of Canada's Job Bank reports that positions with titles such as mechatronic engineer, robotics engineer, control systems designer, and automation technologies are all at a moderate risk of labour shortage through 2033. The MEng Mechatronic Systems Engineering program will respond to these factors by producing highly qualified graduates who are ready to respond to emerging threats and opportunities in workplaces locally and nationally.

To ensure the new Mechatronic Systems Engineering program meets the needs of today's employers, a sample of Ontario job postings was collected and analyzed. Twenty-two (22) postings were collected from public job search databases for mechatronics experts at various career stages. The sample represents a single-day snapshot (March 13, 2026) of the job market. Positions advertised came from a range of sectors, with manufacturing, automotive, energy and utilities, and clean tech being most represented. Southwestern Ontario was well-represented in the sample, with half the positions advertised being located between Windsor and Toronto.

Job duties described in the sample offer insight into what graduates can expect in their future careers, and how the MEng Mechatronic Systems Engineering program can prepare them. Job duties were categorized to aid in analysis, with many duties falling into multiple categories. The chart below shows the most commonly occurring responsibilities by number of total job duties in category, and by number of postings containing at least one job duty in the category.



A similar analysis was performed on the "essential qualifications" sections of the job postings – what employers expect to see in successful applicants. The chart below shows the most commonly occurring responsibilities by number of total qualifications in category, and by number of postings containing at least one essential qualification in the category.



The skills most in demand by employers, as well as those required to carry out job duties, are reflected in the program learning outcomes referenced in Section C.2.3. Job Bank data shows that the average hourly wage for an engineer working in mechatronics is $45.02, giving an annual salary of $93,642. This data includes wages for positions requiring only a bachelor's degree, so graduates of a master's program will be able to command a higher salary. Other salary data aggregators place averages higher, with talent.com reporting a median wage of $120,688 for a mechatronic engineer in Canada, and O*NET reporting

$117,750 in the USA. The job postings included in the scan offered salaries ranging from $60,000 CAD for entry level positions to $250,000CAD for more senior roles.
Job prospects for MEng Mechatronic Systems Engineering graduates are strong: the industry increasingly demands specialization, and those graduates who can fill an existing skills gap enter a field with good wages and opportunities for promotion. UWindsor graduates also have unique access to the Michigan job market, expanding their post-graduate opportunities relative to graduates in other regions.

3. Societal need

The explosion of generative AI in recent years has fundamentally altered industrial landscapes. There is a significant argument to be made that an increasing number of robots and automation systems in manufacturing, energy production and agriculture do not necessarily decrease the number of personnel required, but that the jobs required to oversee and manage production across these sectors change significantly (Wynoch, 2020; Davison, 2025). According to the International Federation of Robotics, installation of robotic and automation systems in US manufacturing has increased every year since 2020, and this trend is expected to continue (International Federation of Robotics, 2024). It is crucial that Canada continue to compete on a global level, and producing highly qualified mechatronics graduates is a key step.

The need for this program can be found both nationally and locally. Locally, significant industrial investment is expected to increase pressure on the labour market to supply highly qualified personnel. Windsor-Essex is home to advanced manufacturing, information, and communications technologies, as well as greenhouse agriculture and Agri-Tech. Convoy Technologies Canada Ltd specifically cited the region's post-secondary institutions as part of its decision to locate a $17m manufacturing hub for advanced communications and automation equipment in Tecumseh (Invest Windsor Essex, 2025). A highly skilled workforce also factored into NEO Battery Materials' decision to invest $69m in a new facility in Windsor (Invest Windsor Essex, 2025). The NextStar Energy battery plant celebrated its official opening in Windsor on March 5, 2025, and is expected to hire 2500 personnel across its production lines (Office of the Premier, 2026). NextStar Energy considers Mechatronic Systems Engineering a significant skill set for its operations and has provided a letter of support for the program, especially with respect to co-op placements, and is joined in this support by Magna, a key player in automotive parts manufacture and Centerline Limited, designers of automation systems for manufacturing. These letters of support can be found in Appendix C.

Companies like these depend on automation, robotics, and other mechatronic systems to run efficient operations, and increasing use of robotics and automation are visible in the agricultural (Sanchez-Molina, Rodriguez, Moreno, Sanchez-Hermosilla, & Gimenez, 2024) and automotive sectors (Bartoš, et al., 2021), both of which are major players in the regional economy. The reputational increase in the region from having a graduate program in Mechatronic Systems Engineering will support continued investment by similar industrial actors. UWindsor mechatronics graduates will have excellent job opportunities as well as pathways to serve the growth of their local communities.

Based on student survey data, job market analysis, and the rapidly changing state of industry, we believe the MEng program fills a crucial gap for students who want to specialize and graduate with job-ready skills, and for working professionals who are ready to advance their careers. Industry, both in the Windsor-Essex region and beyond, needs highly skilled graduates who combine technical excellence with a knowledge of cutting-edge innovation, and the UWindsor MEng program in Mechatronic Systems Engineering will provide the pathway students need to be ready for those jobs.

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

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

Provide details on projected enrolment levels for the first five years of operation 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)	1	9	3	17	4	16	5	15	6	14
In the co-op/ experiential learning stream (if applicable)										

The co-op stream is optional, and spaces are not restricted based on domestic/international status of students, so projections have not been included. No more than four co-op placements are anticipated any given year.

B.4.3 Duplication (Ministry section 3)

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

*The co-op stream is optional, and spaces are not restricted based on domestic/international status of students, so projections have not been included. No more than four co-op placements are anticipated any given year.

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

The MEng in Mechatronic Systems Engineering program will not duplicate any current programs offered by the University of Windsor, but rather, will complement programs in mechanical, industrial, and electrical engineering. As an interdisciplinary program without a research component, it will give students the opportunity to explore multiple facets of engineering and grapple with their overlap and integration, while focusing on real-world application.

We identified 13 graduate-level programs in mechatronics across Canada and in Michigan. Four programs are located in Ontario (e.g., Ontario Tech University, University of Waterloo, University of Guelph, and York University); though York offers a Graduate Certificate rather than a degree program, and Waterloo's program is a Master of Applied Science. As such, Ontario Tech and University of Guelph have the only directly comparable programs in Ontario. Mechatronics engineering is an emergent academic discipline with few established conventions.

Of the 13 graduate-level programs, three programs are course-based Master's programs, while another three are thesis-based. One program gives graduates a Master of Science rather than an Engineering credential. The balance of programs identified include other types of post-graduate qualifications such as certificates, apart from one 4+1 pathway. Only one program has an experiential learning requirement, though three others offer optional co-op placements. Laddering and streaming of programs are not identified in any of the Canadian programs in the scan, though both can be found at comparators in Michigan. It is common for programs to be offered jointly between multiple departments. Half of programs offer a part-time option, and online/hybrid modalities are very limited. Only a single program is explicitly designed for working professionals, at Red River College Polytechnic in Manitoba. Working professionals interested in upskilling while continuing to work have, at this time, very limited options. Given the lack of Mechatronics engineering programs in Ontario, the proposed program offers an innovative pathway to gaining the knowledge and skills within this field through laboratories, simulations, applied research experiences, and an elective co-op option.

Mechatronics graduate programs are few in number nationally, and even more limited in Ontario. Very few programs in Ontario occupy the same space this program is expected to. Similar programs in Ontario include:

- Ontario Tech University, MEng or MASc in Mechatronics Engineering
- University of Waterloo MASc in Mechanical and Mechatronics Engineering
- University of Guelph, MEng in Mechatronics Engineering

The proposed new program will not compete with MASc programs offered by Ontario Tech University or the University of Waterloo, which are research based, and both extant MEng programs are serving the GTA. Given the employment demand in our region, as described in section B.4.1, there is significant benefit in having a program in the Windsor-Essex region. Local industry needs highly qualified graduates in order to thrive, and a local program will ensure that students make connections with industry here in Windsor-Essex and stay in the community post-graduation. As such, the proposed program will offer a needed and unique opportunity to study mechatronics at the graduate level.

A.3 RESOURCES

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

A.3.1 Resources Available

B.5.1.1 Resources In Support of the 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 proposed 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 proposed program on existing resources from other campus units and include evidence that there are adequate resources available and committed to the proposed 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

Faculty resources: The MEng in Mechatronic Systems Engineering program at the University of Windsor will be administered as a joint program by the Department of Mechanical, Automotive and Materials Engineering and Electrical and Computer Engineering. Both departments have well-established records of providing high-quality graduate-level educational mentoring and training. With fostering this synergy in mind, a steering committee has been established to ensure the quality of the program. The committee consists of the Dean of Engineering, the Associate Dean-Academic, the Heads of both departments and the program Academic Advisor. The Academic advisor assists students in selecting the appropriate courses including required courses and electives for their specializations each semester, ensuring they meet degree requirements and stay on track for graduation. They help students understand the curriculum and prerequisite courses necessary for the discipline.

Courses: Most of the core general Master of Engineering programming can be delivered by the existing expertise in the Electrical and Computer Engineering and Mechanical, Automotive, & Materials Engineering departments, however three new courses have been developed to provide an advanced Mechatronic Systems base that both respond to industry demands and differentiates it from the other Master of Engineering programs. Two recent hires will be supplemented by two more in the coming years, which will help to deliver the specialty courses (listed in Program Content Section) in addition to courses in the new undergraduate program as well. These positions are accommodated through recent or upcoming retirements in Electrical and Computer Engineering (ECE), or Mechanical, Automotive and Materials Engineering (MAME).

