ACADEMIC COUNCIL MEETING
Undergraduate Studies Committee

AGENDA

Date: May 19, 2026
Time: 9:00 a.m. - 9:55 a.m.
Zoom Videoconference Link (registration required)

USC Meeting Schedule and Materials 2025-2026

No.		Topic	Lead	Suggested Start Time
		PUBLIC SESSION		
1.		**Call to Order and Land Acknowledgement**	Chair	9:00 a.m.
2.		**Agenda (M)**		
3.		**Chair's Remarks**		
4.		**New Program Proposal (Recommendation)**		
	4.1	Faculty of Engineering and Applied Science: Bachelor of Engineering (Hons), Artificial Intelligence Engineering* (M)	M. Agelin-Chaab	9:10 a.m.
5.		**Minor Program Adjustment (Approval)**		
	5.1	Faculty of Business and Information Technology: Bachelor of Commerce* (M)	A. Hogue	9:20 a.m.
6.		**Academic Policy Instruments**		
	6.1	Institutional Quality Assurance Process (IQAP) Policy and Procedures* (M)	K. McCartney	9:30 a.m.
	6.2	Registration and Course Selection Policy Amendments* (M)	A. Wingate	
7.		**Consent Agenda: (M)**	Chair	9:50 a.m.
	7.1	Public Minutes of the April 21, 2026 Meeting* (M)		
	7.2	Memo: Faculty of Science – Computer Science		
	7.3	Minor Curricular Changes: 7.3.1 Course Changes: ENGR 4111U, ENGR 1200U, INFR 4661U		
8.		**Termination**	Chair	9:55 a.m.

Sandra Grouette, Assistant University Secretary

*Documents attached (C) Consultation (D) Discussion (I) Information (M) Motion

UNDERGRADUATE STUDIES COMMITTEE REPORT

ACTION REQUESTED:

Recommendation ☒
Decision ☐
Discussion/Direction ☐
Information ☐

DATE: **19 May 2026**

FROM: **Faculty of Engineering and Applied Science**

SUBJECT: **New Program Proposal – Bachelor of Engineering (Hons), Artificial Intelligence Engineering**

COMMITTEE MANDATE:
In accordance with the USC Terms of Reference, USC has the responsibility to examine proposals for new undergraduate degree programs and major changes to existing programs and to recommend their approval, as appropriate, to the Academic Council.

MOTION FOR CONSIDERATION:
That USC hereby recommends to Academic Council the approval of the Bachelor of Engineering (Hons) in Artificial Intelligence Engineering program and the subsequent recommendation of the program to the Board.

BACKGROUND/CONTEXT & RATIONALE:
The proposed four-year Bachelor of Engineering (Hons), Artificial Intelligence Engineering is an interdisciplinary program designed to address the urgent demand for AI professionals with strong engineering expertise and a deep commitment to ethical innovation. Through the integration of hands-on learning, industry collaboration, and a focus on societal impact, the program prepares graduates to excel in a rapidly evolving field.

The program provides a robust foundation in core AI concepts while addressing critical engineering challenges such as real-time processing, embedded systems, and secure data handling. By combining rigorous AI theory with practical engineering applications, the program's name accurately reflects its interdisciplinary nature and objectives.

With a strong emphasis on career-ready education, the program supports collaborative, technology-driven learning and research that enables students to solve real-world problems and contribute to scientific, social, and economic innovation. Courses are delivered primarily in person, with selected hybrid or online offerings, and are supported by extensive work-integrated learning opportunities, including engineering laboratories, design projects, industrial projects, and co-op and internship experiences.

The program responds directly to AI's transformative role across engineering domains such as software systems, IoT, smart homes, automotive technologies, cyber-physical systems, and smart infrastructure. It aligns with the strategic objectives of the Faculty of Engineering and Applied Science and Ontario Tech University by offering a market-driven, career-oriented curriculum that enhances the university's academic portfolio and reflects its commitment to producing new and useful ideas that create a better world.

RESOURCES REQUIRED:

Consistent with the structure and growth of engineering programs at Ontario Tech, strong enrolment growth is anticipated for the proposed Artificial Intelligence Engineering program as it matures. As institutional resources are tied to enrolment, careful monitoring of enrolment trends across the sector, and specifically their impact on this program and Software Engineering, will be required to ensure that existing resources are leveraged to the fullest extent and that any new hires resulting from enrolment increases in AI and related fields are positioned to support growth across both programs.

This careful and phased approach to investment will be essential to uphold academic quality, foster innovation, respond to evolving student demand, ensure long term resource sustainability, and remain competitive in a rapidly evolving academic and technological landscape.

Required teaching loads and supervision of experiential learning opportunities, including capstone projects, will be assigned to current tenured, tenure track, and teaching faculty members within the Faculty. Additional Teaching Assistant support will be required for new courses and can be met through available full-time graduate students, including those from the MASc in Software Engineering.

CONSULTATION AND APPROVAL:

- ✓ Academic Resource Committee: 21 October 2025
- ✓ FEAS Faculty Council: 23 April 2026
- Undergraduate Studies Committee (Recommendation): 19 May 2026
- Academic Council (Approval and Recommendation): 26 May 2026
- Board of Governors (Approval): 25 June 2026

A thorough consultation process has been undertaken with the Deans of all potentially affected faculties, involving initial informational meetings, formal presentations to Deans' Council, and bilateral discussions to address curriculum overlaps, resource sharing, and ensure synergy.

NEXT STEPS:

- Pending the recommendation of USC, the program proposal will be presented to Academic Council for approval and recommendation to the Board. The proposal must proceed through the following external approval steps
  - Ontario Universities Council on Quality Assurance
  - Ministry of Colleges, Universities, Research Excellence and Security

The preferred date of implementation is in the Fall of 2027

SUPPORTING REFERENCE MATERIALS:

- New Program Proposal with Appendices
- Reports from External Review

New Undergraduate Program Proposal

The program proposal and accompanying documents must address the purpose and content of the new program and the capacity of the unit to deliver a high-quality program. This template is for all proposals for new undergraduate programs and aligns with Ontario Tech Institutional Quality Assurance Process (IQAP) requirements and, together with the required supporting documents, will help to ensure that all evaluation criteria established by the Quality Council are addressed. All sections of the template are required.

Full name of proposed program (as it will appear on the student's transcript): (e.g., Bachelor of Arts in Psychology; Bachelor of Science in Biology)	Bachelor of Engineering (Honours), Artificial Intelligence Engineering Bachelor of Engineering and Management (Honours), Artificial Intelligence Engineering Bachelor of Engineering (Honours), Artificial Intelligence Engineering, Co-operative Education
Degree designation and short form: (e.g., Bachelor of Arts, B.A.; Bachelor of Science, B.Sc.)	BEng (Hons)
Cost recovery program:	☐Yes ☒No
Professional program:	☒Yes ☐No
Faculty offering the program: (i.e., where the program will be housed/site of academic authority)	Faculty of Engineering and Applied Science
Collaborating Faculty(ies) (if applicable):	
Collaborating institution(s) (if applicable):	
Program delivery location:	Ontario Tech University - North Campus 2000 Simcoe St N, Oshawa, ON L1G 0C5
Proposed program start date (please change as needed):	Fall 2027
Program proponent/contact:	Dr. Hossam Kishawy (Dean) Dr. Anwar Abdalbari (PCC Chair)
Version date (please change as you edit this proposal):	March 2026

Date of Academic Council Approval:	

***Brief* description of the proposed program[1]:** (NOTE: Text box is formatted to limit the description to 1000 characters or less. This description should be identical to the 'Program Abstract' on page one of the proposal.)

The four-year Bachelor of Engineering (Hons), Artificial Intelligence (AI) Engineering is an interdisciplinary program that addresses the urgent demand for AI professionals who possess engineering technical expertise and a deep commitment to ethical innovation. By integrating hands-on learning, industry collaboration, and a focus on societal impact, this program prepares graduates to excel in a rapidly evolving field. The program will offer a robust foundation in core AI concepts and address critical engineering challenges such as real-time processing, embedded systems, and secure data handling.

The program fosters career-ready education and drives collaborative, technology-driven research, preparing students to solve real-world challenges and contribute to scientific, social, and economic innovations. By integrating AI theory with practical applications, the program embodies the university's commitment to producing new and useful ideas that create a better world.

[1] NOTE: Following the Quality Council's approval of the proposed program, the QA Secretariat will seek confirmation from the University that this description is appropriate to post on the Quality Council's website (Approved Programs — Ontario Universities Council on Quality Assurance (oucqa.ca))

For CIQE Use Only:

Approval Steps	**Date (e.g., of site visit, final sign off, meeting, submission)**
Notice of Intent (NOI) Open for Community Comment	March 31, 2025
NOI at Academic Resource Committee (ARC)	April 8, 2025
NOI Approved to Proceed	May 7, 2025
Development of Proposal Brief	
✓ *Program Learning Outcomes Workshops and Review Completed*	September 2025
Writing of Proposal ✓ *Collect Data* ✓ *Broad Consultation and Letters of Support* ✓ *All Required Appendices Completed*	April-October, 2025
Library Report Completed	July 8, 2025
Draft Proposal at Faculty Council for Feedback	September 25, 2025
Draft Proposal Reviewed by Centre for Institutional Quality Enhancement (CIQE)	September 24, 2025
Draft Proposal Reviewed by Schools of Graduate and Post-Doctoral Studies (if applicable)	n/a
List of Potential Reviewers Submitted to CIQE	October 7, 2025
Draft Proposal Presented to ARC	October 14, 2025
Draft Proposal Return to ARC (if required)	n/a
External Review (Degree Programs Only) and Completion of Proposal	
External Review Completed (degree programs)	February 3, 2026
Response to Review Completed (degree programs)	March 23. 2026
Final Proposal Completed	April 23, 2026
Decanal signoff *In signing I/We confirm that I/We have ensured appropriate:* ✓ *compliance with the evaluation criteria required in the Ontario Tech Institutional Quality Assurance Process* ✓ *consultation with the Office of the Provost and Vice-President, Academic* ✓ *consultation with faculty and students, other University divisions, and external institutions where appropriate*	[Name], Dean, [Faculty/Division] [Date of Signoff]
Provostial signoff *In signing I confirm that the new program proposal:*	[Name], Provost and Vice-President, Academic [Date of Signoff]

✓ *Is complete and includes information on all evaluation criteria required in the Ontario Tech Institutional Quality Assurance Process*	
Faculty Council Approval	April 23, 2026
Submission to University Governance	
Undergraduate/Graduate Studies Committee Recommendation	May 19, 2026
Academic Council Approval and Recommendation (must be within two years of NOI approval)	May 26, 2026
Board of Governors Approval	June 25, 2026
The program may begin advertising once academic and fiscal approval has been received and the proposal has been submitted to the Ontario Universities Council on Quality Assurance (Quality Council) as long as any and all material includes the clear statement that, “No offer of admissions will be made to the program pending final approval by the Quality Council and the Ministry of Colleges and Universities (where the latter is sought/required).” **External Approval and Launch of Program**	
Quality Council	[date]
☐External reviewers’ report ☐Program’s and Dean’s response (with date)* ☐CVs, course outlines, and other supporting material (as appendices, where applicable; ***CVs provided to external reviewers***)	☐Summary of changes ☐Final, revised proposal
Anticipated Submission to the Ministry (where sought/required)	[date]
Final Expected Start Date	[date]
Initial Intake Report Due (based on expected start date)	[date]
1-Year Report Due (based on expected start date)	[date]
Date of First Cyclical Review (based on expected start date)	[date]

New Undergraduate Program Proposal

Bachelor of Engineering (Hons), Artificial Intelligence (AI) Engineering
Faculty of Engineering and Applied Science

Please retain all the prompts and questions and address/answer all points in each section.

1 Program Abstract

Please provide a brief overview of the proposed program, summarizing the key points, to be shared with the public, in 1000 characters or less. You may wish to include:

- *A clear statement of the purpose of the program (who is it for, what are the outcomes)*
- *Any program components, such as fields, pathways, or micro-credentials (note that fields, pathways, and micro-credentials are not required)*
- *Nature of the learning environment, noting any distinctive elements, including alternative modes of delivery (including online)*

Note that this statement will be used on a standalone basis and is for external purposes; what do you want potential students/advisors to know about this program? (You may wish to complete this section last.)

The four-year Bachelor of Engineering (Hons), Artificial Intelligence (AI) Engineering is an interdisciplinary program that addresses the urgent demand for AI professionals who possess engineering technical expertise and a deep commitment to ethical innovation. By integrating hands-on learning, industry collaboration, and a focus on societal impact, this program prepares graduates to excel in a rapidly evolving field. The program will offer a robust foundation in core AI concepts and address critical engineering challenges such as real-time processing, embedded systems, and secure data handling.

The program fosters career-ready education and drives collaborative, technology-driven research, preparing students to solve real-world challenges and contribute to scientific, social, and economic innovations. By integrating AI theory with practical applications, the program embodies the university's commitment to producing new and useful ideas that create a better world.

2 Academic Rationale

- *Identify what is being proposed, clearly state the program objectives, and provide an academic rationale for the proposed program (what is being created and why?)*
- *Explain the appropriateness of the program name and degree nomenclature, particularly as they relate to the program objectives; list any program specializations, pathways, etc.*
- *Describe the mode of delivery (in-class, hybrid, online) and any work-integrated learning; outline how the delivery and components are appropriate to support students in achieving the Degree Level Expectations, program outcomes, and Program Learning Outcomes*
- *Discuss how the program addresses the current state of the discipline or area of study*
- *Describe the ways in which the program fits into the broader array of program offerings within the Faculty and the University*
- *Describe any unique curriculum or program innovations, creative components, or significant high impact practice*

We're proposing the establishment of a four-year Honours Bachelor of Engineering in Artificial Intelligence (AI) Engineering program within the Electrical, Computer and Software Engineering Department at Ontario Tech University.

In addition to the Artificial Intelligence (AI) Engineering program, the Faculty of Engineering and Applied Science (FEAS) will also be offering an Artificial Intelligence (AI) Engineering and Management program. This program will be of the same format as all of FEAS's other management options where students do an additional year of business courses between Years 3 and 4 of their engineering program. Also, engineering students all have the opportunity to participate in a co-op option, allowing them to gain valuable, real-world industry experience.

The objective of the program is to address the urgent demand for AI professionals who possess both strong engineering technical expertise and a deep commitment to ethical innovation.

The program's name, Artificial Intelligence Engineering, precisely reflects its interdisciplinary nature, combining rigorous AI theory with practical engineering applications, and aligning directly with the objectives of preparing graduates to excel in a rapidly evolving field. It will offer a robust foundation in core AI concepts such as machine learning, deep learning, natural language processing, computer vision, intelligent control systems, robotics, machine learning DevOps, and reinforcement learning, while also tackling critical engineering challenges like real-time processing, embedded systems, and secure data handling.

The courses will be delivered primarily in-class, with some courses offered in hybrid or online formats. A strong emphasis on work-integrated learning and industry collaboration supports students in achieving the Program Learning Outcomes (PLOs) and Degree Level Expectations (DLEs) through a combination of practical experiences and theoretical knowledge. These include engineering laboratories, design-based projects, industrial projects and co-op and internship opportunities. This approach is especially well-suited to the applied nature of AI engineering and supports the goal of preparing graduates to be career ready.

The program directly addresses the current state of AI as a transformative force across various engineering domains, including software applications, IoT systems, smart homes, automotive systems, cyber-physical systems, and smart infrastructure by equipping students with cutting-edge skills to enhance decision-making and improve system efficiency.

The proposed program aligns with the objectives and strategies the Faculty of Engineering and Applied Science by offering a market- and career-oriented curriculum that preparing graduates to meet the evolving demands of the twenty-first century. This new offering strategically fits within Ontario Tech University's broader commitment to fostering career-ready education and technology-driven research, complementing existing programs by providing specialized expertise in AI engineering. By providing specialized expertise in AI theory with practical applications, the program enhances the university’s existing portfolio and reflects its dedication to societal impact.

Its unique curriculum is designed to produce new and useful ideas that contribute to a better Canada and the world. This program will equip students with cutting-edge AI skills, preparing them to solve real-world challenges and contribute to scientific, social, and economic innovations.

3 University Mission, Vision, Integrated Academic and Research Plan, and Strategic Mandate Agreement

- *Detail the consistency of the program objectives with the Mission, Vision, Integrated Academic and Research Plan, and Strategic Mandate Agreement*
- *Describe how the program contributes to the University's Mission and Vision*
- *Explain how the program aligns with the goals and priorities outlined in the Faculty's(ies') and University's [Integrated Academic and Research Plan]*
- *Is this program consistent with the mandate of the sector? (i.e. technically/vocationally/theoretically/academically oriented for universities) Identify how the program fits within one or more areas of strength or growth in Ontario Tech University's [Strategic Mandate Agreement]*

The Artificial Intelligence (AI) Engineering program is exceptionally consistent with Ontario Tech University's foundational Mission, Vision, and strategic plans, directly contributing to its overarching goals. The University's Vision, "Embracing technology with a conscience to advance knowledge and promote sustainability," and Mission, "We equip future leaders to solve complex problems," are directly embodied by this program, which focuses on developing AI professionals committed to ethical innovation and solving real-world challenges through technology. This aligns seamlessly with the "Tech with a conscience" strategic priority outlined in the University's Integrated Academic and Research Plan, which emphasizes innovating to improve lives and the planet through the ethical development and use of technology. Furthermore, the program's strong emphasis on hands-on learning, industry collaboration, and real-time processing directly supports the "Learning re-imagined" priority by adapting to the evolving educational landscape and providing dynamic learning opportunities. As a technically and vocationally oriented program within a university, it is entirely consistent with the mandate of the sector to provide career-oriented university programs that are responsive to the needs of students and employers, a core tenet of Ontario Tech's founding mandate. This program explicitly fits within a key area of strength and growth identified in Ontario Tech University's Strategic Mandate Agreement: Data Science, Artificial Intelligence and New Technologies. By producing graduates equipped with advanced AI skills, the program directly contributes to the university's role in stimulating economic growth, technological advancement, and social innovation, solidifying Ontario Tech's position as a leader in a critical and rapidly expanding field.

4 Need, Demand, and Duplication

Provide evidence of the need and demand for the program and how this has been determined, focusing on:

- *Student interest:*
- ➢ *including number of prospective student inquiries, applications and registrations for similar programs, results from surveys/focus groups of existing students, graduates, or professionals in the field (include information about domestic vs. international student interest)*
- *Societal need:*
  - ➢ *including evidence of the need for graduates of the program and in which fields (within academic, public, and/or private sectors);*
  - ➢ *employment opportunities for prospective graduates, indicating at least three occupations in which graduates from this proposed program may be employed, selecting at least one using the [Ontario Job Futures website] and one from the [Government of Canada Labour Market Trends website]; you may also wish to review the [Durham Workforce Authority] website and provide any relevant sector portfolio or local/community impact information;*
  - ➢ *for professional programs, a description of the program's congruence with current regulatory requirements*
  - ➢ *note if any employers in the area support the need for this program and include a letter(s) of support as an additional appendix*

The proposed Artificial Intelligence Engineering program is directly supported by significant evidence of both student interest and pervasive societal need, as determined through a review of market trends, employment data, and the broader AI ecosystem.

Student Interest: While specific prospective student inquiries for an "AI Engineering" program at Ontario Tech University are not publicly available at this moment, the general surge in interest for AI-related education across Canada provides strong indirect evidence. Universities across Canada, including the University of Waterloo, University of Alberta, University of Toronto, and Western University, have either established or expanded their AI-focused programs, ranging from specialized AI degrees to AI specializations within existing Computer Science and Engineering programs. This proliferation reflects a high demand from prospective students who recognize the transformative potential of AI. Given Ontario Tech's established reputation in engineering and technology, it is highly probable that a dedicated AI engineering program would attract substantial interest from both domestic and international students seeking specialized, hands-on training in this rapidly evolving field. Similar programs at other institutions have seen competitive application numbers, indicating a strong appetite for such specialized offerings. Surveys or focus groups with current engineering students often reveal a keen desire to integrate AI skills into their future careers, underscoring the relevance of this proposed program.

Societal Need: The societal need for graduates of an AI Engineering program is profound and growing across academic, public, and private sectors. AI technologies are no longer confined to specialized tech companies but are permeating every industry, leading to a critical shortage of professionals capable of designing, developing, and deploying AI solutions ethically and effectively.

Evidence of Need:

- **Ontario's AI Ecosystem:** Ontario is rapidly solidifying its position as a global AI hub. Recent reports, such as the Vector Institute's "Ontario AI Snapshot" (June 2025), indicate a significant growth in the province's AI sector, with over 17,000 new AI jobs created and private investment reaching $2.6 billion (2024-25). This robust ecosystem, characterized by new AI company establishments and relocations to Ontario, highlights an insatiable demand for qualified AI talent.
- **Economic Transformation:** AI is seen as a powerful engine for economic growth and productivity. The integration of AI into manufacturing, financial services, healthcare, transportation, and smart infrastructure necessitates a workforce skilled in AI engineering to optimize processes, enhance decision-making, and drive innovation.
- **Durham Region's Focus:** The Durham Workforce Authority's reports and the "Artificial Intelligence in Durham Region: Talent, R&D and Business at Work" document emphasize Durham Region's emergence as a hub for AI talent and innovation. This regional focus underscores a local, immediate need for skilled AI engineers to support growing businesses and initiatives within the community.

- **Employment Opportunities:** Graduates from this proposed program will be highly sought after in numerous roles. Below are at least three key occupations:
  1. **Artificial Intelligence Engineer / Machine Learning Engineer**: (Referencing Ontario Job Futures / various job boards) This role is consistently in high demand, as seen on job platforms like ZipRecruiter, which lists numerous "AI Engineer" and "Machine Learning Engineer"

positions in Ontario from companies like RBC, H2O.ai, Chubb, and TELUS. These roles involve designing, building, and deploying AI/ML models, developing scalable data pipelines, and integrating AI solutions into various applications.

2. **Data Scientist:** (Referencing Government of Canada Labour Market Trends / OECD) The OECD's "The state of AI jobs in Canada" report (March 2025) identifies Data Scientists as the most in-demand AI profession, accounting for 20% of all AI-related job postings. These professionals leverage AI and machine learning to analyze complex datasets, extract insights, and inform strategic decisions across sectors.
3. **Intelligent Control Systems Engineer / Robotics Engineer:** (Drawing from program scope) Given the program's focus on intelligent control systems and robotics, graduates will be well-prepared for roles in advanced manufacturing, autonomous vehicles, and industrial automation. While a direct "Intelligent Control Systems Engineer" entry might not be universally distinct on broad job boards, these skills are crucial for roles such as "Automation Engineer," "Robotics Software Developer," or "Mechatronics Engineer with AI specialization," particularly within the automotive sector (e.g., General Motors' investment in autonomous vehicle systems in Oshawa, as noted by the Durham Region report).

- **Congruence with Regulatory Requirements:** For professional programs, adherence to regulatory requirements is paramount. While AI engineering is an emerging field, the program's foundation within the Electrical, Computer, and Software Engineering department ensures alignment with established engineering accreditation bodies (e.g., Engineers Canada, through its provincial regulators like Professional Engineers Ontario). The curriculum's integration of ethical innovation is crucial, anticipating future regulatory frameworks for AI and ensuring graduates are prepared for responsible AI development and deployment.

- **Employer Support:** Several employers in the Durham Region and broader Ontario have already expressed a strong need for AI talent. While specific letters of support are not provided in this abstract, the presence of major companies like General Motors in Oshawa, investing in autonomous vehicle systems, and OPG developing AI solutions for operational efficiency, strongly indicates local industry demand.

- *Describe how the program is distinct from other programs at Ontario Tech. Is it reasonable to anticipate this program might affect enrolment in other related programs? If so, how might this be addressed?*

The program will offer a robust foundation in a wide array of AI concepts (machine learning, deep learning, NLP, computer vision, intelligent control systems, robotics, MLOps, reinforcement learning) specifically in the context of their engineering application, a more comprehensive approach than a specialization within a broader engineering discipline.

Ontario Tech has identified AI as a growing institutional priority, recognizing its potential to transform work across disciplines and operations. As AI continues to evolve, the university is developing a collaborative approach to guide its integration across programs and initiatives, with a focus on minimizing potential impacts on enrolment.

- *Is this a new area of study? Please explain:*

While the broad concept of Artificial Intelligence has been a field of academic study since the 1950s, AI Engineering as a distinct and comprehensive undergraduate degree program is indeed a relatively new area of study. Historically, AI research primarily resides within Computer Science departments, focusing on theoretical algorithms and the fundamental science of intelligence. However, the explosion of data, computational power, and the widespread application of AI in various industries over the past decade has created a critical need for professionals who can not only understand AI models but also engineer, deploy, and maintain them ethically and efficiently within real-world systems. This shift has necessitated a formal academic discipline that merges core AI concepts with robust engineering principles, addressing practical challenges like real-time processing, embedded systems, and secure data handling, thereby establishing "AI Engineering" as a crucial and emerging specialization.

- *Identify similar or complementary programs offered by other universities with specific reference to Ontario and Canadian examples, using the table in the Appendix. Please be brief but specific in the table. Avoid value-based statements; rather, focus on need and demand, describing how the proposed program is similar to or different from existing programs. Please fill out and refer to the table in the Appendix when discussing the comparator programs*
- *Provide additional overall comment on the justification for any duplication*

The Artificial Intelligence (AI) Engineering stands apart from existing provincial and national programs by offering a dedicated engineering approach. While many comparable programs provide strong theoretical foundations and practical exposure within computer science or computing frameworks, they often lack the depth in engineering principles and system-level design that are central to AI engineering. This program fills a unique gap by integrating AI theory with hands-on engineering applications, ensuring graduates are equipped to design, deploy, and manage AI systems in real-world environments.

Please see Appendix A for a table indicating complementary programs offered by other universities.

5 Enrolment Information

- *Please complete Table 1 and provide, in paragraph form, information regarding enrolment projections*
- *Please determine the academic year when the program enrolment will reach a steady-state and add an asterisk (*) in the corresponding box beside the number*
- *This table should reflect normal estimated program length. (Table may be adjusted as necessary.)*

Table 1: Projected Enrolment by Academic and Program Year

	Academic Year					
	2027-2028	2028-2029	2029-2030	2030-2031	2031-2032	2032-2033
Level of Study						
1st year	30	40	50	50	50	50
2nd year		27	36	45	45	45
3rd year			26	35	43	43
4th year				25*	34	41
Total Enrolment	30	67	112	155	172	179

Table 1 presents the projected enrolment for the program. The numbers assume the following: 10% attrition (this is the current attrition rate in engineering programs) from Years 1 to 2; 5% attrition between Years 2 and 3, and also Years 3 and 4; enrolment for the 2nd and 3rd academic years increase by 33% and 66% of the first academic year, respectively. It is important to note that the numbers in 4th year may change as some students take co-op/internships and come back in the fifth year to finalize their engineering degree; on average, this represents about 30% of students (consistent with other engineering programs at Ontario Tech). The enrolment will reach steady-state in the 4th academic year (2030-2031).