Laboratory facilities: Students enrolled in the program will engage in hands-on, experiential learning using state-of- the-art equipment currently available in the Faculty of Engineering through a mandatory laboratory component of their courses. UWindsor has established a Mechatronics Lab that is used for the BEng Tech stream established in 2018. The lab will be used for several courses of the proposed program. This lab is equipped with leading-edge technologies such as robotic manipulators (UR and ABB arms), autonomous vehicles (QCar and Turtlebot mobile robots), mechatronic systems (FESTO stations), and programmable logic controllers (Siemens PLCs). The existing labs such as Power Electronics, Circuit, Deformable Bodies, Measurements, Manufacturing labs in ECE and MAME will be utilized to support the program. The mechatronics labs are in place so no new funding for new lab space is required. There will be budget required to support the maintenance of these labs (and has been included in the Budget Summary in Appendix B.)

Graduate assistants will be essential to successful program delivery. The four courses offered per year are expected to have an average of 0.5 graduate assistants each, at a cost of $6,184 per GA. GAs will be recruited from within the program.

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

Assess faculty expertise available and actively committed to the new 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 proposed program and foster the appropriate academic environment, and of the appropriateness of this collective faculty expertise to contribute substantially to the proposed 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 program, promote innovation, and foster an appropriate intellectual climate*
- *any other evidence that the program and faculty will ensure the intellectual quality of the student experience*

Append curricula vitae – see Appendix A. CVs are not required for undergraduate diploma or certificate proposals.

The proposed MEng program will be supported by the Mechanical, Automotive and Materials Engineering (MAME) and the Electrical and Computer Engineering (ECE) Departments. Both departments have well-established records of high-quality faculty and staff.

The following faculty expertise is available and committed to supporting the new program. The CVs of these faculty members can be found in Appendix A. Below are summaries of the ECE and MAME faculty members contributing to the new program. Complete details of each professor's research field, publications, awards, and achievements can be found in their attached CVs.

Electrical and Computer Engineering

The research interests and field impact of ECE faculty members demonstrates significant expertise in areas contributing to mechatronics. The below table shows the top subject areas of scholarly output since 2022, including field weighted citation impact (FWCI), of ECE faculty members, per SciVal.

Topic area	Scholarly output	FWCI
Resource Allocation and Task Offload in Edge Computing	39	2.71
Innovative Approaches to Lithium-Ion Battery Management	34	2.02
UAV Communication and Resource Optimization Framework	23	3.27
Federated Learning Systems for Data Privacy Enhancement	20	4.14
Age of Information in Wireless Networks	16	0.97

The following **ECE faculty members** will teach in the Mechatronic Systems Engineering program:

Dr. Xiang Chen has a well-established and successful research and publication record in robust control and control of networked systems, sensor networks, data-driven optimization, and automotive control. He was recently awarded an NSERC Discovery Grant in the amount of $215,000.

Dr. Arezoo Emadi is an associate professor with a significant publication record in microelectromechanical systems, bio-medical devices, MEMS sensors and transducers, chemical sensors, micro and nanofabrication technologies. She currently holds $914,400 in grant funding from NSERC, Mitacs, and other funding partners, and was awarded the 2021 UWindsor Medal of Excellence for Online Teaching Award. She is also Founder and President of Anthea Technologies Inc., whose mission is to revolutionize sensing technologies by engineering innovative, high-performance sensors and platforms.

Dr. Narayan Kar is a full professor with a leading research and publication record in power electronics design and development, permanent magnet and induction machine design, control and testing for electric vehicle application, torque ripple and cogging torque determination, analysis and minimization. He is a Tier 1 Canada Research Chair in Electrified Vehicles, leads the Centre for Hybrid Automotive Research and Green Energy (CHARGE) Lab, and holds nearly $7million in grant funding, including several significant Mitacs grants.

Dr. Mohammad Khalid is a full professor with a well-established and successful research and publication record in Field programmable chips and systems, FPGA-based system design, rapid prototyping, FPGA-based high-performance computing, heterogeneous computing systems, electronic design automation, and high-level synthesis.

Dr. Mitra Mirhassani is a full professor with an excellent research and publication record in hardware realization of neural networks, hardware security, analog and mixed-signal integrated circuits. She is the co-founder and co-director of the SHIELD Automotive Cybersecurity Centre of Excellence, holds $750,000 in research funding, and was awarded the 2026 Killam National Research Council Paul Corkum Fellowship.

Dr. Roberto Muscedere is an associate professor with research expertise in very large-scale integration (VLSI) and application-specific integrated circuit (ASIC) design System-level design embedded systems.

Dr. Mehrdad Saif is a full professor with a strong research and publication record in systems and control theory, model-based fault detection and diagnostics, and linear and nonlinear controller/observer design. He holds
$535,000 in research funding from NSERC and Mitacs.

Dr. Ahmed Hamdi Sakr is an assistant professor with research expertise in connected and automated vehicles, vehicular networks (V2V, V2I, V2X), ML/AI for wireless networks, internet of things (IoT) and wireless sensor networks (WSN). He has been awarded $237,500 in funds from the NSERC Discovery program. He was recognized with the Distinguished Educator Award by the Engineering Students' Society in 2025, recognizing his excellence in teaching, mentorship and student development.

Dr. Ning Zhang is tenure-track assistant professor with research expertise in wireless networking, AI for networking, the internet of vehicles and security. He is a Tier 2 Canada Research Chair in the Internet of Things and holds an NSERC Discovery award in the amount of $276,500 in addition to his CRC funding. In 2024, he was named a member of the Royal Society of Canada's (RSC) College of New Scholars, Artists, and Scientists, as well as being recognized as a Clarivate Highly Cited Researcher, placing him in the top 1% of researchers in his discipline.

Mechanical, Automotive, and Materials Engineering

The research interests and field impact of MAME faculty members demonstrates significant expertise in areas contributing to mechatronics. The below table shows the top subject areas of scholarly output since 2022, including field weighted citation impact (FWCI), of MAME faculty members, per SciVal.

Topic area	Scholarly output	FWCI
Spark Plug and Ignition Systems	13	2.01
Dimethyl Ether Applications in Diesel Engines	11	0.82
Hybrid Renewable Energy Systems for Sustainable Power	9	1.86
Compressed Air Energy Storage Systems in Power Generation	8	0.86
Thermochemical Hydrogen Production and Energy Systems	8	0.68

The following **MAME faculty members** will teach in the Mechatronic Systems Engineering program:

Dr. Jalal Ahmed is an Associate Professor with a successful research and publication record in mechatronics and controls, micro/nano-electromechanical (MEMS/NEMS) based sensors and actuators. He holds $2.3million in research funding from NSERC, Mitacs, and the Canada Foundation for Innovation, among others.

Dr. Shapour Alirezaee is a Learning Specialist with successful research in mechatronics and robotics, control systems and automation, instrumentation and process control, and PLC, SCADA and DCS systems. He holds
$114,624 in research funding from NSERC and Mitacs.

Dr. William Altenhof is a full professor with a strong and publication record in crashworthiness, impact testing, finite element analysis, experimental (destructive) testing, stress analysis, mechanical material testing and characterization under quasi-static and dynamic loading conditions. He holds an NSERC Discovery grant valued at $279,240 and leads the Crashworthiness, Impact and Materials Deformation Research Lab.

Dr. Ahmed Azab is an associate professor of Industrial & Manufacturing Systems Engineering and Director of the Production & Operations Management Research Lab. His research focuses on job-site systems, automation and process planning. Since 2022, he has served as Associate Editor for the journal Expert Systems with Applications.

Dr. Lucas Bruck is an assistant professor working with the automotive industry to develop simulation tools that accelerate the adoption and improve the quality of critical technologies, including electric-hybrid powertrains and active control systems. His research is centred on removing the barrier between simulation and real-world testing, allowing human feedback to be included throughout the different stages of vehicle design.

Dr. Aleksandr Cherniaev is an associate professor with a well-established and successful research and publication record in composite materials: multiscale modelling, quasi-static & high strain-rate testing, impact mechanics of advanced materials, hypervelocity, high & low-speed impact regimes, and lightweight impact-resistant structures. He holds an NSERC Alliance-Advantage grant valued at $374,466, in partnership with Pratt & Whitney Canada.

Dr. Jeff Defoe is an associate professor whose research focuses on aerodynamics, aviation and computational fluid dynamics. He is the director of the Turbomachinery and Unsteady Flows Research Group. His work focuses on modelling and performance improvement for fans and compressors. He holds $885,000 in research funding from NSERC and Mitacs.

Dr. Amir Fartaj is a full professor with research interests in vehicle thermal management, heating, ventilation, air conditioning and refrigeration, nano fluids, heat exchangers, phase change materials, and battery thermal management.

Dr. Daniel Green is a full professor and former Canada Research Chair in the Development and Optimization of Metal Forming Processes. His research focuses on Sheet metal forming, hot stamping, superplastic forming, mechanical testing, formability testing, material anisotropy, finite element modelling, process optimization, and applications to automotive and aerospace manufacturing.

Dr. Bruce Minaker is the department head and an associate professor with a well-established and successful research and publication record in vehicle dynamics & control, multibody dynamics & suspension design, and numerical modeling & simulation. He has served as Department Head of Mechanical, Automotive, and Materials Engineering since 2021 and conducts research in modeling, simulation, and control of vehicle dynamics. He currently holds a $90,000 Mitacs grant in conjunction with General Dynamics Land Services Canada.

Dr. Ofelia Jianu is an associate professor with expertise in heat, mass and momentum transport with application to alternative fuels and energy systems. She was awarded the 2021 UWindsor Medal of Excellence in Teaching and holds $226,584.00 in research funding from Mitacs, NSERC and the Canadian Foundation for Innovation.

Dr. Afshin Rahimi is an associate professor with a successful research and publication record in machine learning and intelligent systems, systems and control theory, and linear and nonlinear controller/observer design. In 2019 he was awarded the gold medal for invention/innovation by the Toronto International Society of Innovation and Advanced Skills. He currently holds an NSERC Discovery grant valued at $173,500.00.

Dr. David Ting is a full professor with a well-established and successful research and publication record in flow turbulence, flow-induced vibration, heat transfer, combustion, energy & thermal

systems, renewable energy, aerodynamics, vortex dynamics. He co-leads the Turbulence and Energy Lab and holds a $190,000 NSERC Discovery grant.