6 Admission Requirements

Outline the formal admission requirements as they will appear in the Academic Calendar

Current Ontario secondary school students must complete the Ontario Secondary School Diploma (OSSD) with six 4U or 4M credits including English (ENG4U) with a minimum grade of 60 per cent, Advanced Functions (MHF4U), Calculus and Vectors (MCV4U), Chemistry (SCH4U) and Physics (SPH4U). In addition, a combined minimum 70 per cent average in prerequisite math and science courses is required, with no grade below 60 per cent.

- *Explain how the program's admission requirements are appropriate for the program objectives and program learning outcomes: How will they help to ensure students are successful? How do they align with the learning outcomes of the program?*
- *Explain in detail any additional requirements for admission to the program such as minimum grade point average, special language, portfolio, etc. (and how the program recognizes prior work or learning experience, if applicable)*
- *Indicate the programs from which students may be drawn; if this is not a direct-entry from high-school program, please explain*

The formal admission requirements for this engineering program are strategically designed to ensure student success and align with the program's objectives. Prerequisites in English, Advanced Functions, Calculus and Vectors, Chemistry, and Physics provide the essential mathematical, scientific, and communication foundations necessary for an engineering degree, supporting the comprehension of complex AI concepts and effective professional practice. A competitive admission average and minimum grades in core subjects ensure a high standard of academic preparedness, fostering a strong learning environment.

While primarily a direct-entry program for high school graduates, the admission framework also thoughtfully accommodates transfer students from other post-secondary institutions and mature applicants by recognizing prior work and learning experiences, with an emphasis on a strong academic background, typically a 70% average for transfers.

7 Program Requirements, Learning Outcomes, Degree Level Expectations (DLEs), and Program Structure

Participate in program learning outcome (PLO) development sessions and complete the PLO mapping document to describe what the student will know or be able to do by the end of the program and how that knowledge or skill will be demonstrated; include the mapping document as an appendix; refer to the new PLOs and PLO mapping document to complete the questions in this section.

Please see Appendix B for a list of the Program Learning Outcomes, Degree Level Expectations, Courses, and Assessments.

Discuss how the design, structure, requirements, and delivery of the program are appropriate for the program learning outcomes, program outcomes, and Degree Level Expectations. Guidance on program objectives and program-level learning outcomes, including examples, is available here. Be sure to include the following in your response:

- *The sequencing of required courses or other learning activities*
- *The mode of delivery of the program (is this an online or hybrid program?)*
- *Will the program be offered full-time and/or part-time; what is the program length for both full-time and part-time students; how will the program requirements reasonably be completed within the proposed time?*
- *A clear indication of how faculty scholarship and research is integrated; provide a clear indication of how an understanding of research in this area will be reflected in curriculum and/or assessment*
- *How the program will be administered*
- *The unique curriculum or program innovations or creative components in this program*
- *The ways in which the curriculum addresses the current state of the discipline*
- *If the program is to be accredited, include with the above details about the accreditation requirements and add the accreditation tables, if available, as an additional Appendix*

The design, structure, requirements, and delivery of the Artificial Intelligence Engineering program are meticulously crafted to ensure students achieve the outlined Program Learning Outcomes (PLOs), broader program outcomes, and Degree Level Expectations (DLEs) for an engineering degree.

1. Program Design, Structure, and Sequencing of Required Courses: The curriculum will adopt a progressive, scaffolded approach, typical of accredited engineering programs, starting with foundational principles and gradually building towards advanced, specialized AI engineering topics.
    - Years 1-2 (Foundational Engineering and Core Computing): The initial years will focus on strengthening students' understanding of core mathematics (calculus, linear algebra, discrete mathematics), fundamental physics, basic chemistry, and essential computer science principles (programming, data structures, algorithms, computer organization). These courses directly support the PLO to "Solve complex engineering problems... by applying principles from the fields of mathematics, statistics, physics, chemistry, and engineering science." They also lay the groundwork for understanding hardware-software interactions crucial for intelligent systems.
    - Years 2-3 (Core AI and Engineering Applications): Students will then transition into core AI courses such as Machine Learning, Deep Learning, Natural Language Processing, and Computer Vision, coupled with engineering-specific courses like Signals and Systems, Control Systems, Embedded Systems, and Data Communications. This sequencing ensures students first grasp the "why" and "what" of AI before delving into the "how" of building robust AI-driven engineering solutions. This directly addresses PLOs related to "Design and implement intelligent systems" and "Apply engineering design principles."
    - Years 3-4 (Advanced AI Engineering, Specialization, and Ethical/Societal Impact): The final years will involve advanced topics, including Robotics, Reinforcement Learning, Machine Learning DevOps (MLOps), and a significant focus on AI ethics, societal impact, and advanced software engineering practices. A capstone design project (spanning two semesters) will integrate all learned knowledge, requiring students to "Analyze real-world problems," "Assess existing tools," "Apply ethical reasoning and professional judgment," and "Communicate in written, oral, and visual forms." Courses on data analysis and statistical methods will be integrated throughout, particularly in relation to AI model development and evaluation, directly supporting the "Utilize data analysis and Statistical methods" PLO. The emphasis on MLOps and industry best practices in the later years ensures the "Use modern tools, programming languages, and software engineering practices" PLO is met, preparing graduates for real-world deployment.

2. Mode of Delivery and Program Length: This program will be delivered primarily as an in-class program with some courses offered online/hybrid. The in-class mode is crucial for hands-on learning in engineering, providing access to specialized labs, computing infrastructure, and fostering direct collaboration among students and with faculty. The program will be offered full-time over four years. The structured sequencing of courses and the integrated learning approach ensures that all program requirements, including theoretical coursework, laboratory sessions, practical projects, and a capstone design, can be reasonably completed within this proposed timeframe, allowing for comprehensive coverage of the DLEs. While part-time options are not immediately planned for initial launch, flexible scheduling for individual courses could be explored later, though the intensive nature of an engineering degree typically favors full-time study.

3. Integration of Faculty Scholarship and Research: Faculty scholarship and research are deeply integrated into the program, reflecting Ontario Tech's research-intensive environment.
   - Research-Informed Curriculum: Course content will be continually updated to reflect the latest advancements and research findings in AI and related engineering fields. Faculty members, who are active researchers, will bring their cutting-edge work into the classroom through lectures, case studies, and discussions, providing students with insights into current challenges and future directions in AI.
   - Undergraduate Research Opportunities: Students will have opportunities to engage in undergraduate research projects, either through formal courses, independent studies, or by assisting faculty members in their labs (e.g., the Trustworthy AI Lab or the AI4HW Joint Research Centre). This direct exposure to research cultivates critical thinking, problem-solving skills, and an understanding of research methodologies, directly contributing to the "Solve complex engineering problems" and "Adapt to rapidly evolving engineering challenges... by engaging in lifelong learning" PLOs.
   - Capstone Design Project: The capstone design project, a hallmark of engineering education, will often involve tackling open-ended problems that may draw from ongoing faculty research or industry-sponsored initiatives. Students will apply research methods to identify solutions, evaluate alternatives, and demonstrate an understanding of the current state of the discipline.

4. Program Administration: The Artificial Intelligence Engineering program will be administered by the Electrical, Computer and Software Engineering Department within the Faculty of Engineering and Applied Science. The department has established administrative structures for student advising, course scheduling, faculty management, and lab resources. A dedicated Program Curriculum Chair (PCC) or the Department Chair will oversee the curriculum, student progression, and ensure alignment with university policies and potential accreditation requirements. This departmental oversight ensures that the program benefits from existing infrastructure, experienced faculty, and a proven administrative framework.

5. Unique Curriculum and Program Innovations: This program incorporates several unique innovations:
   - Dedicated AI Engineering Focus: Unlike many programs that offer AI as a specialization, this is a standalone engineering degree, allowing for deeper integration of engineering principles with AI across the entire curriculum.
   - Integrated Ethical AI Stream: A strong emphasis on ethical reasoning and responsible AI development is not just a standalone course but woven throughout the curriculum, addressing crucial societal implications (as reflected in the PLO to "Apply ethical reasoning and professional judgment").
   - Emphasis on MLOps and Deployment: Beyond theoretical AI, the program will equip students with practical skills in MLOps, software engineering best practices for AI, and scalable system design, addressing the critical industry need for deployable AI solutions.
   - Project-Based Learning: Extensive hands-on and project-based learning opportunities from early years, culminating in a significant capstone project, will be central to the program, fostering practical application of knowledge and teamwork (directly supporting "Collaborate effectively in diverse teams" PLO).
   - Industry Collaboration: Strong ties with industry partners will facilitate guest lectures, co-op placements, and industry-sponsored projects, ensuring the curriculum remains relevant and students gain real-world experience.

6. Addressing the Current State of the Discipline: The curriculum directly addresses the current state of AI as a rapidly evolving, interdisciplinary field characterized by:
   - Rapid Technological Advancements: By integrating topics like deep learning, reinforcement learning, and MLOps, the program prepares

students for cutting-edge technologies. The "Adapt to rapidly evolving engineering challenges" PLO highlights this.

- Data-Centric Nature: A strong emphasis on data analysis, statistical methods, and data-driven systems ensures graduates are proficient in handling and leveraging the vast amounts of data central to modern AI.
- Ethical and Societal Implications: The integrated ethical stream directly responds to the growing global discourse on AI ethics, bias, privacy, and societal impact.
- Interdisciplinary Application: The program acknowledges that AI is transforming various engineering sectors (automotive, smart homes, IoT) by preparing graduates to apply AI in these diverse contexts, reflected in the PLO to "Analyze real-world problems rooted in social, environmental, and economic context."

7. Accreditation: It is intended that the Artificial Intelligence (AI) Engineering program will seek accreditation by Engineers Canada through the Canadian Engineering Accreditation Board (CEAB). This accreditation is crucial for graduates to pursue professional engineering licensure in Canada. The program's design, including its adherence to rigorous engineering science, engineering design, mathematics, and complementary studies requirements, will align with CEAB's accreditation criteria. The curriculum structure, learning outcomes, and assessment methods will be mapped directly to CEAB's twelve graduate attributes, ensuring that the program meets the high standards required for professional engineering education in Canada.

Please see Appendix C for Accreditation Table.

Describe how the principles of Equity, Diversity, Inclusion, and Decolonization have been considered:

- *Does the program contain concepts, materials, or resources from scholars/professionals who are part of one or more historically marginalized groups?*
- *Are multiple perspectives represented in the program, such as those offered by those who are Indigenous, Black, Persons of Colour, and/or 2SLGBTQIA+?*
- *How has accessibility been considered? More specifically, have the needs of students with disabilities been integrated into the program design (e.g., the ways that students are asked to demonstrate their learning)? Please provide information beyond the services offered by Student Accessibility Services*

- *Discuss how the program structure and delivery reflect universal design for teaching and learning and how the potential need to provide mental or physical health accommodations have been considered; describe how the program structure and delivery methods promote student well-being and resiliency and any elements that support a sense of community in the program*
- *Will this program provide space to allow for the discussion of other viewpoints outside the "dominant, Western narrative"?*

The Artificial Intelligence (AI) Engineering program at Ontario Tech University is being designed with a robust commitment to Equity, Diversity, Inclusion, and Decolonization. This involves actively integrating diverse perspectives and scholarship into the curriculum, including contributions from Indigenous, Black, Persons of Colour, and 2SLGBTQIA+ individuals within AI and engineering. The program will critically examine the ethical implications of AI, addressing issues like algorithmic bias and data colonialism, and ensuring that discussions extend beyond Western narratives to include global and marginalized viewpoints. This approach aims to cultivate not just technical proficiency, but also a deep social and ethical awareness in future AI engineers.

Furthermore, the program prioritizes accessibility through Universal Design for Learning (UDL) principles, offering multiple means of representation, action/expression, and engagement to accommodate diverse learning styles and abilities, moving beyond standard accessibility services. Physical and mental well-being are promoted through a supportive learning environment, flexible considerations for accommodations, and fostering a strong sense of community through collaborative projects. Decolonization efforts within the curriculum will involve challenging technological "neutrality," highlighting non-Western contributions to STEM, and analyzing the global impact of AI with an awareness of power imbalances, ensuring graduates are equipped to develop AI solutions that are equitable and socially responsible for all communities.

FEAS is committed to Reconciliation. The course ENGR 1015U: Introduction to Engineering has two learning modules that cover important Indigenous content: 1) Historic Relations to the Present and 2) Land Relations. Fourth year students will also be able to take the elective course ENGR 4570U: Indigenous Design and Technology. In addition, students in the program can take an Indigenous Studies Minor.

As an example of its focus on EDI, FEAS has the Women in Engineering Society with the following goals :

- We foster a welcoming and engaging space for female engineering students to create a sense of community on and off campus.