Dr. Jill Urbanic is a full professor with a significant research and publication record in additive manufacturing / 3d printing / rapid prototyping, cad/cam, process planning and manufacturing systems design, product design for manufacturing, product and process design optimization, reverse engineering, and robotic systems. She is a finalist for the 2026 TCT Women in 3D Printing Innovator Awards. She holds an NSERC Discovery grant valued at
$240,000

Dr. Nader Zamani is a full professor working in finite element analysis, computational mechanics, computer aided engineering. He has been designated by Dassault Systems as a 3DEXPERIENCE.edu Champion for his educational contributions to their platform.

Two faculty members from the Department of Civil and Environmental Engineering will be part of the teaching complement of general engineering courses required by this program:

Dr. Lindsay Miller is a tenure-track assistant professor with a background in environmental engineering. She is Principal of the Environmental Energy Institute, which works to bridge the gaps between the technical, economic, and political aspects of the nation's energy sector.

Dr. Lisa Salfi-Novena is a learning specialist in technical communications, with a dual background in environmental engineering and English language and literature. In addition to teaching, she runs Eng Chat Room, a weekly recurring workshop that provides a fun and casual space to help international students in engineering to practice their English-speaking skills and meet their peers through guided activities to promote conversation.

B.5.1.1b Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the New 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 proposed program and the associate plans to ensure the sustainability of the program and quality of the student experience.

Reliance on adjunct, limited-term and sessional faculty for this program is expected to be minimal, as significant expertise exists within the two home departments.

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.

As a course-based Master's program with no research component, the program is not expected to affect supervisory burdens for faculty in either the Electrical and Computer Engineering or Mechanical, Automotive and Materials Engineering departments.

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 program, provide evidence that financial assistance for graduate students will be sufficient to ensure adequate quality and numbers of students. (Funding could come from a variety of sources, such as internal or external grants, scholarships, Graduate Assistantships, etc. The amounts, such number of GAships, must be anchored to the minimum limits set by policy or collective agreements.

Financial assistance provided will be in line with what is offered to students in UWindsor's other MEng programs and in line with Graduate Studies policies and collective agreements. There are no current financial assistance

measures for Master of Engineering students, but there has been use of admission scholarships as incentive in the past, and any measure that is made applicable to the M.Eng. programs in the future will be applicable to this program as well.

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 proposed program.*

The Faculty of Engineering will require two new full-time faculty to be hired to support this program. This program will launch in the midst of the new Bachelor of Applied Science – Mechatronics Engineering's 3rd new cohort and the department does not have a sufficient faculty complement in Mechatronics to sustain the enrolment expectations for the bachelor's degree, let alone a new graduate degree. As an area of growth for the institution, these new faculty are vital and the proposed budget supports this investment without showing any of their time shared with serving the bachelor's program as well, which is anticipated.

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 preparing this proposal. (e.g., streamlining existing programs and courses, deleting courses, etc.)

The sharing of electives from Mechanical Engineering and Electrical & Computer Engineering graduate courses will provide shared delivery of 25% of the program with these departments. As well, the General Engineering (GENG) courses are shared across all Master of Engineering Programs. In total, 62.5% of the program will have shared courses and sections with other Master of Engineering streams.

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 proposed program. If not applicable, write n/a.*

Faculty:	Two new hires shared between this program and its undergraduate counterpart are anticipated. These hires will be base-budgeted by the Faculty of Engineering.
Staff:	Administrative and technical staff will be shared with other programs in the Faculty.
GA/TAs:	Two to four GA positions per year are expected which does not represent an increase as these GA positions are shared and already exist for the M.Eng. programs.

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 proposed 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 resources beyond the standard are expected to be required.
Teaching and Learning Support:	No resources beyond the standard are expected to be required.
Student Support Services:	No resources beyond the standard are expected to be required.
Space and Facilities:	Lab space will be shared with other programs in the Faculty.
Equipment (and Maintenance):	Equipment maintenance is estimated at $100,000 but this cost is shared with the undergraduate mechatronic systems engineering program, as well as other programs in the Faculty.

PROGRAM DEVELOPMENT COMMITTEE
NEW PROGRAM PROPOSAL
FORM A

B. Program Details

B.1 Admission Requirements (QAF section 2.1.2.5)

Describe

- *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.*

Undergraduate degree (Bachelor of Applied Science (BASc), Bachelor of Science (BSc.) in Engineering, Bachelor of Engineering (B.Eng.), Bachelor of Technology (B.Tech.), or Bachelor of Engineering Technology (B.Eng.Tech)) degree or equivalent*) in a related engineering field* with at least a 72% average over the last four years. International applicants are advised to refer to the specified minimum admission requirements, listed by country, at the Faculty of Engineering's Professional and Graduate Studies (FEPGS) website and the Faculty of Graduate Studies website.

Incoming students will have the option of applying to a competitive entry for the Master of Engineering program with co-op. The number of available spots in the co-op option is limited, so only the most qualified candidates will be admitted. Students must meet the following minimum admissions requirements to be considered:

- Must apply for admission into the co-op program prior to study term one. NOTE: Students who have formally accepted their offer of admission to the Master of Engineering program by the dates listed, will be e-mailed an information package with instructions on how to apply for co-op. Students wanting to be considered for the co-op option are encouraged to apply early to the Master of Engineering program.
    - Winter start: September 15th
    - Summer start: January 15th
    - Fall start: May 15th
- Must have strong written and verbal communication skills
- Must be enrolled in full-time studies in the Engineering program
- Must not be on a leave of absence when taking Transform or during the job competition
- Must not be planning on taking any courses during the work term
- Must not end their program on a work term (i.e. must be returning to school following the completion of the work term)
- An admissions interview may take place to determine co-op eligibility

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

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

The admission requirements for this program are consistent with admission requirements for the existing Master of Engineering in Civil Engineering, Electrical and Computer Engineering, Engineering Materials, Environmental Engineering, Industrial Engineering, Mechanical Engineering. The completion of a Bachelor of Applied Science (BASc), Bachelor of Science (BSc.) in Engineering, Bachelor of Engineering (B.Eng.), Bachelor of Technology (B.Tech.), or Bachelor of Engineering Technology (B.Eng.Tech), along with cumulative average of 72% will ensure students have sufficient background knowledge and skills to progress from introductory to mastery of the PLOs.

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

NB: For graduate programs, provide evidence that each graduate student in the 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 titles.

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FORM A

MEng Mechatronic Systems Engineering

Total courses: 8

Degree requirements:

- Six (6) mandatory courses, equivalent to 18 credits:
  - GENG-8000 Engineering Technical Communications
  - GENG-8020 Engineering Project Management
  - GENG-8030 Computational Methods and Modeling for Engineering Application
  - TRON-8010 Advanced Industrial Controls
  - TRON-8020 Advanced Robotics
  - TRON-8030 Artificial Intelligence and Machine Learning
- Two (2) elective courses selected from Mechatronic Systems Engineering (TRON-8XXX) or relevant courses in Mechanical Engineering (MECH-8XXX) and Electrical & Computer Engineering (ELEC-8XXX).
- Co-op option: GENG-8071

Note: TRON-8XXX elective courses will be developed as faculty settle into the program. Relevant MECH-8XXX and ELEC-8XXX elective courses will be determined by each department when planning course offerings for the academic year.

MEng Mechatronic Systems Engineering students will follow the same program regulations as listed for all other Master of Engineering programs. Please see the graduate calendar for details.

Co-op degree requirements: Master of Engineering co-op students are subject to the same degree requirements as non co-op students. In addition to meeting the degree requirements of the Master of Engineering program, to graduate with co-op, students also need to be successful in the Transform job readiness program (non-credit), the associated work term, and reflective/technical work term reports. Master of Engineering co-op students must successfully complete one work term with a pass. A common course code for co-op is shared by all Master of Engineering programs (MECH-8071).

Courses used to calculate the major average are: All 8 courses Description of thesis option (if applicable): Not applicable Does the new program proposal include new courses?:

- ✓ Yes [All new course proposals must be submitted on PDC Form Ds and submitted for approval with the new program proposal (PDC Form A)]

____ No

If yes, list all new courses:

- TRON 8010 Advanced Industrial Controls
- TRON 8020 Advanced Robotics
- TRON 8030 Artificial Intelligence and Machine Learning

Proposers must append a Curriculum Map (or provide link). Refer to the curriculum map in the appropriate sections.

Please see section C.2.3 for a copy of the curriculum map.

C.2.1 Co-op/Experiential Learning Component (if applicable) (QAF section 2.1.2.6)

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)*

All co-operative education positions must be full-time, paid, related to the degree program, and approved by the University. The process of securing a co-op position is competitive. Co-op students apply for work opportunities as advertised by the Co-operative Education and Workplace Partnerships office using an Internet-based software program (mySuccess) and employers make interview and hiring decisions. Students are also encouraged to seek co-op employment outside of the advertised postings by completing a guided job search process facilitated by the Co-operative Education and Workplace Partnerships office.

Withdrawal from the co-op program is granted only on an exception basis since it must be determined that the student has no outstanding commitments to employers. Students who wish to withdraw must meet with a Work-Integrated Learning Coordinator and complete a withdrawal form. However, the only time a student may withdraw from the Master of Engineering co-op program without further co-op fee payment implications is prior to the end of the first day of classes of their second term of study. Students who withdraw from co-op at any other time will be liable for paying the co-op fee for the term in which they are dropping and one additional term. This helps to offset the costs associated with resources allocated to the development of the student. Once a student has completed their work term they cannot withdraw from co-op.

In the interest of building solid partnerships with employers, students who have accepted a co-op employment offer (verbally or in writing throughout all rounds of the job competition) must honour that commitment. Therefore, once students accept an offer of employment for a work term, they will be considered registered in the appropriate work term course and must remain in the co-op program until they have completed their work term requirements. Failure to honour these commitments and/or to complete all work term requirements will lead to being required to withdraw from the co-op program and will result in a failing grade on their transcript for that work term barring exceptional circumstances (e.g., unexpected medical issue).

Master of Engineering co-op students will be registered for a work term course for the four-month term of their placement. This course will be evaluated on a pass-non pass basis. To receive a passing grade, students must:

- Submit learning objectives at the beginning of the 4-month work term.
- Receive a satisfactory mid-work term assessment from their supervisor.
- Submit and receive a passing grade on a work term assignment after the work term to solidify reflection and new learning within their work experience.

Receive, at minimum, a satisfactory final work term performance evaluation by the employer.

MEng co-op students must remain full-time students and typically follow a standardized work/study sequence schedule. Work/study sequence changes are not possible unless explicit consent is granted by the Faculty of Engineering and the Co-operative Education and Workplace Partnerships office in response to exceptional circumstances.

Please see Appendix C for letters of support from employers.

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

Yes, however, students who withdraw from the co-op option can move into the non-co-op program and graduate on schedule. While these students will not graduate with co-op on their degrees, we expect the training offered by the Co- operative Education and Workplace Partnerships office will be useful for their future employability.

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).

Term 1	**Term 2**	**Term 3**	**Term 4**
Study (Transform)	Study (Job Competition)	Work Term	Study (Work Term Assignment)

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

Describe how the program's structure and requirements 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 MEng Mechatronic Systems Engineering program consists of 3 required GENG courses and 3 required TRON courses (and 2 elective courses*). The curriculum map below highlights how each required course would contribute to the achievement of the program learning outcomes:

	ACH	AD	ABCI	C	CDF	E	CE	AEH	DF	FG	EG	ABI	I
	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11	PLO12	PLO13
GENG-8000					I	I	I		I	I	I		
GENG-8020						I	I		R	I	R	I	I
GENG-8030	I		I	I	R				R	I			
TRON-8010	R	R	R	M	R	R	R	M	M	R	R	R	R
TRON-8020	R	M	M	R	M	R	R	M	R	M	M	R	R
TRON-8030	M	R	M	M	M	M	M	R	M	M	R	M	M

*Note: Two elective courses will contribute to and provide opportunities to reinforce and master the PLOs.

Legend

GENG-8000 Engineering Technical Communications GENG-8020 Engineering Project Management

GENG-8030 Computational Methods and Modeling for Engineering Applications TRON-8010 Advanced Industrial Controls

TRON-8020 Advanced Robotics

TRON-8030 Artificial Intelligence & Machine Learning

PLO1 Apply advanced knowledge of mechanical & electrical principles, robotics, industrial automation, and artificial intelligence to analyze and design innovative and efficient

mechatronic engineering systems.

PLO2 Physically integrate and test mechanical, electronic, sensing, control, and computational components into coherent and functional mechatronic system solutions.

PLO3 Systematically access, evaluate, and apply relevant scholarly literature, standards, and technical documentation to define complex engineering problems in mechatronic systems.

PLO4 Critically analyze and evaluate complex mechatronic systems, using mathematical modelling, computational methods, and system-level analysis to develop engineering solutions.

PLO5 Interpret, evaluate, and communicate quantitative and technical information used in the modelling, design, and evaluation of mechatronic systems.

PLO6 Explain the ethical, professional, environmental, and societal implications of mechatronic and intelligent systems.

PLO7 Evaluate instances of accountability and integrity in engineering practice, in alignment with the Code of Ethics of Professional Engineers Ontario.

PLO8 Apply principles of safety, sustainability, and responsible engineering practice when designing and implementing engineering solutions.

PLO9 Communicate complex engineering ideas, system designs, and technical findings effectively in written, oral, and visual forms for technical and non-technical audiences.

PLO10 Collaborate effectively in multidisciplinary engineering teams while coordinating technical tasks to achieve shared project outcomes.

PLO11 Exercise initiative and leadership in the planning, coordination, and execution of engineering projects.

PLO12 Identify and plan for emerging technologies, tools, and industry practices in mechatronic systems. PLO13 Articulate academic and career goals as well as personal strengths, weaknesses and preferences.

The program structure and learning outcomes for the proposed Master of Engineering co-op are in line with other University of Windsor co-op programs. The University of Windsor co-op program follows guidance from Co-operative Education and Work-integrated Learning (CEWIL) Canada. Co-op placement will provide students with opportunities to achieve co-op specific learning outcomes and reinforce program level learning outcomes.

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

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 program requirements can be reasonably completed within the proposed time period.

The proposed standard timeline is a four-semester program with two courses per semester. Students may choose to overload a maximum of one course in two semesters and complete the program in three semesters, or can take up to five semesters to complete.

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 degree.

The program does not include a research component.

C.3.1.3 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]

The master's program comprises the following fields: mechanical engineering; electrical and computer engineering

C.3.2 For All Program Proposals

C.3.2.1 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 standing required for continuation in the experiential learning option or co-op option of the program, where applicable.

The proposed program GPA requirements for continuation are consistent with those presently in use in other graduate programs in Engineering at the University of Windsor. The requirements are as follows:

- Candidates must maintain a cumulative average of 70% or above to be in good standing and be eligible to graduate.
    - A grade of less than 60% in any course counts as a failure and that course must be repeated (if it is a required course) or in the case of an elective course, a replacement of equivalent weight must be taken and passed.
    - Candidates who earn a grade of less than 60% in one course will be placed on probation until it is repeated or replaced. Candidates with a cumulative average of less than 70% will be placed on probation and are required to raise their cumulative average to 70% or above within one term.
- Candidates may receive credit for a maximum of two courses with grades between 60% and 69% over their entire program. Candidates must repeat or replace (as detailed in above) a third course in which they receive a grade below 70%. Candidates who earn a third grade between 60% and 69% will be placed on probation until it is repeated or replaced.
- Candidates who are on probation and who do not replace their previously failed course, a third grade between 60 and 69%, and/or raise their cumulative average to 70% or above in the subsequent term may be required to withdraw (RTW).
- Co-op candidates must be successful in the Transform Job Readiness Program (non-credit), their work term, and reflective activities.
- Full-time candidates must take a maximum of two courses in their first semester that must include GENG-8010. Required course sequencing is defined by the program department.
- A candidate, with the permission of the Associate Dean in consultation with the host department, may register for at most one senior undergraduate course (4000-level) within their major. All courses must be for credit only.
- A candidate, with the permission of the Associate Dean in consultation with the host department, may take one graduate course from outside of the student's major within the Faculty of Engineering. All courses must be for credit only.

C.3.2.2 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 standing required for graduation in the experiential learning option or co-op option of the program, where applicable.

The proposed program GPA requirements for graduation are consistent with those presently in use in other

graduate programs in Engineering at the University of Windsor: namely, completion of six required and two elective courses with cumulative average of 70%. The standing required for graduation with co-op is a minimum cumulative grade point average of 70% with the additional coop course.

C.4 LEARNING OUTCOMES (Degree Level Expectations) (QAF section 2)

COMPLETE THIS TABLE FOR GRADUATE 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.*

PROGRAM DEVELOPMENT COMMITTEE
NEW PROGRAM PROPOSAL
FORM A

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:	**OCGS-approved Graduate Degree Level Expectations**
A. Apply advanced knowledge of mechanical & electrical principles, robotics, industrial automation, and artificial intelligence to analyze and design innovative and efficient mechatronic engineering systems. (Also aligns with characteristics C and H). Physically integrate and test mechanical, electronic, sensing, control, and computational components into coherent and functional mechatronic system solutions. (Also aligns with characteristic D). Co-op: Integrate mechatronics theory and research skills with workplace practice. Also applies to grad attribute B.	A. the acquisition, application and integration of knowledge	1. Depth and Breadth of Knowledge 2. Research and Scholarship 3. Level of Application of Knowledge 6. Awareness of Limits of Knowledge
B. Systematically access, evaluate, and apply relevant scholarly literature, standards, and technical documentation to define complex engineering problems in mechatronic systems. (Also aligns with characteristics A, C, and I).	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)	2. Research and Scholarship 3. Level of Application of Knowledge 6. Awareness of Limits of Knowledge
C. Critically analyze and evaluate complex mechatronic systems, using mathematical modelling, computational methods, and system-level analysis to develop engineering solutions. Co-op: Work as a team member to solve problems and complete projects in the workplace. Also applies to grad attribute H.	C. critical thinking and problem-solving skills	1. Depth and Breadth of Knowledge 2. Research and Scholarship 3. Level of Application of Knowledge 4. Professional Capacity/autonomy 6. Awareness of Limits of Knowledge
D. Interpret, evaluate, and communicate quantitative and technical information used in the modelling, design, and evaluation of mechatronic systems. (Also aligns with characteristics C and F). Co-op: Effectively use technical vocabulary to communicate in oral and written formats.	D. literacy and numeracy skills	2. Research and Scholarship 5. Level of Communication Skills

E. Explain the ethical, professional, environmental, and societal implications of mechatronic and intelligent systems. Evaluate instances of accountability and integrity in engineering practice, in alignment with the Code of Ethics of Professional Engineers Ontario. (Also aligns with characteristic C). Apply principles of safety, sustainability, and responsible engineering practice when designing and implementing engineering solutions. (Also aligns with characteristics A and H). Co-op: Consistently exhibit integrity, respect and responsibility in the workplace. Also applies to grad attribute H.	E. responsible behaviour to self, others and society	4. Professional Capacity/Autonomy 6. Awareness of Limits
F. Communicate complex engineering ideas, system designs, and technical findings effectively in written, oral, and visual forms for technical and non-technical audiences. (Also aligns with characteristic D). Co-op: Create and maintain a network of contacts in their chosen career field. Also applies to grad attribute G.	F. interpersonal and communications skills	5. Level of Communication Skills
G. Collaborate effectively in multidisciplinary engineering teams while coordinating technical tasks to achieve shared project outcomes. (Also aligns with characteristic F). Exercise initiative and leadership in the planning, coordination, and execution of engineering projects. (Also aligns with characteristic E).	G. teamwork, and personal and group leadership skills	4. Professional Capacity/Autonom y 5. Level of Communication Skills
H.	H. creativity and aesthetic appreciation	2. Research and Scholarship 4. Professional Capacity/autonomy 6. Awareness of Limits of Knowledge
I. Identify and plan for emerging technologies, tools, and industry practices in mechatronic systems. (Also aligns with characteristics A and B). Articulate academic and career goals as well as personal strengths, weaknesses and preferences. Co-op: Articulate academic and career goals as well as personal strengths, weaknesses and preferences.	I. the ability and desire for continuous learning	4. Professional Capacity/autonomy

C.4.3 Mode of Delivery (QAF section 2.1.2.2)

In the Faculty of Engineering courses are planned to be delivered face-to-face. Course activities (lectures, tutorials, laboratories) are organized around scheduled class meetings in a physical location on campus. Some delivery may also include project-based teaching and Problem-Based Learning to help with preparing students for complex problems.