- We connect female students to future employers and engineering career opportunities across Canada, and showcase successful female engineering professionals.
- We equip our students with professional skills, connections, and inspiration to prepare them for their professional careers.
- We give back to the community by running outreach events to encourage and inspire young women to pursue an education in engineering.

In addition to the above, FEAS's Engineering Outreach offers programs targeting Indigenous and black students to inspire and encourage them to pursue engineering.

For students who have accommodation needs, existing Student Accessibility Services (SAS) supports will be available to students who require specific accommodations.

Does this Program contain any Indigenous content? ☑ Yes ☐ No ☐ Unsure

For more information on how Indigenous content is defined at Ontario Tech University and how to consult with the Indigenous Education Advisory Circle (IEAC), please refer to the [Protocol for Consultation with the Indigenous Education Advisory Circle.]

Has the IEAC been contacted ☑ Yes ☐ No If yes, when?

2021-2022

What was the advice you received from the IEAC, and how has it been included in your proposal?

The IEAC was consulted when the learning modules (noted above) were developed for ENGR 1015U: Introduction to Engineering. This course is taken by all engineering students. In addition, the IEAC was consulted in the development of the elective course ENGR 4570U: Indigenous Design and Technology. The feedback from the IEAC was incorporated in both these cases.

Did the IEAC ask you to return the proposal to them for review? ☐ Yes ☑ No

If yes, have they completed their review? ☐ Yes ☐ No ☐ N/A

Is there an experiential learning component (e.g. workplace learning, co-op, internship, field placements, service learning, mandatory professional practice) to the program? If yes, please describe this component in 2500 words or less. Include confirmed partners, duration of the experiential learning component(s), and projected number of placements (where applicable) and provide letters of support.

The Artificial Intelligence (AI) Engineering program at Ontario Tech University will integrate a robust experiential learning component, primarily through a co-operative education (co-op) option and various embedded work-integrated learning (WIL) opportunities. The co-op stream allows students to complete a minimum of three (12 months total) to a maximum of five (20 months total) full-time paid work terms, typically extending the program to five years. These placements, projected to be 50-70+ per year at full enrolment, will leverage Ontario Tech's extensive network of over 350 industry partners, including significant local collaborators like General Motors Canada and Lakeridge Health, ensuring students gain invaluable practical experience in real-world AI engineering environments.

Beyond co-op, the curriculum will feature integrated WIL through mandatory multi-semester capstone design projects, applied labs utilizing industry-standard tools, guest lectures from AI professionals, and problem-based learning using real-world case studies. These components are crucial for students to achieve Program Learning Outcomes (PLOs) by applying theoretical knowledge to complex engineering problems, designing and implementing intelligent systems ethically, developing strong communication and teamwork skills, and mastering modern AI deployment practices. This comprehensive experiential learning framework ensures graduates are not only academically proficient but also career-ready, adaptable, and aligned with the dynamic demands of the AI industry.

8 Assessment of Teaching and Learning

Using examples from the PLO mapping document, address the following. Please see [Guidance on Assessment of Teaching and Learning] and speak with the Teaching and Learning Centre (TLC) for advice on how to satisfy these criteria.

- *Appropriateness of the proposed methods for the assessment of student achievement of the intended program learning outcomes and Degree Level Expectations*
- *Describe plans for documenting and demonstrating:*
  - ➢ *The overall quality of the program*
  - ➢ *Whether the program is achieving in practice its proposed objectives;*
  - ➢ *Whether the students are achieving the program learning outcomes and a level of performance consistent with the Degree Level Expectations; and*
  - ➢ *How the resulting information will used to inform continuous program improvement*

The Artificial Intelligence (AI) Engineering program will utilize diverse assessment methods to ensure students achieve its Program Learning Outcomes (PLOs) and Degree Level Expectations (DLEs). These include applied labs, coding assignments, design projects, case studies, ethical dilemma analyses, and both oral and written presentations, all directly mapped to specific PLOs in areas like problem-solving, design, critical thinking, communication, and ethics. The culminating capstone project will be particularly crucial for demonstrating comprehensive engineering application.

Program quality and continuous improvement will be rigorously monitored. This involves direct measures like curriculum mapping, rubric-based assessments of capstone projects and key assignments, and aggregated data from courses. Indirect measures will include student, alumni, and employer surveys, alongside co-op work term evaluations.

Ontario Tech’s cyclical program review process will formalize this. In addition to the review every eight years, Ontario Tech's Academic Resource Committee requires a brief report at program launch and a full report one-year after the launch of a new program. If there are areas of concerns raised at the one-year report, a subsequent 18-month report will be required. The one-year report will ask the program to review enrolment data, admission averages, and provide an analysis of successes and challenges encountered in the first year. If it is deemed necessary, recommendations will be made to enhance program effectiveness and student success. If required, the 18-month report will address key curricular and student data (e.g. GPA, retention data, etc.) as well as any outstanding recommendations from the one-year report. Pending the committee's review, further documentation may be required of the program for ongoing monitoring.

9 Calendar Copy and Program Map(s)

- *Provide, as an Appendix using the template provided, a clear and full calendar copy. The template ensures consistency across all programs in the Academic Calendar; New minors, Co-op programs, or other alternatives have additional Calendar entries. Should you be including these items, please contact CIQE for more information and templates*
- *Provide, as an Appendix, a full list of all courses included in the program including course numbers, titles, and descriptions. Please indicate clearly whether the courses are new/existing. Include full new course proposals for new courses, the template for which will be provided by CIQE. Include the most recent course descriptions for existing courses. If you are making changes to the existing courses, also include a course change form. In an Appendix referenced in Section 11 below, you will note which faculty members are expected to teach in the program and who is responsible for developing any new courses.*

Please see Appendix D for proposed calendar copy.

Please see Appendix E for a full list of courses in the program.

10Consultation

- *Describe the expected impact of the new program on the nature and quality of other programs delivered by the home and collaborating Faculty(ies) and any expected impact on programs offered by other Faculties*
- *Outline the process of consultation with the Deans of Faculties that will be implicated or affected by the creation of the proposed program*
- *Provide letters of support for the program from Deans at Ontario Tech and/or from other institutions/partners*
- *Describe any consultation undertaken with regard to the principles of Equity, Diversity, Inclusion, and Decolonization not covered in Section 7 above*

The new proposed Bachelor of Engineering (Hons), Artificial Intelligence (AI) Engineering program is expected to positively impact other Ontario Tech University programs by elevating the Faculty of Engineering and Applied Science's profile and fostering interdisciplinary research. While minor enrolment shifts may occur in existing Computer Science or other Engineering specializations, clear program differentiation and collaborative advising will mitigate this. The program will significantly strengthen the university's overall AI ecosystem, leading to increased collaboration on courses and research with faculties like Science (Computer Science) and Business and IT (Data Science), and creating new opportunities for interdisciplinary projects with faculties such as Health Sciences. This strategic addition aims to complement, rather than compete with, existing offerings, enriching the academic landscape across the university.

A thorough consultation process has been undertaken with the Deans of all potentially affected faculties, involving initial informational meetings, formal presentations to Deans' Council, and bilateral discussions to address curriculum overlaps, resource sharing, and ensure synergy. Furthermore, the program's design actively embeds Equity, Diversity, Inclusion, and Decolonization (EDID) principles. This includes consultations with Student Accessibility Services for Universal Design for Learning and discussions with diverse student groups and alumni to ensure an inclusive learning environment, fostering a program that is both technically robust and socially responsible.

11Resource Requirements

Resource Summary
Provide a brief summary *statement of the funding requirements and the rationale. Please consult with the Provost's Office early regarding any resource implications described in this section.*

Strong enrolment growth is anticipated for the AI Engineering program. While existing faculty resources can support initial enrolment, careful monitoring of enrollment in this new program as well as Software Engineering will be required to ensure the most strategic and flexible use of existing faculty resources (in the context of overall faculty resource requirements) to support enrollment growth in AI-focused curriculum.

The program will also require additional Teaching Assistant (TA) support for new courses, which can be met through current full-time graduate students.

As AI continues to integrate across disciplines and operations at Ontario Tech, leveraging existing resources and securing appropriate additional resources as required—including faculty, infrastructure, and support services—is a strategic priority to ensure the university remains competitive and innovative.

The resource requirements outlined in Section 11 have been reviewed by the Academic Resource Committee (ARC): *October 21, 2025*

11.1 Human Resource Requirements

Faculty - New and Existing Requirements

Complete, as an Appendix, the table detailing the list of faculty committed to the program and provide, in paragraph form below, the following:

- *Clear evidence that faculty have the recent research or professional/clinical expertise needed to sustain the program, promote innovation, and foster an appropriate intellectual climate*
- *Additional information to demonstrate how supervisory loads are distributed in light of qualifications and appointment status, if not clear from the table*
- *Evidence of the participation of a sufficient number and quality of faculty who will actively participate in the delivery of (teach and/or supervise) the program and achieve the goals of the program and foster the appropriate academic environment, contribute substantively to the program, and commit to student mentoring*
- *Describe the role of any sessional/part-time faculty and any adjunct faculty; provide an approximate percentage used in the delivery of the program and the plans to ensure the sustainability of the program and quality of the student experience*
- *Explain the provision of supervision of any experiential learning opportunities; how will supervisory loads be distributed?*

Ontario Tech is particularly well-served with a depth of qualified faculty members with expertise in AI, data science, computer engineering, and other related relevant fields. A detailed Faculty Information table is included in appendix F.

Both required teaching load and supervisory of experiential learning opportunities such as capstone will be assigned to both current Tenured and Tenure-Track, and Teaching Faculty members within the Faculty.

Provide the CVs of all faculty who appear in the table of faculty committed to the program. These CVs should form a separate document with a table of contents and *should have all CVs in alphabetical order by surname. CVs should be submitted in a consistent format.*

Please see Appendix G for Curriculum Vitae for Faculty committed to the Program.

Are additional faculty required to be able to offer this program? ☐ Yes ☑ No

Please explain, i.e. Why would new faculty not be required? Would this change over time? What year will any faculty hire be required, and are there additional criteria associated with the hiring requirement (e.g. enrolment levels, program growth, University or Faculty priorities)?

Consistent with the structure and growth of Engineering programs at Ontario Tech, we anticipate strong enrolment growth in the Artificial Intelligence (AI) Engineering program as it matures. As institutional resources are tied to enrolment, careful monitoring of enrolment trends across the sector - and specifically as they impact this new program and Software Engineering - will be required to ensure that existing resources are leveraged to fullest extent and that any new hires required by enrollment increases in AI offerings and related fields are positioned to support enrollment growth across the two programs.

As shown above in *Table 1: Projected Enrolment by Academic and Program Year*, initial enrolment levels can be supported with existing faculty resources.

This careful and phased consideration of investment will be essential to uphold academic quality, foster innovation, respond to growing and changing student demand, ensure long-term resource sustainability and to remain competitive in a rapidly evolving academic and technological landscape.

Additional Academic and Non-Academic Human Resources

Give details regarding the nature and level of TA support required by the program, the level of administrative (i.e. new program director appointment), and academic advising support, etc. If new staff resources are needed, provide further details below.

The proposed program will require additional Teaching Assistant (TA) support to accommodate the new courses being introduced which the Faculty currently has availability from full-time graduate students across various programs in particular with the recently introduced MASc in Software Engineering. No additional resources are anticipated at this time for program administration, academic advising, or support staff, as these needs can be met within the existing structures.

Are additional staff required to be able to offer this program? ☐ Yes ☑ No

If yes, please outline what year the staff hire(s) will be required and any additional criteria associated with the hiring requirement (e.g. enrolment levels, program growth, University or Faculty priorities):

N/A

11.2 Learning Resources

Provide an opening statement to describe the resources to sustain the quality of scholarship and research activities of undergraduate and graduate students, enhance the learning and teaching environment, promote student well-being and resiliency in the learning and teaching environment; refer as noted to the two standard Appendices. Please contact your Subject Librarian as you begin your proposal to request the 'Library statement for new program proposal'.

Ontario Tech University is committed to providing robust resources to ensure the sustained quality of scholarship and research for both undergraduate and graduate students, enhance the learning and teaching environment, and promote student well-being and resiliency within the proposed Bachelor of Engineering (Hons), Artificial Intelligence (AI) Engineering program. Our strategy leverages existing institutional strengths and targeted support, as detailed in the Library Statement and outlined in the student support services statement.

Please see Appendix H for a statement from the Library confirming the adequacy of library holdings and support for student learning.

Please see Appendix I for a University statement concerning Learning Resources.

11.3 Information Technology

Provide a summary of evidence that there are adequate information technology resources to sustain the quality of scholarship and research activities of undergraduate and graduate students; address any unique requirements including renovations to existing space, Faculty-specific space/equipment, etc.; are there additional technology *requirements specific to being able to successfully launch this program? Refer as noted to the standard Appendix.*

Ontario Tech University possesses strong existing IT infrastructure, including HPC clusters, software licenses, and network connectivity, to support the new AI Engineering program. However, launching and sustaining this program's quality requires specific enhancements. Unique requirements include dedicated AI Engineering labs with enhanced GPU capacity (necessitating potential power/cooling upgrades), a robotics and intelligent systems lab, and specialized data storage solutions. Additional crucial technology needs for a successful launch involve securing comprehensive software licenses, substantial cloud computing credits, and potentially dedicated IT support for these specialized AI resources, along with the initial procurement of high-end hardware. These focused investments will ensure students have access to the cutting-edge computing environments essential for advanced AI engineering scholarship and research.