The mode of delivery can be changed to online or hybrid formats only as necessary for medical or other emergency requirements.

Work terms will take place within the organizations who hire the students. Opportunities provided by organizations can come in various forms including in-person, remote, and hybrid work. The job readiness program will take place on campus. Some of the content will be delivered in-person and some in a hybrid format.

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 intended learning outcomes and degree level expectations.

Student achievement in the program will be evaluated using course-embedded assessments that are linked to both course learning outcomes and program learning outcomes**.** Course specific assessments will be used to evaluate students' mastery of the program learning outcomes. These assessments may include, though are not limited to: examinations, assignments (e.g., elevator talk, peer evaluation, annotated bibliography) hands-on labs, written reports, group projects, simulations, writing exercise. The structure of the degree program is scaffolded to ensure students can meet the learning outcomes as well as progress from 'introduction' to 'mastery'. There will also be many opportunities for students to practice and reinforce these skills through their elective courses.

Engineering Technical Communications (GENG-8000): This course will prepare students to communicate technical information clearly and concisely, in written, oral, and graphical form. This course will include topics such as grammar; sentence structure; organization; writing reports, letters, instructions, and proposals; referencing sources; preparing and making presentations; and corporate culture. Students will also work in teams to prepare written and oral communications for a major project. Sample assessments include, though are not limited to: oral presentations, peer evaluations, elevator talks, annotated bibliography and research briefs.

Engineering Project Management (GENG-8020): This course will expose students to basic principles, concepts, and tools utilized in project management activities. This course will include topics such as defining project scope, and time, cost, risk, procurement and stakeholder management. Sample assessments include, though are not limited to: weekly quizzes and activities, assignments, and examinations.

Computational Methods and Modeling for Engineering Applications (GENG-8030): This course covers the basics of computational analysis for real-world engineering applications. Students will learn the fundamentals of programming and modeling with MATLAB. Topics include computational Methods, Model Building, for Engineering Projects, Hardware for Real-time Testing, Data Acquisition from Sensors. Students will complete a real-world project in the areas of their interests. Sample assessments include, though are not limited to: examination, quizzes, and course based projects.

Advanced Industrial Controls (TRON 8010): This course provides a comprehensive study of modern industrial control systems with a strong emphasis on Programmable Logic Controllers (PLCs), Supervisory Control and Data Acquisition (SCADA) systems, sensors and instrumentation, and industrial data communication networks. Students will explore the architecture, design, and integration of automation systems used in manufacturing,

process industries, and smart production environments. The course covers PLC programming and control logic development, SCADA system configuration and visualization, sensor selection and signal conditioning, and real-time data acquisition. It also introduces key industrial communication protocols such as Modbus, Ethernet/IP, and OPC, enabling reliable data exchange between devices and control layers. Through a combination of theoretical concepts and hands-on laboratory work, students will design and implement integrated control systems, analyze system performance, and address practical challenges such as noise, latency, and system reliability. The course also highlights emerging trends including Industrial Internet of Things (IIoT), data-driven monitoring, and cyber-physical systems, preparing students for advanced roles in industrial automation and smart manufacturing. Sample assessments include, though not limited to: assignments, hands-on labs, final projects which include simulations and written report.

Advanced Robotics (TRON 8020): This course provides an in-depth study of advanced robotics, encompassing both mobile robotic systems and stationary manipulators (robotic arms). It covers the modeling, control, and programming of diverse robotic platforms, including wheeled and legged mobile robots, autonomous vehicles, and industrial manipulators. Topics include robot kinematics and dynamics, motion planning and trajectory optimization, localization and mapping, sensor integration, perception, multi-robot coordination, and human-robot interaction. Advanced control strategies, such as adaptive, robust, and nonlinear control, are applied to both mobile and stationary robotics scenarios. Students gain hands-on experience through simulation and laboratory exercises, implementing algorithms for navigation, manipulation, obstacle avoidance, and autonomous decision-making. Case studies from industrial automation, service robotics, autonomous vehicles, and collaborative robot applications illustrate the integration of mobile and stationary robotic systems in real-world environments. Sample assessmentsinclude, though not limited to: assignments, hands-on labs, final projects which include simulations and written report.

Artificial Intelligence & Machine Learning (TRON 8030): This course provides an introduction to the fundamental concepts and techniques in artificial intelligence and machine learning, with an emphasis on engineering applications in mechatronics, robotics, and autonomous systems. Topics include supervised and unsupervised learning, model evaluation and optimization, neural networks, and deep learning. The course also covers data preprocessing, feature extraction, and the implementation of machine learning algorithms using modern software tools. Applications and themes may include robotic perception and sensor fusion, autonomous navigation and path planning, control and decision-making for intelligent systems, computer vision for object detection and tracking, and reinforcement learning for adaptive and autonomous control. Case studies are drawn from real-world problems in robotics, unmanned aerial and ground vehicles, and smart manufacturing systems. Sample assessments include, though not limited to: assignments, hands-on labs, final projects which include simulations and written report.

Students will also complete two elective courses which will offer additional opportunities for students to practice and master program level learning outcomes. Refer to sample curriculum map and table of assessments for alignment of courses and assessment to program learning outcomes.

Work placements are monitored by the Co-operative Education and Workplace Partnerships office, which facilitates students engaging in the placement, reflecting on the experience, identification of new learning and development, and active experimentation of new skills and abilities. Final reflective assessments are evaluated for student achievement of learning 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 program;*
- *whether the 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.*

Provide a detailed narrative and/or modify the sample table below.

The requirements for monitoring and reporting as part of cyclical review processes will guide monitoring and evaluation of this program to ensure quality and achievement of objectives. For example, as the program evolves quality of the program and student success will be tracked through consultation, student feedback, and grade achievement data. Records will be kept by the ability of the graduates to find relevant employment on completion of the degree. Other indicators of the quality of the program and achieving objectives will be used including input, flow through, and output metrics (e.g., admission indicators, retention, GPA, etc.), post-graduation activities, employment status, satisfaction surveys, and employer satisfaction surveys. Student workload and experiences will be monitored through current and graduating student perception surveys. To ensure that students are achieving the learning outcomes, courses will utilize grading schemes in the assessment of assignments. There will also be efforts to ensure assessments are designed to align with PLOs (see the table below).

PROGRAM LEARNING OUTCOMES (or list instead program LO from Table 1a (section B.1.1.a)	**Program quality and student performance and achievement of learning outcomes will be monitored through the following <u>Assessment</u> <u>Methods</u> (these are examples listed below, please delete and use ones pertinent to your programs)**
A. The acquisition, application and integration of knowledge • Apply advanced knowledge of mechanical & electrical principles, robotics, industrial automation, and artificial intelligence to analyze and design innovative and efficient mechatronic engineering systems. (Also aligns with characteristics C and H). • Physically integrate and test mechanical, electronic, sensing, control, and computational components into coherent and functional mechatronic system solutions. (Also aligns with characteristic D). • Co-op: Integrate mechatronics theory and research skills with workplace practice. Also applies to grad attribute B.	-examinations -annotated bibliography -in class activities -hands-on labs -assignments -group based projects -simulations -technical/written reports
B. Research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy) • Systematically access, evaluate, and apply relevant scholarly literature, standards, and technical documentation to define complex engineering problems in mechatronic systems. (Also aligns with characteristics A, C, and I).	-annotated bibliography - research brief -oral presentation -video presentation -Elevator talk video -Technical reports -Projects

C. Critical thinking and problem-solving • Critically analyze and evaluate complex mechatronic systems, using mathematical modelling, computational methods, and system-level analysis to develop engineering solutions. • Co-op: Work as a team member to solve problems and complete projects in the workplace. Also applies to grad attribute H.	- Examinations - Assignments - In-class activities - Hands-on labs - Simulations
D. Literacy and numeracy skills • Interpret, evaluate, and communicate quantitative and technical information used in the modelling, design, and evaluation of mechatronic systems. (Also aligns with characteristics C and F). • Co-op: Effectively use technical vocabulary to communicate in oral and written formats.	- annotated bibliography - research brief -oral presentation -video presentation -Elevator talk video -Technical/written reports -Projects
E. Responsible behaviour to self, others and society	- Examinations - Assignments - In class activities
• Explain the ethical, professional, environmental, and societal implications of mechatronic and intelligent systems. • Evaluate instances of accountability and integrity in engineering practice, in alignment with the Code of Ethics of Professional Engineers Ontario. (Also aligns with characteristic C). • Apply principles of safety, sustainability, and responsible engineering practice when designing and implementing engineering solutions. (Also aligns with characteristics A and H). • Co-op: Consistently exhibit integrity, respect and responsibility in the workplace. Also applies to grad attribute H.	
F. Interpersonal and communications skills • Communicate complex engineering ideas, system designs, and technical findings effectively in written, oral, and visual forms for technical and non-technical audiences. (Also aligns with characteristic D). • Co-op: Create and maintain a network of contacts in their chosen career field. Also applies to grad attribute G.	- annotated bibliography - research brief -oral presentation -video presentation -Elevator talk video -Technical/written reports -Projects
G. Teamwork, and personal and group leadership skills • Collaborate effectively in multidisciplinary engineering teams while coordinating technical tasks to achieve shared project outcomes. (Also aligns with characteristic F). • Exercise initiative and leadership in the planning, coordination, and execution of engineering projects. (Also aligns with characteristic E).	- Peer evaluation - Performance review - Team contribution assessments

H. Creativity and aesthetic appreciation	
I. The ability and desire for continuous learning • Identify and plan for emerging technologies, tools, and industry practices in mechatronic systems. (Also aligns with characteristics A and B). • Articulate academic and career goals as well as personal strengths, weaknesses and preferences. • Co-op: Articulate academic and career goals as well as personal strengths, weaknesses and preferences.	- Assignments - In class activities - Examinations - Hands-on labs

C. EXPERIENTIAL LEARNING/CO-OP COMPONENT ONLY (Senate Co-op Policy)

[Complete this section ONLY if the proposed program includes an experiential learning or co-op component involving paid or unpaid placements.]

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

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

Co-operative Education:

- Work term is developed in partnership with an employer and approved by the program as a suitable learning environment;
- Student is engaged in productive work for which the student receives remuneration;
- Curriculum supports student learning goals, personal evaluation, and reflection;
- Student performance in the workplace is supervised and evaluated by the student's employer;
- Student progress during work term is monitored by the Co-operative Education and Workplace Partnerships team;
- Both work and academic terms are full-time and follow a formalized sequence. A work term is defined as a minimum of 12 weeks (420 hours) full-time, paid, relevant experience.

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 curriculum.

Master of Engineering students are trained to be responsive to new situations and think critically, creatively, and analytically to find innovative solutions to complex problems, and to deploy technical skills across a spectrum of engineering environments. As such, they typically have a broad range of skills developed during their undergraduate studies and through professional work experience in organizations across the globe. Some of these skills include:

1. Communication: Students are specifically trained to develop their written and verbal communication skills, both of which are essential in any profession.
2. Critical thinking: Students are trained to analyse information, evaluate arguments, and make informed decisions.
3. Research: Students are skilled in conducting practice-oriented research, gathering information, and interpreting data. These skills can be applied to many different fields and industries.
4. Creativity: The MEng program fosters creativity and encourages students to think outside the box.
5. Adaptability: Students are trained to be adaptable and flexible. This is an important skill in a rapidly changing job market.
6. Cultural awareness: Students come from diverse cultures and bring distinct perspectives. They are trained to understand and appreciate the viewpoints of their classmates. This is important in today's globalized world.
7. Leadership: Coursework and other MEng programming serves to improve student leadership and teamwork skills. These are essential in many professions.

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 (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.]

Preliminary opportunity development has been undertaken by the Co-operative Education and Workplace Partnerships office including labour market review and identification of existing employers, associations, and funding streams (Ontario Co-op Tax Credit, SWPP). A mechatronics degree is highly marketable in Ontario due to the province's strong automotive, manufacturing, and automation sectors. Graduates are in high demand for roles combining mechanical, electrical, and software skills. As industries adopt AI and automation, expertise in robotics and system integration is in demand.

The employer engagement and relationship management teams believe that a suitable number of high-quality placements can be developed to support the program. The Co-operative Education and Workplace Partnerships office will have responsibility for placement opportunity development with support from the Faculty of Engineering.

Letters of support have been provided by three companies with a strong local presence in the Windsor-Essex region, including NextStar Energy, Magna International, and Centerline (Windsor) Limited. These companies have expressed both their support for Mechatronic Systems Engineering, including the support and hiring of coop students. These letters of support can be found in Appendix C.

E.4 Supervision of Placements (QAF section 2.1.2.6)

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

Placements are supervised by both the University (via Co-operative Education and Workplace Partnerships) and the Employer. In the workplace, supervision is provided by an identified manager or supervisor who is responsible for:

- assisting the co-op student in establishing learning objectives;
- advising, mentoring, instructing, guiding, and referring the co-op student to other appropriate resources;
- confirming the student's understanding and ability to use the requisite knowledge and skills;
- reinforcing learning through recognition and feedback;
- periodically evaluating the student.

During the work term, the Co-operative Education and Workplace Partnerships team will complete a work term check-in typically in the form of a site visit. This site visit typically lasts 30 – 45 minutes and provides an opportunity for the student and employer to review the placement and work term goals with a Work Integrated Learning Coordinator or Employer Relations Coordinator, highlight any needs or concerns, and clarify direction for the final assignment.

E.5 Fees Associated with Experiential Learning Component

Provide information on the fees associated with the 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.

Students will be assessed co-op fees upon acceptance and the start of the Transform job readiness program.

Co-op fees continue to be assessed in all terms where the student is registered in either Transform or a co-op placement. Fees are set and approved by the Ancillary Fee Committee and the Board of Governors.

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

Please obtain signatures for the following statement.

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):_____
[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):_____
[Approval of the program by the Director of Co-op Services shall constitute agreement and support of the development of the co-op program.

E.7 Guidelines for the Establishment of New 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)?

APPENDIX A
Under Separate Attachment
FACULTY CURRICULA VITAE
(QAF)

PROGRAM DEVELOPMENT COMMITTEE
NEW PROGRAM PROPOSAL
FORM A

APPENDIX B – 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*	$413,400	$806,004	$784,045	$760,886	$736,487	$3,500,822
Potential Provincial funding**	$8,400	$25,704	$34,957	$44,571	$54,555	$168,187
Total Revenue	$421,400	$831,708	$819,003	$805,457	$791,041	$3,669,009
Additional Faculty member *(full time and sessional)*	$56,000	$164,000	$272,000	$272,000	$272,000	$1,036,000
Additional Staff/Technician	0	0	0	0	0	0
GA/TA***	$22,262	$22,262	$22,262	$22,262	$22,262	$111,312
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	$10,000	$10,000	$10,000	$10,000	$10,000	**$50,000**
Technology/CTL resources	0	0	0	0	0	**0**
Other expenses *(please list)*						
Program Coordinator	$16,000	$16,000	$16,000	$16,000	$16,000	**$80,000**
Admin/Advisor	**$15,000**	**$15,000**	**$15,000**	**$15,000**	**$15,000**	**$75,000**
Marketing/Recruitment	**$25,000**	**$25,000**	**$25,000**	**$25,000**	**$25,000**	**$125,000**
General Operating & Supplies	**$5,000**	**$5,000**	**$5,000**	**$5,000**	**$5,000**	**$25,000**
Overhead (35% tuition)	**$144,690**	**$282,101**	**$274,416**	**$266,310**	**$257,770**	**$1,255,288**
Total Expenses	**$296,892**	**$548,360**	**$651,913**	**$647,172**	**$642,127**	**$2,786,465**
Net Income	**$124,908**	**$283,348**	**$167,089**	**$158,285**	**$148,915**	**$882,544**

* $1,050 per full-time equivalent domestic Masters student per course; $5,625 per full-time equivalent international Masters student per course

** $1,050 per full-time equivalent domestic Masters student per course; $0 per full-time equivalent international Masters student per course

***Estimate $6,184 per GA/TA allocation per course

PROGRAM DEVELOPMENT COMMITTEE
NEW COURSE PROPOSALS
FORM D

TITLE OF PROGRAM(S)/CERTIFICATE(S):	**Master of Engineering- Mechatronic Systems**
DEPARTMENT(S)/SCHOOL(S):	**Mechanical Automative and Materials Engineering**
FACULTY(IES):	**Engineering**

Proposed change(s) effective as of* [Fall, Winter, Spring]:**(subject to timely and clear submission)*	Fall 2027

A. NEW COURSE PROFILE

Course # and Title: TRON-8010. Advanced Industrial Controls

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.

A comprehensive study of modern industrial control systems with emphasis on Programmable Logic Controllers (PLCs), Supervisory Control and Data Acquisition (SCADA) systems, sensors and instrumentation, and industrial data communication networks. Explore architecture, design, and integration of automation systems used in manufacturing, process industries, and smart production environments. Introduce key industrial communication protocols such as Modbus, Ethernet/IP, and OPC. Design and hands-on implementation of integrated control systems, analyze system performance, and address practical challenges such as noise, latency, and system reliability. Review of emerging trends in industrial automation and smart manufacturing including Industrial Internet of Things (IIoT), data-driven monitoring, and cyber-physical systems.

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	48	3	1			Explain:

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]*
No pre-requisites				Yes	

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?

__X__ 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)]

____ No

If yes, list all programs for which this course will be required: This course will be required for the newly proposed Master of Engineering - Mechatronics Systems Engineering.

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 Advanced Industrial Control Systems course is designed to strengthen the applied and industry-oriented focus of the Master of Engineering in Mechatronics program. It serves as a specialized elective that bridges foundational control theory with practical implementation in industrial environments. The course equips students with essential skills in PLC programming, SCADA system integration, sensor interfacing, and industrial data communication—competencies that are critical for modern automation and smart manufacturing systems. Within the program, this course complements core subjects such as control systems, robotics, and embedded systems by emphasizing real-world deployment, system integration, and industrial standards. It prepares students for professional practice in sectors such as manufacturing, energy, automotive, and process industries, where advanced automation and data-driven decision-making are increasingly important. Additionally, the course supports the program's objective of producing highly skilled graduates who can design, implement, and manage complex mechatronic systems, while also enhancing their readiness for interdisciplinary collaboration and industry engagement.