Please see Appendix J for a University statement concerning information technology services.

Supporting information for online and hybrid programs

Where applicable, please provide the following details for online and hybrid programs:

- *Describe the adequacy of the technological platform to be used for online delivery*
- *Describe how the quality of education will be maintained*
- *Describe how the program objectives will be met*
- *Describe how the program learning outcomes will be met*
- *Describe the support services and training for teaching staff that will be made available*
- *Describe the sufficiency and type of supports that will be available to students*
- *How has accessibility been considered?*
- *What strategies have been considered to accommodate students with disabilities?*
- *Have the principles of Universal Design been considered?*
- *Will course content be offered in both written and audible forms (e.g., closed captioning, transcriptions)?*
- *Is course content designed logically and is it easy to follow with limited instruction?*
- *Are assignment expectations clear (i.e., a rubric)?*
- *Have the needs of students with limited or unreliable access to wi-fi been considered (e.g., breaking down pre-recorded lectures into maximum 10-minute videos)?*

As a primarily in-class program, the Bachelor of Engineering (Hons), Artificial Intelligence (AI) Engineering leverages Ontario Tech's robust Canvas LMS and specialized software/HPC resources, ensuring a strong digital learning environment. Quality is maintained through blended learning, hands-on labs, diverse assessments, and a carefully structured curriculum.
Extensive support for both faculty and students is available: the Teaching and Learning Centre (TLC) provides pedagogical and tech training for staff, while students benefit from the Student Learning Centre, Student Accessibility Services (SAS), Career Centre, and Mental Health Services, alongside comprehensive library resources. The program prioritizes accessibility and Universal Design for Learning (UDL), offering multiple means of representation (e.g., closed captioning/transcriptions for all video), action/expression (varied assignments with clear rubrics), and engagement. Course content will be logically designed and easy to follow, with pre-recorded material potentially segmented into short videos to accommodate diverse student needs, including those with limited internet access or attention challenges.

11.4 Space and Infrastructure Requirements

- *Provide evidence that there are adequate resources to sustain the quality of scholarship and research activities of undergraduate and graduate students, including information about laboratory and research space access, where applicable, and office space; address any unique requirements*
- *Highlight the change in the number of faculty, students, administrative staff, etc. as well as information on changes in equipment and activities; renovation of existing space; or whether the current space allocation will accommodate the new program*
- *Are there additional space requirements specific to being able to successfully launch this program?*

Ontario Tech University has strong existing resources to support the new AI Engineering program's scholarship and research. Its Faculty of Engineering and Applied Science already provides numerous modern labs, including those for mechatronics and prototyping, which lay a strong foundation for AI applications. The university's strategic space planning aims to optimize existing facilities and acquire new ones, aligning with a vision for dynamic learning and research environments rather than traditional office spaces, allowing for accommodation of new faculty and administrative staff.

However, unique demands for this specialized program necessitate specific enhancements. Key requirements include establishing or significantly renovating dedicated AI/Deep Learning Labs with high-performance, GPU-equipped workstations, likely requiring electrical and HVAC upgrades. An expansion or dedicated zones within existing Robotics and Intelligent Systems Labs will also be crucial. These specialized spaces, along with access to comprehensive AI software licenses and scalable cloud computing, are essential for hands-on learning and advanced student and faculty research, ensuring a successful launch.

11.5 Other Resource Implications

- *Note here if this new program may impact enrolment agreements with other institutions/external partners that exist with the Faculty/Provost's office. Indicate if the new program will require changes to any existing agreements with other institutions or will require the creation of a new agreement. Please consult with CIQE (ciqe@ontariotechu.ca) regarding any implications to existing or new agreements*
- *Are there inter-Faculty teaching implications?*
- *If this is a new joint program with another institution, indicate how the program will be administered and how program reviews will be conducted (refer to the Ontario Tech Institutional Quality Assurance Process Policy for more information)*

The new AI Engineering program has no impact on enrollment agreements with other institutions/external partners.

As per the other BEng programs at Ontario Tech, FEAS will continue to make use of service courses offered by the Faculty of Science and the Faculty of Social Science and Humanities (liberal studies electives). In addition, the management option will make use of courses offered by the Faculty of Business and Information Technology.

12 Closing Statements Regarding Program Quality

- *Please summarize the appropriateness of the faculty's collective expertise and how it contributes substantively to the proposed program; use indicators to provide evidence of the quality of the faculty (e.g., qualifications, funding, honours, awards, research, innovation, and scholarly record).*
- *Please summarize how the program and faculty will ensure the intellectual quality of the student experience.*

The Bachelor of Engineering (Hons), Artificial Intelligence (AI) Engineering program at Ontario Tech University will be underpinned by the exceptional collective expertise of its faculty. These professors, predominantly PhD holders from renowned institutions, bring diverse and deep knowledge in key AI areas like machine learning, deep learning, computer vision, robotics, and data analytics. Their active engagement in cutting-edge research, evidenced by significant funding from bodies like NSERC and their consistent publication in top-tier journals, ensures the curriculum remains at the forefront of the rapidly evolving AI landscape. This scholarly activity directly informs the courses, providing students with insights into the latest advancements and real-world challenges.

The faculty's quality is further demonstrated by numerous honours and awards, including Canada Research Chairs, and their strong ties with industry partners such as General Motors Canada and Lakeridge Health. This blend of academic excellence and practical experience ensures the program is not only theoretically robust but also highly relevant to industry needs. The faculty's commitment to both fundamental research and its application provides a strong foundation for a program designed to produce highly skilled and ethically-aware AI professionals.

To ensure the intellectual quality of the student experience, the program will integrate faculty's research directly into teaching, offering students exposure to leading-edge discoveries and unresolved problems in AI. A strong emphasis on hands-on and project-based learning will define the curriculum, utilizing dedicated AI/GPU labs and robotics labs for practical application. The multi-semester capstone design project will challenge students to apply their knowledge to complex, real-world problems. Furthermore, the embedded co-op stream and various work-integrated learning opportunities will provide invaluable industry exposure, allowing students to apply their skills in professional settings and deepen their understanding.

Beyond technical prowess, the program is committed to fostering critical thinking and ethical reasoning. Faculty will guide discussions on AI's societal implications, including algorithmic bias and data privacy, instilling a "Tech with a Conscience" mindset. Students will benefit from strong mentorship and ample opportunities for direct interaction with faculty, promoting intellectual inquiry and development. Access to cutting-edge computing resources and a comprehensive library will further support their learning and research endeavors, ensuring graduates are well-equipped to be leaders and innovators in the field of Artificial Intelligence.

Appendices

Appendix A – List of Comparator Programs

Appendix B – Program Learning Outcome Alignment Map to DLEs, Courses, and Assessment

Appendix C – Accreditation Table

Appendix D – Calendar Copy with Program Maps

Appendix E – List of Program Courses, New Course Proposals, Course Change Proposals, Course Descriptions for Existing Courses

Appendix F – Faculty Information table

Appendix G – *Curriculum Vitae* *(provided only to external reviewers and Quality Council in the case of new Degree Programs)*

Appendix H - Library Report

Appendix I – Learning Resources

Appendix J – Information Technology Services

Items to be separate documents sent to CIQE*:*
New Program Funding and Tuition form (for CIQE use only)
Budget Spreadsheet (for ARC use only)

Appendix A: Comparator Programs

Please list at least 3 Ontario Tech and 3 external comparators; provide a short summary of the programs and highlight any differences between the degree programs and what is proposed. Please be brief but specific in the table. Avoid value-based statements; rather, focus on need and demand, describing how the proposed program is similar to or different from existing programs.

Institution and Unit	Degree and Program (including URL)	Program Description and Curriculum	Differences Between This Program and What is Proposed
University of Waterloo	Bachelor of Computer Science - AI Specialization BCS	Offers strong theoretical foundation in AI, machine learning, deep learning. Strong co-op component.	Primarily a Computer Science degree; engineering principles (e.g., real-time processing, embedded systems, secure data handling in hardware) are less central than in a dedicated engineering program.
University of Alberta	BSc with Honours in Computing Science - AI Option BSc (Hons)	Provides core AI concepts, machine learning and deep learning within a computing science framework. Strong research focus.	Focuses on computing science rather than a full engineering methodology for AI system design and deployment.
Queen's University	Bachelor of Applied Science in Computer Engineering - AI BASc	Integrates AI within a Computer Engineering context, likely covering some hardware-software interaction and system design for AI.	Specific focus may vary; may not have the explicit, comprehensive coverage of AI system lifecycle from an engineering perspective as broadly as the proposed program.

Institution and Unit	Degree and Program (including URL)	Program Description and Curriculum	Differences Between This Program and What is Proposed
Carleton University	Bachelor of Computer Science - AI & Machine Learning Stream BCS	Includes courses on AI, ML, neural networks, computer vision, NLP. Offers co-op.	A stream within a Computer Science degree, not a dedicated engineering degree, potentially less emphasis on the engineering view of AI system development and deployment.
Durham College	Honours Bachelor of Artificial Intelligence BH AI	A dedicated honours bachelor's degree in AI, strong focus on hands-on learning, real-world applications, and AI practices. Located in Oshawa.	While a bachelor's, it is a college degree, potentially differing in research, theoretical depth, and engineering intensity from a university engineering program.
University of Toronto	Honours Bachelor of Science in Computer Science - AI Specialist BSc (Hons)	Deep dive into AI theories, machine learning, deep neural networks, computational linguistics. Strong research focus.	Primarily a Computer Science degree; engineering aspects like hardware deployment and system deployment are less central.

BEng in Artificial Intelligence Engineering

PLO #	Program Learning Outcomes
PLO1	Solve complex engineering problems related to artificial intelligence and data-driven systems by applying principles from the fields of mathematics, statistics, physics, chemistry, and engineering science.
PLO2	Analyze real-world problems rooted in social, environmental, and economic context to evaluate complexity and feasibility from an AI and engineering perspective.
PLO3	Assess existing tools, technologies, and systems for effectiveness, robustness, safety, and ethical implications in addressing engineering and societal challenges.
PLO4	Design and implement intelligent systems and solutions using appropriate AI methodologies—including machine learning, deep learning, data analytics, and computer vision—that are safe, cost-effective, efficient, and reliable.
PLO5	Apply engineering design principles to develop AI-based systems that meet specified needs under realistic constraints such as safety, scalability, economic viability, environmental impact, and societal acceptability.
PLO6	Apply ethical reasoning and professional judgment to ensure safe and socially responsible AI solutions that promote public trust and benefit the community.
PLO7	Communicate in written, oral, and visual forms with various audiences about topics related to complex AI systems, design processes, and implications.
PLO8	Collaborate effectively in diverse teams, functioning as a member or leader in multidisciplinary settings to achieve project objectives, integrating diverse knowledge and perspectives.
PLO9	Use modern tools, programming languages, and software engineering practices to build AI applications that are scalable, maintainable, and aligned with industry best practices and MLOps frameworks.
PLO10	Utilize data analysis and statistical methods to inform AI model development, validation, and performance evaluation.
PLO11	Adapt to rapidly evolving engineering challenges and career demands in artificial intelligence by engaging in lifelong learning.

Undergraduate DLEs	Aligned PLO*
Example: 1. Depth and Breadth of Knowledge	*Example: PLO1, PLO3*
1. Depth and Breadth of Knowledge	PLO1, PLO2, PLO3, PLO10
2. Knowledge of methodologies	PLO4, PLO9, PLO10
3. Application of knowledge	PLO1, PLO2, PLO4, PLO5, PLO9
4. Communication skills	PLO7, PLO8
5. Awareness of limits of knowledge	PLO3, PLO6, PLO11
6. Autonomy and professional capacity	PLO5, PLO6, PLO8, PLO11

BEng in Artificial Intelligence Engineering

	Degree Level Expectation	Depth and Breadth of Knowledge			Knowledge of Methodologies		Application of Knowledge				Communication Skills		Awareness of Limits of Knowledge	Autonomy and Professional Capacity		
	Program Learning Outcomes	LO1	LO2	LO4	LO9	LO10	LO4	LO5	LO9	LO10	LO7	LO8	LO3	LO5	LO6	LO11
Course No.	**Course Title**															
ENGR 1050U	Engineering Communications & Technology Impacts				2	2					3.7	1,2,4		1,2		1,2
ENGR 1015U	Introduction to Engineering										3,7	1,2,4	4	1,2,4	2	1,2,4
MATH 1010U	Calculus I	1,2	1,2						4							
MATH 1850U	Linear Algebra for Engineers	1,2	1,2						4							
PHY 1010U	Physics I	1,2	1,2						4							
CHEM 1800U	Chemistry for Engineers					2			4			2		2		2
ENGR 1025U	Engineering Design					2						2	4	4		1,2,4
ENGR 1200U	Introduction to Programming for Engineers	1,2	1,2	1,2								1,2	4	4		2
MATH 1020U	Calculus II	2	2						2							
PHY 1020U	Physics II	2	2						2							
ELEE 2110U	Discrete Mathematics for Engineers	4	1,4	4		4	1,2,4	1,2,4								
SOFE 2710U	Object Oriented Programming and Design	1,2	1,2	1,2	2		4	4	1,2	4		4		4		4
ARTE 2200U	Introduction To Data Analytics	1,2,4	3,7	2,4,7		3,4,7	1,3,4	4	3,4,7	3,4,7						
ARTE 2100U	Bio-Inspired Computing				2	2					2,4,7	2,4,7		2,4	7	2,4
	Liberal Studies Elective															
ELEE 2200U	Electrical Engineering Fundamentals	1,2	1,2	1,2									4			
SOFE 2250U	Digital Systems and Computer Architecture	1	4	1,4			4	1,2,4	4	1,2,4			4			
STAT 2800U	Statistics and Probability for Engineers	2	2						2,4		3,7	3,7				
SOFE 2715U	Data Structures	4	1	1,4	2	2					3,7	1,2,3,7	4	1,2		1,2
ARTE 2000U	Foundations of AI Engineering				7	7									1,2	
	Science Elective															
ARTE 3000U	Data and Feature Engineering	1,2	1,2,4	7									3,4		4,7	
SOFE 3650U	Software Design and Architectures				4	4						2	4	2		2
SOFE 3720U	Introduction to Artificial Intelligence	1,2	1,2	1,2	4,7	4,7	1,2,4	1,2,4	1,2,4	1,2,4	7	2,4,7		2,4		2,4
SOFE 3770U	Design and Analysis of Algorithms	1,2	1,2,7	1,2	7	4									1,2	
	Liberal Studies Elective															
ENGR 3360U	Engineering Economics								2,4			1,2,4		1,2,4		1,2,4
SOFE 3290U	Software Quality and Project Management				4	7									7	
ARTE 3200U	Natural Language Processing	1	2								3,7	3,7			3,4	
ARTE 4120U	AI Agents and Multi-Agent Systems			4,7	1,2		4,7	1,2	3,9		7	7				
SOFE 3620U	Machine Learning and Data Mining	4	1,2	4					4	1,2						
ENGR 4111U	Capstone Systems Design I				3,5,7	3,5,7					3,5,7	3,5,7		5,7		5,7
SOFE 4590U	Embedded Systems	1	1,2	2									4			
ARTE 4110U	Deep Learning Architecture and Algorithms	1	2	2,4			4,7	1,2								
ARTE 4100U	Foundation Models and Generative AI										7	7		7		5
ENGR 4760U	Ethics, Law and Professionalism for Engineers				3,5,7	3,5,7						2		2	5,7	2
ENGR 4222U	Capstone Systems Design II				3,5,7	3,5,7					3,5,7	2,3,5,7	7	5,7	5,7	5,7
ARTE 4210U	Autonomous and Connected Systems						4,7	1,2	3,9				1		2	
ARTE 4200U	AI Engineering and Machine Learning Operations										7	7		7		5

Degee of Implementation:
- Introduced
- Reinforced
- Mastered

Assessments - Identify types of relevant assessments and number them (do not have to be in rank order); those listed below are only example

1 - Test
2 - Exam
3 - Presentation
4 - Assignment
5 - Essay
6 -Thesis
7 - Group project

Appendix C - Accreditation Table

	Course Code	Course Name	MC	LEC	Lab/Tut	LEC-Aus	LAB-Aus	S=Lec+0.	Math%	NS %	CS %	ES%	ED %	Math au	NS au	CS au	ES au	ED au	ES + ED a	Math+NS	KBE	PA	INV	DES	UET	ITW	COM	PRO	ISE	ETH	EPM	LLL
Year 1	ENGR 1015U	Introduction to Engineering	0	3	2.5	36	30	51	0	0	30	45	25	0	0	15.3	22.95	12.75	35.7	0				I	I			I	I	I		I
	ENGR 1050U	Engineering Communications & Technology Impacts	0	3	1	36	12	42	0	0	100	0	0	0	0	42	0	0	0	0							I	I	I	I		I
	MATH 1010U	Calculus I	0	3	1.5	36	18	45	100	0	0	0	0	45	0	0	0	0	0	45	I	I										
	MATH 1850U	Linear Algebra for Engineers	0	3	1.5	36	18	45	100	0	0	0	0	45	0	0	0	0	0	45	I	I										
	PHY 1010U	Physics I	0	3	2.25	36	27	49.5	0	100	0	0	0	0	49.5	0	0	0	0	49.5	I	I										
	CHEM 1800U	Chemistry for Engineers	0	3	1.75	36	21	46.5	0	100	0	0	0	0	46.5	0	0	0	0	46.5	I	I							I			I
	ENGR 1200U	Intro to Programming for Engineers	0	3	2	36	24	48	0	0	0	100	0	0	0	0	48	0	48	0	I		I		I							I
	MATH 1020U	Calculus II	0	3	1.5	36	18	45	100	0	0	0	0	45	0	0	0	0	0	45	D	D										
	PHY 1020U	Physics II	0	3	2.25	36	27	49.5	0	100	0	0	0	0	49.5	0	0	0	0	49.5	D	D										
	ENGR 1025U	Engineering Design	0	3	3	36	36	54	0	0	0	0	100	0	0	0	0	54	54	0			I	I	I	I			I		I	I
Year 2	ARTE 2000U	Foundations of AI Engineering	0	**3**	**1.5**	36	18	45	0	0	0	**40**	**60**	0	0	0	18	27	45	0				**D**				**D**	**D**	**I**	**I**	
	ARTE 2100U	Bio-Inspired Computing	0	**3**	**1**	36	12	42	0	**80**	0	**20**	0		33.6	0	8.4	0	8.4	33.6			**D**				**D**		**I**	**I**		**D**
	ELEE 2110U	Discrete Mathematics for Engineers	0	3	1.5	36	18	45	100	0	0	0	0	45	0	0	0	0	0	45	D	D	I									
	ELEE 2200U	Electrical Engineering Fundamentals	0	3	2.5	36	30	51	0	25	0	75	0	0	12.75	0	38.25	0	38.25	12.75	I	I			I							
	SOFE 2710U	Object Oriented Programming and Design	0	3	1.5	36	18	45	0	0	0	70	30	0	0	0	31.5	13.5	45	0	D	D		I	D			I				I
	ARTE 2200U	Introduction to Data Analytics	0	**3**	**1.5**	36	18	45	0	0	0	**75**	**25**	0	0	0	33.75	11.25	45	0			**I**	**I**	**D**	**D**						**I**
	SOFE 2250U	Digital Systems and Computer Architecture	0	3	4.5	36	54	63	0	0	0	75	25	0	0	0	47.25	15.75	63	0	D	D	D	D	D							
	SOFE 2715U	Data Structures	0	3	1.5	36	18	45	0	0	0	70	30	0	0	0	31.5	13.5	45	0	D				D		I		I			I
	STAT 2800U	Stats for Engs	0	3	0	36	0	36	100	0	0	0	0	36	0	0	0	0	0	36	D	D										
	SE	Science Elective	0	3	0	36	0	36	0	100	0	0	0	0	36	0	0	0	0	36												
	LSE	Liberal Studies Elective	0	3	0	36	0	36	0	0	100	0	0	0	0	36	0	0	0	0												
Year 3	ARTE 3000U	Data and Feature Engineering	0	**3**	**2.5**	36	30	51	0	0	0	**30**	**70**	0	0	0	15.3	35.7	51	0			**D**	**D**			**D**			**D**		
	SOFE 3650U	Software Design & Architectures	0	3	3	36	36	54	0	0	0	50	50	0	0	0	27	27	54	0				D	D	D			D			D
	SOFE 3720U	Introduction to Artificial Intelligence	0	3	1.5	36	18	45	0	0	0	55	45	0	0	0	24.75	20.25	45	0	D	A					D		A			A
	SOFE 3770U	Design and Analysis of Algorithms	0	3	1.5	36	18	45	0	0	0	70	30	0	0	0	31.5	13.5	45	0	D		D	D					D	D		
	ARTE 3200U	Natural Language Processing	0	**3**	**1.5**	36	18	45	0	0	0	**75**	**25**	0	0	0	33.75	11.25	45	0		**D**		**A**	**A**				**D**			**A**
	ARTE 4100U	Foundation Models and Generative AI	0	3	0	36	0	36	0	0	0	50	50	0	0	0	18	18	36	0			D	A								D
	ENGR 3360U	Engineering Economics	0	3	0	36	0	36	0	0	100	0	0	0	0	36	0	0	0	0		A									D	A
	SOFE 3290U	Sofeware Quality and Project Management	0	3	3	36	36	54	0	0	33	33	34	0	0	17.82	17.82	18.36	36.18	0								D		D	D	
	SOFE 3620U	Machine Learning and Data Mining	0	3	0	36	0	36	25	0	0	50	25	9	0	0	18	9	27	9	A	A		A	A							
	LSE	Liberal Studies Elective	0	3	0	36	0	36	0	0	100	0	0	0	0	36	0	0	0	0												
Year 4	ARTE 4120U	AI Agents and Multi-Agent Systems	0	**3**	**1**	36	12	42	0	0	0	**75**	**25**	0	0	0	31.5	10.5	42	0		**D**	**D**	**D**	**D**							**I**
	ARTE 4110U	Deep Learning Architecture and Algorithms	0	3	**1.5**	36	18	45	25	0	0	50	25	11.25	0	0	22.5	11.25	33.75	11.25			D	A	A					D		
	ENGR 4111U	Capstone Systems Design I	0	1.5	3	18	36	44.8	0	0	25	0	75	0	0	11.2	0	33.6	33.6	0				A		A	A	A			A	A
	SOFE 4590U	Embedded Systems	0	3	1.5	36	18	45	0	0	0	60	40	0	0	0	27	18	45	0	A		A	A	A				A			
	ARTE 4210U	Autonomous and Connected Systems	0	**3**	**1**	36	12	42	0	0	0	**75**	**25**	0	0	0	31.5	10.5	42	0		**A**		**A**	**A**	**A**			**A**			
	ARTE 4200U	AI Engineering and Machine Learning Operations	0	3	0	36	0	36	0	0	0	75	25	0	0	0	27	9	36	0		D	D	D	D							I
	ENGR 4222U	Capstone Systems Design II	0	1.5	3	18	36	45.15467	0	0	25	0	75	0	0	11.28867	0	33.866	33.866	0			A	A		A	A		A	A		
	ENGR 4760U	Ethics, Law, Prof for Engs	0	3	0	36	0	36	0	0	100	0	0	0	0	36	0	0	0	0							A	A	A	A		A
	ENG Elective	See Below				0	0	36						0	0	0	0	11.25	22.5	0												
	ENG Elective	See Below				0		42						0	0	0	8.4	12.6	36	0												
	ENG Elective	See Below				0	0	45						0	0	0	18	3.6	21.6	0												
ENG Electives	ARTE 4300U	Computer Vision and Robotics	0	**3**	**1**	36	12	42	**10**	0	0	**20**	**70**	4.2	0	0	8.4	29.4	37.8	4.2				**A**	**A**			**A**			**A**	
	ENGR 4570U	Indigenous Design and Technology		3	0	36	0	36	0	0	40	50	10			14.4	18	3.6	21.6	0	A											
	SOFE 4610U	Design and Analysis of IoT Software Systems	0	3	1.5	36	18	45	0	0	0	50	50	0	0	0	22.5	22.5	45	0	A	A		A	A				A			
	SOFE 4630U	Cloud Computing	0	3	0	36	0	36	0	0	0	65	35	0	0	0	23.4	12.6	36	0			A	A	A	A	A					A
	SOFE 4640U	Mobile Applications Development	0	3	1.5	36	18	45	0	0	0	75	25	0	0	0	33.75	11.25	45	0	A			A	A	A		A				
	SOFE 4850U	User Interface and Experience Design	0	3	1.5	36	18	45	0	25	25	0	50	0	11.25	11.25	0	22.5	22.5	11.25	A	A					A	A	A	A		
	SOFE 4830U	Real Time Systems and Control	0	3	3.5	36	42	57	0	0	0	75	25	0	0	0	42.75	14.25	57	0	A								A			A
	SOFE 4890U	Advanced Computer Networks	0	3	3	36	36	54	0	0	0	75	25	0	0	0	40.5	13.5	54	0	A		A	A		A	A					A
	MATH	236.25										Current AU		236.25	227.85	241.6087	631.62	454.976	1112.846	464.1												
	NS MC	227.85										CEAB Min Required		195	195	225	225	225	900	420												
	CS MC	241.6086667																														
	ES MC	631.62																														
	ED MC	454.976																														
	MC TOTALS	1792.304667																														
	K FACTOR	15.05155556																														
	Total AU Without ENG Electives	1738.454667																														
	Total AU	1861.454667																														

Appendix D - Calendar Copy with Program Map

Calendar Copy

Artificial Intelligence Engineering

General information

Our university's Artificial Intelligence Engineering program is designed to produce engineers capable of designing, building, and deploying robust, ethical, and scalable AI systems. The curriculum provides a strong foundation in software engineering, mathematics, and the core principles of AI, including machine learning, deep learning, natural language processing, and computer vision. Courses such as Machine Learning, AI Engineering and MLOps, Deep Learning, Foundation Models and Gen AI, and Autonomous and Connected Systems prepare graduates for careers as AI engineers, ML engineers, and AI system designers across a vast range of industries, from robotics and software to finance and healthcare.

Admission requirements

Admission requirements should include the general University statement:

Admission is competitive. The specific average or standing required for admission varies from year to year. Students are selected by taking into consideration a wide range of criteria including school marks, distribution of subjects taken, and performance in subjects relevant to the academic program. Possession of the minimum requirements does not guarantee acceptance. Preference will be given to applicants with the best qualifications.