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

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*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?*

In developing the Advanced Industrial Control Systems course within the Master of Engineering in Mechatronics program, consideration has been given to incorporating Indigenous perspectives, knowledge systems, and inclusive approaches to teaching and learning, in alignment with the University of Windsor's commitment to the Truth and Reconciliation Commission (TRC) Calls to Action and relevant legal and institutional frameworks.

At the Faculty and departmental level, Indigenization has been approached through ongoing reflection on curriculum design, consultation of institutional resources, and alignment with university-wide principles that emphasize respect for Indigenous knowledge, ways of knowing, and community engagement. While this course is deeply technical in nature, its applied focus provides some opportunity to incorporate context of sustainable engineering practices, community-centered design, and ethical technology deployment. These principles may provide opportunity to touch on Indigenous perspectives.

Topics such as industrial automation, sensor systems, and data communication are increasingly applied in sectors that directly impact Indigenous communities, including energy systems, water management, environmental monitoring, and infrastructure development. The course will highlight examples where engineering solutions intersect with Indigenous communities, emphasizing the importance of respectful collaboration, sustainability, and long-term community benefit. As the course evolves, there is intention to include additional Indigenous worldviews that emphasize interconnectedness, stewardship of the land, and responsibility to future generations.

In alignment with TRC Calls to Action related to education, the course promotes critical awareness of the broader social, environmental, and historical contexts in which engineering systems are deployed. This

includes encouraging students to reflect on the impacts of industrialization and automation on diverse communities, which can include Indigenous lands and communities, and to consider ethical responsibilities in engineering practice.

Faculty have developed awareness of Indigenous histories and perspectives through University resources and ongoing professional development. Although the course is deeply technical in nature, the Faculty will encourage critical reflection on the social and ethical dimensions of robotics, fostering professional responsibility, accountability, and culturally respectful engineering practice. These considerations are reflected in the course syllabus and learning outcomes, particularly in areas related to ethical practice, sustainability, and societal impact. While no specific Indigenous Knowledge Holders specializing in Engineering have been formally consulted at this stage, the team did work with members of the CTL, including Learning Specialist in the Field of Indigenization, Jaimie Kechego, and the course remains open to future collaboration and inclusion of community informed perspectives.

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.*

TRON-8010. Advanced Industrial Controls

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 and integrate advanced knowledge of industrial control systems, including PLCs, SCADA, sensors, and communication networks to design and implement real-world automation systems.	A. the acquisition, application and integration of knowledge
B. Define industrial automation problems and identify appropriate control solutions. Access, retrieve, and evaluate technical information from standards, manuals, and scholarly sources and apply this knowledge to design and analyze industrial control systems.	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C. Analyze and design industrial control systems. Evaluate complex automation challenges, assess alternative solutions, and apply appropriate control strategies to develop effective and reliable systems.	C. critical thinking and problem-solving skills
D. Interpret technical documentation, standards, and system specifications Apply mathematical and analytical methods in the design, modeling, and evaluation of industrial control systems	D. literacy and numeracy skills

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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:
E. Adhere to ethical engineering practices, safety, and sustainability.	E. responsible behaviour to self, others and society
F. Respectfully and collegially collaborate with peers on team-based projects Clearly convey technical concepts, discuss solutions with peers, and effectively collaborate in multidisciplinary engineering teams.	F. interpersonal and communications skills
G. Coordinate tasks, guide team efforts, and take responsibility for both individual and group outcomes in industrial control system design and implementation.	G. teamwork, and personal and group leadership skills
H. Develop innovative solutions for industrial control and automation problems. Design efficient, elegant, and user-friendly control systems, integrating technical functionality with thoughtful system organization and interface design.	H. creativity and aesthetic appreciation
I. Identify emerging technologies, industry standards, and advanced control strategies. Independently explore new tools, methods, and applications to stay current in the rapidly evolving field of industrial automation.	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	20	20	20	20

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 new course will not affect any of the existing courses within the Faculty of Engineering's Master of Engineering program.

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.

As part of the new program proposal for the Master of Engineering – Mechatronic Systems Engineering program, the budget shows some reliance, albeit low (10%), will rely on the sessional faculty delivery for courses.

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.*

As part of the new program proposal for the Master of Engineering – Mechatronic Systems Engineering program, the Faculty of Engineering will require two new full-time faculty to be hired to support this program. This program will launch in the midst of the new Bachelor of Applied Science – Mechatronics Engineering's 3rd new cohort and the department does not have a sufficient faculty complement in Mechatronics to sustain the enrolment expectations for the bachelor's degree, let alone a new graduate degree. As an area of growth for the institution, these new faculty are vital and the proposed budget supports this investment without showing any of their time shared with serving the bachelor's program as well, which is anticipated.

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 TRON courses will not be shared with other Master of Engineering programs; however, when the master's and doctorate research graduate programs are pursued, these courses will be shared with those programs. For the Master of Engineering - Mechatronic Systems program, the sharing of electives from Mechanical Engineering and Electrical and Computer Engineering graduate courses will provide shared delivery of 25% of the program with these departments. As well, the General Engineering (GENG) courses are shared across all

Master of Engineering Programs. In total, 62.5% of the program will have shared courses and sections with other Master of Engineering streams.

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:	Two new hires shared between this program and its undergraduate counterpart are anticipated. These hires will be base budgeted by the Faculty of Engineering.
Staff:	Administrative and technical staff will be shared with other programs in the Faculty.
GA/TAs:	Two to four GA positions per year are expected.

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 resources beyond the standard are expected to be required.
Teaching and Learning Support:	No resources beyond the standard are expected to be required.
Student Support Services:	No resources beyond the standard are expected to be required.
Space and Facilities:	Lab space will be shared with other programs in the Faculty.
Equipment (and Maintenance):	Equipment maintenance is estimated at $100,000 but this cost is shared with the undergraduate mechatronic systems engineering program, as well as other programs in the Faculty.

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TITLE OF PROGRAM(S)/CERTIFICATE(S):	**Master of Engineering- Mechatronic Systems**
DEPARTMENT(S)/SCHOOL(S):	**Mechanical Automative and Materials Engineering**
FACULTY(IES):	**Engineering**

Proposed change(s) effective as of* [Fall, Winter, Spring]:**(subject to timely and clear submission)*	Winter 2027

A. NEW COURSE PROFILE

Course # and Title: TRON-8020. Advanced Robotics

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.

An in-depth study of advanced robotics, encompassing both mobile robotic systems and stationary manipulators (robotic arms). Modeling, control, and programming of diverse robotic platforms, including wheeled and legged mobile robots, autonomous vehicles, and industrial manipulators. Topics include robot kinematics and dynamics, motion planning and trajectory optimization, localization and mapping, sensor integration, perception, multi-robot coordination, and human-robot interaction. Advanced control strategies, such as adaptive, robust, and nonlinear control. Hands-on simulation and laboratory exercises, implementing algorithms for navigation, manipulation, obstacle avoidance, and autonomous decision-making. Real-world case studies from industrial automation, service robotics, autonomous vehicles, and collaborative robot applications.

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
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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	48	3	1			Explain:

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]*
No				Yes	

******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?	

Is the new course a required course in one or more programs?

__X__ 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)]

____ No

If yes, list all programs for which this course will be required: This course will be required for the newly proposed Master of Engineering - Mechatronics Systems Engineering.

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 Advanced Robotics course is designed to provide Master of Engineering in Mechatronics students with specialized knowledge and practical skills in both mobile robotic systems and stationary manipulators. It serves as an elective that bridges foundational robotics theory with applied, industry-relevant practices. Within the program, the course complements core subjects such as control systems, mechatronics design, and automation by emphasizing real-world implementation of advanced robotic systems. Students gain experience in robot modeling, motion planning, sensor integration, and control of both mobile platforms and robotic arms. The course prepares students for professional roles in sectors such as industrial automation, autonomous vehicles, service robotics, and research laboratories, where integration of mobile and stationary robots is increasingly essential. It supports the program's objective of developing graduates who are technically

competent, innovative, and capable of addressing complex, interdisciplinary engineering challenges.

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?*

In developing the Advanced Robotics course, consideration has been given to incorporating Indigenous perspectives and knowledge, in alignment with the University of Windsor's commitment to the TRC Calls to Action and relevant legal and institutional frameworks. While this course is technical in nature, it provides opportunities to embed Indigenous perspectives through discussions of ethical technology deployment, sustainable engineering, and human-centered design in robotic systems.

At the departmental level, Indigenization has been approached through consultation of University resources, review of TRC and University Principles documents, and reflection on how robotics and automation intersect with Indigenous communities and lands. The course emphasizes the societal impact of robotics, encouraging students to consider how autonomous and mobile systems may be applied responsibly in sectors affecting diverse communities, which could include Indigenous communities in areas such as environmental monitoring, resource management, or infrastructure.

Faculty have developed awareness of Indigenous histories and perspectives through University resources and ongoing professional development. Although the course is deeply technical in nature, the Faculty will encourage critical reflection on ethical technology deployment, sustainable engineering, and human-centered design in robotic systems. These considerations are reflected in the course syllabus and learning outcomes, particularly in areas related to ethical practice, sustainability, and societal impact. While no specific

Indigenous Knowledge Holders specializing in Engineering have been formally consulted at this stage, the team did work with members of the CTL, including Learning Specialist in the Field of Indigenization, Jaimie Kechego, and the course remains open to future collaboration and inclusion of community-informed perspectives.