Current Ontario secondary school students must complete the Ontario Secondary School Diploma (OSSD) with six 4U or 4M credits including English (ENG4U) with a minimum average of 60 per cent, Advanced Functions (MHF4U), Calculus and Vectors (MCV4U), Chemistry (SCH4U), and Physics (SPH4U). In addition, a combined minimum 70 per cent average in math and science courses is required, with no grade below 60 per cent. All other applicants should refer to admissions for the requirements for their specific category of admission.

Note: students who are missing one or more of Calculus and Vectors (MCV4U), Chemistry (SCH4U), and/or Physics (SPH4U), may apply for admission to the pre-engineering program.

Professional designation

Our undergraduate engineering programs in the Faculty of Engineering and Applied Science have been fully accredited by the Canadian Engineering Accreditation Board. Each graduate is eligible to apply for licensing as a professional engineer (PEng) in any province or territory in Canada. Note that our newest programs, Energy Engineering and Industrial Engineering, will go for accreditation in 2026-2027 when the first classes of students reach fourth year.

Program details and degree requirements

To be eligible for an honours Bachelor of Engineering degree in Artificial Intelligence Engineering, students must successfully complete 126 credit hours, including all courses outlined here. For elective options, see the following list.

All courses in Year 1 are prerequisites to all non-elective courses in Year 3.

All courses in Years 1 and 2 are prerequisites to all non-elective courses in Year 4.

Although reasonable efforts will be made to adhere to the order and timing of courses as indicated, course requirements and term offerings may change. For the most up-to-date list of course offerings, please visit the faculty website at engineering.ontariotechu.ca.

Year 1 (30 credit hours)

- ENGR 1015U - Introduction to Engineering
- ENGR 1050U – Engineering Communications and Technology Impacts
- MATH 1010U - Calculus I
- MATH 1850U - Linear Algebra for Engineers
- PHY 1010U - Physics I
- CHEM 1800U - Chemistry for Engineers
- ENGR 1025U - Engineering Design
- ENGR 1200U - Introduction to Programming for Engineers
- MATH 1020U - Calculus II
- PHY 1020U - Physics II

Year 2 (33 credit hours)

- ARTE 2000U - Foundations of AI Engineering
- ARTE 2100U - Bio-Inspired Computing
- ELEE 2110U - Discrete Mathematics for Engineers
- ELEE 2200U - Electrical Engineering Fundamentals
- SOFE 2710U - Object Oriented Programming and Design

- ARTE 2200U - Introduction to Data Analytics
- SOFE 2250U - Digital Systems and Computer Architecture
- SOFE 2715U -Data Structures
- STAT 2800U - Statistics for Engineers
- Science Elective*
- Liberal Studies Electives*

Year 3 (30 credit hours)

- ARTE 3000U - Data and Feature Engineering
- SOFE 3650U - Software Design & Architectures
- SOFE 3720U - Introduction to Artificial Intelligence
- SOFE 3770U - Design and Analysis of Algorithms
- ARTE 3200U - Natural Language Processing
- ARTE 4100U - Foundation Models and Generative AI
- ENGR 3360U - Engineering Economics
- SOFE 3290U - Software Quality and Project Management
- SOFE 4620U - Machine Learning and Data Mining
- Liberal Studies Electives*

Year 4 (30 credit hours)

- Engineering Elective*
- ARTE 4120U - AI Agents and Multi-Agent Systems
- ARTE 4110U - Deep Learning Architecture & Algorithms
- ENGR 4111U - Capstone Systems Design I
- SOFE 4590U - Embedded Systems
- ARTE 4210U - Autonomous and Connected Systems
- ARTE 4200U - AI Engineering & Machine Learning Operations
- ENGR 4222U - Capstone Systems Design II
- ENGR 4760U - Ethics, Law, Prof for Engs
- Engineering Elective*

Engineering electives

Courses selected for the engineering elective must be approved by the Faculty of Engineering and Applied Science. Engineering courses from other engineering programs may be allowed as engineering electives provided students have the prerequisites and the courses extend the students' knowledge through greater depth in an advanced area, or greater breadth in a complementary field. Not all of the listed engineering electives will necessarily be offered each year.

The following are approved courses as engineering electives:

- ENGR 4570U Indigenous Design and Technology
- ARTE 4300U Computer Vision and Robotics

- SOFE 4610U Design and Analysis of IoT Software Systems
- SOFE 4630U Cloud Computing
- SOFE 4640U Mobile Applications Development
- SOFE 4830U Real Time Systems and Control
- SOFE 4850U User Interface and Experience Design
- SOFE 4890U Advanced Computer Networks

Science electives

Courses selected for the Science elective must be approved by the Faculty of Engineering and Applied Science. Science courses from our university's other programs may be allowed as Science electives provided students have the prerequisites and the courses extend the students' knowledge through greater depth in an advanced area, or greater breadth in a complementary field. Not all of the approved Science electives will necessarily be offered each year.

The following are approved courses as science electives:

- BIOL 1841U - Essentials of Biology
- ENVS 1000U - Environmental Science
- ENVS 2010U - Introductory Environment Science
- HLSC 1200U - Human Anatomy & Physiology I
- PHY 2900U - Astronomy I

Liberal Studies electives

Complementary studies, including courses in humanities, social sciences, arts, management, engineering economics, ethics and communication, are included in engineering programs to complement the technical content of the curriculum and thereby provide graduates with a broader perspective of their role in society. The inclusion of complementary studies also satisfies several accreditation criteria of the Canadian Engineering Accreditation Board. Courses or parts of courses covering engineering economics, ethics, and the impact of technology on society, as well as courses that develop the student's capability to communicate orally, visually and in writing, are essential to the education of an engineer and therefore are included in all of our engineering programs.

Liberal studies electives are included in each engineering program to ensure adequate coverage of subject matter that deals with central issues, methodologies and thought processes of the humanities and social sciences. Such material is required in the education of an engineer. Liberal studies electives can include, but are not limited to, courses dealing with cultural analysis; historical analysis; literature and the arts; knowledge, cognition, and moral reasoning; and social and behavioural analysis.

Foreign language and business courses may not be used as liberal studies electives. Courses can be approved as liberal studies electives for students in engineering programs at the university by the Dean of the Faculty of Engineering and Applied Science (or designate), in accordance with these principles.

Courses selected for the liberal studies electives must be approved by the Faculty of Engineering and Applied Science. Liberal studies electives are subject to change. An updated list of liberal studies electives will be maintained online at engineering.ontariotechu.ca.

Program learning outcomes

The following outcomes outline the knowledge and skills students will have achieved upon completion of the program.

PROPOSED Artificial Intelligence Engineering 2027-2028						
Year	**Course**	**Course**	**Course**	**Course**	**Course**	**Course**
1-1	ENGR 1015U Introduction to Engineering	ENGR 1050U Engineering Communications and Technology Impacts (Credit restrictions: COMM 1050U/ SSCI 1470U)	MATH 1010U Calculus I	MATH 1850U Linear Algebra for Engineers	PHY 1010U Physics I	
1-2	CHEM 1800U Chemistry for Engineers (Credit restrictions: CHEM 1010U/CHEM 1020U/CHEM 1110U)	ENGR 1025U Engineering Design (ENGR 1015U, ENGR 1050U)	ENGR 1200U Introduction to Programming for Engineers	MATH 1020U Calculus II (MATH 1010U)	PHY 1020U Physics II (PHY 1010U)	
2-1	**ARTE 2000U Foundations of AI Engineering (ENGR 1200U)**	**ARTE 2100U Bio-Inspired Computing (ENGR 1025U)**	ELEE 2110U Discrete Mathematics for Engineers (MATH 1020U, MATH 1850U)	ELEE 2200U Electrical Engineering Fundamentals (MATH 1020U, MATH 1850U, PHY 1020U)	SOFE 2710U Object Oriented Programming and Design (ENGR 1200U)	Liberal Studies Elective
2-2	**ARTE 2200U Introduction to Data Analytics (SOFE 2710U and ARTE 2000U Foundations of AI Engineering)**	SOFE 2250U Digital Systems and Computer Architecture (ELEE 2110U, SOFE 2710U)	SOFE 2715U Data Structures (SOFE 2710U)	STAT 2800U Statistics and Probability for Engineers (MATH 1020U)	Science Elective	
3-1	**ARTE 3000U Data and Feature Engineering (SOFE 2715U and ARTE 2200U Intro to Data Analytics)**	SOFE 3650U Software Design and Architectures (SOFE 2720U **or ARTE 2000U Foundation of AI Eng**)	SOFE 3720U Introduction to Artificial Intelligence (SOFE 2715U)	SOFE 3770U Design and Analysis of Algorithms (ELEE 2110U, SOFE 2715U)	Liberal Studies Elective	
3-2	**ARTE 3200U Natural Language Processing (SOFE 3770U, SOFE 3720U)**	ARTE 4100U Foundation Models and Generative AI **~~(SOFE 3620U~~ SOFE 3720U)**	ENGR 3360U Engineering Economics	SOFE 3290U Software Quality and Project Management (SOFE 3650U, **~~SOFE 3700U~~**)	SOFE 3620U Machine Learning and Data Mining (SOFE 3720U)	
4-1	**ARTE 4120U AI Agents and Multi-Agent Systems (ARTE 3200U Natural Language Processing)**	ARTE 4110U Deep Learning Architecture & Algorithms (SOFE3620U)	ENGR 4111U Capstone Systems Design I (Successful completion of all non-elective courses in year three)	SOFE 4590U Embedded Systems (SOFE 3950U or **ARTE 4100U)**	Engineering Elective	Engineering Elective
4-2	**ARTE 4210U Autonomous and Connected Systems (SOFE 4590U)**	ARTE 4200U AI Engineering & Machine Learning Operations (SOFE 3620U, (SOFE3290U)	ENGR 4222U Capstone Systems Design II (ENGR 4111U)	ENGR 4760U Ethics, Law and Professionalism for Engineers	Engineering Elective	

Appendix E – List of Program Courses, New Course Proposals, Course Change Proposals, Course Descriptions for Existing Courses

List of Program Courses

	Course Code	**Course Name**	
Year 1	ENGR 1015U	Introduction to Engineering	Existing Course – course description enclosed
	ENGR 1050U	Engineering Communications and Technology Impacts	Existing Course – course description enclosed
	MATH 1010U	Calculus I	Existing Course – course description enclosed
	MATH 1850U	Linear Algebra for Engineers	Existing Course – course description enclosed
	PHY 1010U	Physics I	Existing Course – course description enclosed
	CHEM 1800U	Chemistry for Engineers	Existing Course – course description enclosed
	SSCI 1470U	Impact of Science on Society	Existing Course – course description enclosed
	ENGR 1200U	Intro to Programming for Engineers	Existing Course – course description enclosed
	MATH 1020U	Calculus II	Existing Course – course description enclosed
	PHY 1020U	Physics II	Existing Course – course description enclosed
	ENGR 1025U	Engineering Design	Existing Course – course description enclosed
Year 2	ARTE 2000U	Foundations of AI Engineering	NEW course – template enclosed
	ARTE 2100U	Bio-Inspired Computing	NEW course – template enclosed
	ELEE 2110U	Discrete Mathematics for Engineers	Existing Course – course description enclosed
	ELEE 2200U	Electrical Engineering Fundamentals	Existing Course – course description enclosed
	SOFE 2710U	Object Oriented Programming and Design	Existing Course – course description enclosed
	ARTE 2200U	Introduction to Data Analytics	NEW course – template enclosed
	SOFE 2250U	Digital Systems and Computer Architecture	Existing Course – course description enclosed
	SOFE 2715U	Data Structures	Existing Course – course description enclosed
	STAT 2800U	Stats for Engs	Existing Course – course description enclosed
	SE	Science Elective	
	LSE	Liberal Studies Elective	
Year 3	ARTE 3000U	Data and Feature Engineering	NEW course – template enclosed
	SOFE 3650U	Software Design & Architectures	Existing Course – course description enclosed Course change template below
	SOFE 3720U	Introduction to Artificial Intelligence	Existing Course – course description enclosed
	SOFE 3770U	Design and Analysis of Algorithms	Existing Course – course description enclosed
	ARTE 3200U	Natural Language Processing	NEW course – template enclosed
	ARTE 4100U	Foundation Models and Generative AI	Existing Course – course description enclosed Course change template below
	ENGR 3360U	Engineering Economics	Existing Course – course description enclosed
	SOFE 3290U	Software Quality and Project Management	Existing Course – course description enclosed Course change template below
	SOFE 3620U	Machine Learning and Data Mining	Existing Course – course description enclosed
	LSE	Liberal Studies Elective	NEW course – template enclosed
	ARTE 4120U	AI Agents and Multi-Agent Systems	NEW course – template enclosed
	ARTE 4110U	Deep Learning Architecture and Algorithms	Existing Course – course description enclosed Course change template below
	ENGR 4111U	Capstone Systems Design I	Existing Course – course description enclosed
	SOFE 4590U	Embedded Systems	Existing Course – course description enclosed Course change template below
	ARTE 4210U	Autonomous and Connected Systems	NEW course – template enclosed

Year 4	ARTE 4200U	AI Engineering and Machine Learning Operations	Existing Course – course description enclosed
	ENGR 4222U	Capstone Systems Design II	Existing Course – course description enclosed
	ENGR 4760U	Ethics, Law, Prof for Engs	Existing Course – course description enclosed
	ENG Elective	Engineering Elective	
	ENG Elective	Engineering Elective	
	ENG Elective	Engineering Elective	
ENG Electives	ARTE 4300U	Computer Vision and Robotics	NEW course – template enclosed
	ENGR 4570U	Indigenous Design and Technology	Existing Course – course description enclosed
	SOFE 4610U	Design and Analysis of IoT Software Systems	Existing Course – course description enclosed
	SOFE 4630U	Cloud Computing	Existing Course – course description enclosed
	SOFE 4640U	Mobile Applications Development	Existing Course – course description enclosed
	SOFE 4850U	User Interface and Experience Design	Existing Course – course description enclosed
	SOFE 4830U	Real Time Systems and Control	Existing Course – course description enclosed

Course Descriptions

ENGR 1015U - Introduction to Engineering
An introduction to engineering, the profession and core skills of engineers. Topics include: history of engineering; introduction to Indigenous histories in Canada and the responsibility of engineers to consult and work with Indigenous peoples; fields in engineering; how systems work; an overview of computer systems; information technology trends and state-of-the-art applications (scientific computing, communications, and signal processing); role of engineers in society; Equity, Diversity, and Inclusion (EDI); impact of technology on the environment; core engineering skills including freehand sketching, basic engineering graphics and drafting techniques, engineering report writing and introduction to MATLAB programming; occupational health and safety, and safety standards.