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.*

TRON-8020. Advanced Robotics

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 mobile and stationary robotic systems, including kinematics, dynamics, control strategies, sensor integration, and motion planning to design, implement, and evaluate complex robotic systems. Integrate concepts from multiple domains—control, perception, communication, and planning—into cohesive, real-world robotic solutions.	A. the acquisition, application and integration of knowledge
B. Define complex robotics problems, identifying technical requirements, and accessing relevant literature, standards, and datasets. Critically evaluate information from academic, industrial, and technical sources and apply it to the design, analysis, and optimization of both mobile and stationary robotic systems.	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C. Analyze complex robotic systems, identify design and control challenges, and develop effective solutions. Apply analytical methods, simulation, and experimentation to evaluate alternatives and implement robust strategies for both mobile and stationary robotic platforms.	C. critical thinking and problem-solving skills
D. Interpret technical documentation, robotics research papers, and system specifications Apply mathematical modeling, data analysis, and computational techniques to the design and evaluation of robotic systems.	D. literacy and numeracy skills

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:
E. Adhere to ethical engineering practices, safety, and sustainability.	E. responsible behaviour to self, others and society
F. Respectfully and collegially collaborate with peers on team-based projects (Also relevant to G). Clearly convey technical concepts, discuss design decisions, and effectively collaborate with peers in both mobile and stationary robotics contexts.	F. interpersonal and communications skills
G. Coordinate tasks, lead aspects of team work, and take responsibility for both individual and group outcomes in the design, implementation, and testing of robotic systems.	G. teamwork, and personal and group leadership skills
H. Develop innovative solutions for robotic system design and implementation. Create efficient, elegant, and user-friendly robotic solutions, integrating technical functionality with thoughtful system organization, interface design, and overall system aesthetics.	H. creativity and aesthetic appreciation
I. Identify emerging robotics technologies, advanced control strategies, and industry best practices. Independently explore new tools, methods, and applications to remain current in the rapidly evolving field of mobile and stationary robotics.	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	20	20	20	20

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 new course will not affect any of the existing courses within the faculty of Engineering Master of Engineering program.

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.

As part of the new program proposal for the Master of Engineering – Mechatronic Systems Engineering program, the budget shows some reliance, albeit low (10%), will rely on the sessional faculty delivery for courses.

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.*

As part of the new program proposal for the Master of Engineering – Mechatronic Systems Engineering program, the Faculty of Engineering will require two new full-time faculty to be hired to support this program. This program will launch in the midst of the new Bachelor of Applied Science – Mechatronics Engineering's 3rd new cohort and the department does not have a sufficient faculty complement in Mechatronics to sustain the enrolment expectations for the bachelor's degree, let alone a new graduate degree. As an area of growth for the institution, these new faculty are vital and the proposed budget supports this investment without showing any of their time shared with serving the bachelor's program as well, which is anticipated.

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 TRON courses will not be shared with other Master of Engineering programs; however, when the masters and doctorate research graduate programs are pursued, these courses will be shared with those programs. For the Master of Engineering – Mechatronic Systems program, the sharing of electives from Mechanical Engineering and Electrical and Computer Engineering graduate courses will provide shared delivery of 25% of the program with these departments. As well, the General Engineering (GENG) courses are shared across all Master of Engineering Programs. In total, 62.5% of the program will have shared courses and sections with other Master of Engineering streams.

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:	Two new hires shared between this program and its undergraduate counterpart are anticipated. These hires will be base budgeted by the Faculty of Engineering.
Staff:	Administrative and technical staff will be shared with other programs in the Faculty.
GA/TAs:	Two to four GA positions per year are expected.

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 resources beyond the standard are expected to be required.
Teaching and Learning Support:	No resources beyond the standard are expected to be required.
Student Support Services:	No resources beyond the standard are expected to be required.
Space and Facilities:	Lab space will be shared with other programs in the Faculty.
Equipment (and Maintenance):	Equipment maintenance is estimated at $100,000 but this cost is shared with the undergraduate mechatronic systems engineering program, as well as other programs in the Faculty.

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TITLE OF PROGRAM(S)/CERTIFICATE(S):	**Master of Engineering- Mechatronic Systems**
DEPARTMENT(S)/SCHOOL(S):	**Mechanical Automative and Materials Engineering**
FACULTY(IES):	**Engineering**

Proposed change(s) effective as of* [Fall, Winter, Spring]: **(subject to timely and clear submission)*	Fall 2027

A. <u>NEW COURSE PROFILE</u>

Course # and Title: TRON-8030. Artificial Intelligence and Machine Learning

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.

An introduction to the fundamental concepts and techniques in artificial intelligence and machine learning, with an emphasis on engineering applications in mechatronics, robotics, and autonomous systems. Topics include supervised and unsupervised learning, model evaluation and optimization, neural networks, and deep learning. Data preprocessing, feature extraction, and the implementation of machine learning algorithms using modern software tools. Applications/themes may include robotic perception and sensor fusion, autonomous navigation and path planning, control and decision-making for intelligent systems, computer vision for object detection and tracking, and reinforcement learning for adaptive and autonomous control. Real-world case studies in robotics, unmanned aerial and ground vehicles, and smart manufacturing systems.

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
- ☐ 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

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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	48	3	1			Explain:

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]*
No				Yes	

******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?

_X___ 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)]

____ No

If yes, list all programs for which this course will be required: This course will be required for the newly proposed Master of Engineering - Mechatronics Systems Engineering.

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.

This course provides foundational knowledge in artificial intelligence and machine learning, equipping students with essential skills to analyze, design, and implement intelligent systems. It supports the program by preparing students for advanced topics and applications in mechatronics, robotics, and autonomous systems, and serves as a key technical elective for those pursuing data-driven and intelligent engineering solutions.

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?*

In developing this course, consideration has been given to incorporating Indigenous perspectives within the context of engineering, artificial intelligence, and emerging technologies. Examples will be incorporated to highlight how technological solutions can be developed in a manner that is respectful of diverse community needs, which is applicable to Indigenous knowledge systems and community needs.

Faculty have developed awareness of Indigenous histories and perspectives through University resources and ongoing professional development. Although the course is deeply technical in nature, the Faculty will encourage critical reflection on ethical deployment of AI technologies. These considerations are reflected in the course syllabus and learning outcomes, particularly in areas related to ethical practice, sustainability, and societal impact. While no specific Indigenous Knowledge Holders specializing in Engineering have been formally consulted at this stage, the team did work with members of the CTL, including Learning Specialist in the Field of Indigenization, Jaimie Kechego, and the course remains open to future collaboration and inclusion of community-informed perspectives.

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.

TRON-8030. Artificial Intelligence and Machine Learning

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 and integrate fundamental AI and machine learning concepts to analyze, design, and implement solutions for engineering problems in mechatronics, robotics, and autonomous systems. Integrate multiple disciplines such as computer vision, robotics, linguistics, mathematics, and engineering to develop computers that can think, see, hear, walk, talk and feel.	A. the acquisition, application and integration of knowledge
B. Define research problems and effectively access, evaluate, and apply relevant information to develop AI and machine learning solutions in engineering contexts. Define problems in artificial intelligence and explore solutions through the selection and application of AI models, definition of AI algorithms, detection and reduction of parameters and variables, selection and reduction of features, and simulation of artificial intelligence algorithms.	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C. Analyze complex engineering challenges and develop effective AI and machine learning solutions. Analyze problems, model systems, and select the proper AI techniques to implement intelligent mechatronic systems.	C. critical thinking and problem-solving skills
D. Interpret data, communicate results, and support decision-making in AI and engineering applications. Design AI systems using CAD tools Research and apply state-of-the-art development and applications of various artificial intelligence algorithms for mechatronic system design.	D. literacy and numeracy skills
E. Adhere to ethical engineering practices, safety, and sustainability.	E. responsible behaviour to self, others and society
F. Clearly and precisely communicate ideas in oral and written forms.	F. interpersonal and communications skills
G. Collaborate effectively with peers to guide collaborative AI and engineering initiatives (Also relevant to F).	G. teamwork, and personal and group leadership skills

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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:
H. Develop innovative AI solutions while considering clarity, usability, and design in engineering applications. Analyze, model, and realize intelligent systems	H. creativity and aesthetic appreciation
I. Identify emerging AI and machine learning technologies.	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	20	20	20	20

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 new course will not affected any of the existing courses within the faculty of Engineering Master of Engineering program.

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.

As part of the new program proposal for the Master of Engineering – Mechatronic Systems Engineering

program, the budget shows some reliance, albeit low (10%), will rely on the sessional faculty delivery for courses.

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)

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.*

As part of the new program proposal for the Master of Engineering – Mechatronic Systems Engineering program, the Faculty of Engineering will require two new full-time faculty to be hired to support this program. This program will launch in the midst of the new Bachelor of Applied Science – Mechatronics Engineering's 3rd new cohort and the department does not have a sufficient faculty complement in Mechatronics to sustain the enrolment expectations for the bachelor's degree, let alone a new graduate degree. As an area of growth for the institution, these new faculty are vital and the proposed budget supports this investment without showing any of their time shared with serving the bachelor's program as well, which is anticipated.

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 TRON courses will not be shared with other Master of Engineering programs; however, when the masters and doctorate research graduate programs are pursued, these courses will be shared with those programs. For the Master of Engineering Mechatronic Systems program, the sharing of electives from Mechanical Engineering and Electrical and Computer Engineering graduate courses will provide shared delivery of 25% of the program with these departments. As well, the General Engineering (GENG) courses are shared across all Master of Engineering Programs. In total, 62.5% of the program will have shared courses and sections with other Master of Engineering streams.

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:	Two new hires shared between this program and its undergraduate counterpart are anticipated. These hires will be base budgeted by the Faculty of Engineering.
Staff:	Administrative and technical staff will be shared with other programs in the Faculty.
GA/TAs:	Two to four GA positions per year are expected.

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

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*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 resources beyond the standard are expected to be required.
Teaching and Learning Support:	No resources beyond the standard are expected to be required.
Student Support Services:	No resources beyond the standard are expected to be required.
Space and Facilities:	Lab space will be shared with other programs in the Faculty.
Equipment (and Maintenance):	Equipment maintenance is estimated at $100,000 but this cost is shared with the undergraduate mechatronic systems engineering program, as well as other programs in the Faculty.