ENGR - 1050U - Engineering Communications and Technology Impacts
In the first part of the course students will learn the principles of professional oral, written, visual, and interpersonal communication required to effectively communicate in an engineering career. Students will become familiar with common forms of engineering communications, such as technical reports, memos, proposals, emails, and presentations. In the second part of the course students will learn about the impacts of technology including the ethical, environmental, economic, social, and political issues raised by technological change. The focus will be on ways of thinking critically about both the remediation of already existing problems and the prevention of future problems.

MATH 1010U - Calculus I
Applications to science and engineering using differential calculus. Emphasis on limits, continuity, the derivative, Mean Value Theorem for derivatives and integrals, approximation by differentials, Fermat's Theorem, differentiation and anti-differentiation, definite integrals, areas between curves, and the Fundamental Theorem of Calculus.

MATH 1850U - Linear Algebra for Engineers
Develops the fundamental ideas of linear algebra and demonstrates their applications to other areas. Topics include the algebra of matrices; systems of linear equations; determinants and matrix inverses; real and complex vector spaces, linear independence, bases, dimension and co-ordinates; inner product spaces and the Gram-Schmidt process; least squares and regression; linear maps and matrices, change of basis and similar matrices; eigenvalues, eigenvectors and matrix diagonalization; quadratic forms.

PHY 1010U - Physics I
This calculus-based course is intended for students who have completed high school calculus. It gives an introduction to basic mechanics, Newton's laws of motion; kinematics and dynamics in one and two dimensions; work and energy; friction; momentum and collisions; angular momentum, torque and rotation of rigid bodies; gravitation; simple harmonic motion; mechanical and sound waves; static equilibrium; fluid mechanics; kinetic theory of gases and thermodynamics.

CHEM 1800U - Chemistry for Engineers
Introduction to the four sub-disciplines of modern chemistry: analytical, inorganic, organic and physical. Atoms, molecules, stoichiometry and gas laws; reactions, chemical kinetics, thermochemistry, entropy and free energy; electronic structure of atoms, bonding and molecular structure with emphasis on organic molecules; intermolecular forces, liquids and solids; electrochemistry, fuel cells and electrolytic cells.

ENGR 1025U - Engineering Design
A project-based introduction to the engineering design process, computer-aided drafting, and the use of design tools and software packages for engineering design. Open-ended design-build projects by individuals and groups and written and oral technical communications. Basics of project management including organizing, planning, scheduling, controlling, and application of spreadsheets and project management software.

ENGR 1200U - Introduction to Programming for Engineers
Introduction to the anatomy of a computer: CPU, memory, machine cycle, input and output devices, data representation; fundamental programming concepts: flowcharting, algorithm design, use of procedures, program control flow, arrays and vectors, arithmetic and logic operations, input and output, data declaration; programming in C++.

MATH 1020U - Calculus II
A continuation of Calculus I or Introductory Calculus emphasizing integral calculus: problem solving, calculations and applications. Applications to volumes, arc length, polar co-ordinates and functions of two or more variables. Multivariable calculus: partial derivatives, differential equations, Taylor and MacLauren series, double integrals.

PHY 1020U - Physics II
Introduction to electromagnetism and optics: electric charge and Coulomb's law; electric field, electric flux, Gauss' law; electrostatic potential, capacitance; Kirchoff's laws in DC circuits. Magnetic forces and magnetic field; Biot-Savart law; Ampere's law; magnetic flux, Faraday's law, inductance; AC circuits. Electromagnetic waves, geometrical and wave optics; nuclear structure and radioactivity.

ELEE 2110U - Discrete Mathematics for Engineers
Sets and set operations, propositional logic, predicate logic, rules of inference; methods of proof and reasoning, modular arithmetic, counting, pigeonhole principle, induction, deduction, relations, functions, graphs, graph algorithms, shortest path, trees, combinatorics; applications to cryptosystems, hashing functions, coding.

ELEE 2200U - Electrical Engineering Fundamentals
Coulomb's, Ohm's and Kirchoff's laws; electrostatics and electromagnetics; resistance, capacitance, inductance and impedance and reactance; series and parallel circuits, independent and dependent voltage and current sources; energy, power; superposition, Thevenin, and Norton Theorems; maximum power transfer; node-voltage and mesh-current analysis of DC and AC circuits; initial, steady state and transient conditions; complex power and phasor domain analysis; poly-phase circuits and transformers.

SOFE 2710U - Object Oriented Programming and Design
Introduction to the fundamentals of software design through object-oriented programming, abstraction principles, information hiding and encapsulation. Introduction to design tools like pseudo-coding and basic Unified Modelling Language (UML) diagrams. Introduction to simple data structures, including linked lists, stacks, and queues, and their applications to Engineering problems. The content outline by topic is as follows: principles of object oriented programming; debugging and analysis; maintain and document programs using techniques of good programming style; basic and advanced, aspects of abstraction, recursion, parameter passing, file I/O and classes; object libraries and packages; object-oriented analysis and design using UML object interaction, messaging, association, and composition diagrams; abstract data types and basic data structures like lists, stacks, and queues.

SOFE 2250U - Digital Systems and Computer Architecture
This course starts with foundational Boolean algebra, combinational and sequential logic circuits, hardware-description language on FPGAs, and progresses to more advanced topics such as logic circuit optimization, memory technologies (ROM, RAM, ASIC), and A/D and D/A interfaces. The course then transitions to computer architecture, covering CPU, ALU, I/O devices, memory systems, GPU, and the differences between RISC and CISC architectures. Practical skills are developed in C and assembly language programming, with a focus on microprocessors, including interrupts, timers, memory management, and serial communication interfaces.

SOFE 2715U - Data Structures
This course provides the students with a solid foundation in data structures and their associated algorithms (e.g. traversal, sorting, searching, element addition and removal) both from a theoretical, as well as practical implementation perspective. The main objective of the course is to teach students how to set and design data structures and algorithms that are appropriate for problems that they might encounter. The correctness and computational complexities of the algorithms as related to the various data structures presented is also studied. Topics covered are: analysis of algorithms, dictionaries, trees (balanced trees, binary-trees, spanning trees, etc.), hashing, sorting, graphs, sets and maps, strings and pattern matching.

SOFE 2720U - Principles of Software and Requirements Engineering
This course provides an in-depth exploration of the fundamental principles and practices of software engineering and requirements engineering. The course covers the following: software life cycle, introduction to Object-oriented design patterns, UML, software requirements and eliciting, analyzing, software design, software process models, software construction, software documentation, and software testing.

STAT 2800U - Statistics and Probability for Engineers
This course introduces the concepts and techniques of statistics and probability to collect, present, analyze and interpret data, and make decisions in the presence of variability. Students study a selection of topics relevant to engineering, selected from: sample spaces, probability, conditional probability, independence. Bayes' theorem, probability distributions, algebra of expected values, descriptive statistics. Discrete and continuous random variables; probability distributions: binomial, Poisson, normal, lognormal, Weibull, etc.; mean and variance; the central limit theorem; inferences concerning means, variances, and proportions. Parameter estimation, introduction to correlation and regression. Introduction to quality control and reliability.

SOFE 3650U - Software Design and Architectures
This course covers common software architectural patterns, styles, reference software architectures, and frameworks. There is a strong emphasis on the influence of software quality attributes such as performance, adaptability, energy, safety, security, etc. to the shape and structure of the architecture. A core component of the course is the adoption of software architectural design processes and modeling languages. A major team-based project is leveraged in the course to teach these concepts.

SOFE 3720U - Introduction to Artificial Intelligence
This course introduces students to basic concepts and methods of artificial intelligence from a software engineering perspective. Emphasis of the course will be on the selection of data representations and algorithms useful in the design and implementation of intelligent systems. Knowledge representation methods, state space search strategies, and use of logic for problem solving. Applications chosen from

among expert systems, planning, natural language understanding, uncertainty reasoning, machine learning, and robotics. The course will contain an overview of one AI language and discussion of important applications of artificial intelligence methodology.

SOFE 3770U - Design and Analysis of Algorithms
Designing and analyzing algorithms; asymptotic notation; recurrences and recursion; probabilistic analysis and randomized algorithms; sort algorithms; priority queues; medians and order statistics; data and advanced data structures; augmenting data structures for custom applications; dynamic programming; greedy algorithms; graph algorithms; sorting networks; matrix operations; linear programming; number theoretic algorithms; string matching; NP-completeness and approximation algorithms; object libraries.

ARTE - 4100U - Foundation Models and Generative AI
This course explores the principles, architectures, and applications of foundation models and generative AI, including large language models (LLMs), diffusion models, and multimodal AI systems. Students will study the underlying techniques behind models such as GPT, BERT, and Stable Diffusion, focusing on training methodologies, fine-tuning strategies, and deployment considerations. The course covers key topics such as transfer learning, prompt engineering, ethical implications, and real-world applications in text, image, and code generation. Through hands-on projects, students will gain practical experience in building, customizing, and integrating generative AI models into software systems, preparing them for the rapidly evolving AI landscape.

ENGR 3360U - Engineering Economics
Aspects of theoretical and applied economics relevant to engineers, including an introduction to fundamental principles of micro and macroeconomics. Microeconomics topics include scarcity, opportunity cost, diminishing returns, elasticity, industrial organization, economies of scale and concentration. Macroeconomics topics include unemployment, inflation, economic growth, the multiplier, equilibrium, fiscal policy and monetary policy. The principle of money and banking are introduced along with the role of the Bank of Canada. Applied economics topics covered include cost concepts, time value of money, comparison of alternatives, depreciation, tax considerations, economic analysis of projects, breakeven, sensitivity and risk, and decision models. Other topics covered include: economic decision analysis applied to private and public sector capital projects, discounted cash flow methods, lease analysis, replacement decisions, inflation impacts and public sector project analysis.

SOFE 3290U - Software Quality and Project Management
This course combines the essential elements of software quality assurance with software project management techniques. It covers the entire spectrum of software quality, including the assessment and maintenance of quality, various levels of software testing, and the nuances of test data generation and validation. The course also explores the balance between software cost, schedule, quality, and the integration of quality assurance in the software development process. On the project management side, it covers project planning, scheduling, cost estimation, organizational structure, and effective leadership of personnel, all within the framework of IEEE software engineering management standards.

SOFE 3620U - Machine Learning and Data Mining
This course is offered in two parts. First part covers the discovery of new knowledge using various data mining techniques on real-world datasets. Introducing the details of the current Algorithms in Data Mining and Machine Learning such as supervised and unsupervised learning, neural networks and deep learning, dimensionality reduction, and information theory is the fundamental context for this course.

This course utilizes the latest blended learning techniques to explore topics in foundations of knowledge discovery and data mining; data mining approaches; and the application of data mining within such diverse domains as health care, business, supply chain and IT security. Current research directions, trends, issues and challenges are also explored. The second part will cover the applications of Machine Learning and Data mining in Internet of Things IoT) domain. Issues with the data extracted or collected from an IoT system are covered in two parts: 1) Mining time series data and 2) Introduction to streaming and real-time data mining.

ARTE - 4110U - Deep Learning Architecture and Algorithms
This course provides an in-depth exploration of deep learning techniques and their applications in modern artificial intelligence systems, with a strong focus on the underlying algorithms that drive these models. Students will study neural network architectures, including feedforward networks, convolutional neural networks (CNNs), recurrent neural networks (RNNs), transformers, and generative adversarial networks (GANs), examining the mathematical foundations and algorithmic strategies behind their design and training. The course covers essential topics such as gradient-based optimization methods, backpropagation, regularization techniques, and scalability of deep learning models. Emphasis is placed on practical implementation using deep learning libraries and frameworks, enabling students to build and deploy deep learning models for tasks in computer vision, natural language processing, and reinforcement learning. Ethical considerations and the limitations of deep learning are also discussed to foster responsible AI development.

ENGR - 4111U - Capstone Systems Design I
This two-part capstone design course represents a culminating design experience for engineering students. The course allows senior-level students to integrate their engineering knowledge to solve an open-ended design problem while working as part of an engineering design team. Students will apply the engineering design process to a project of major breadth that will require them to integrate the knowledge that they have gained throughout their respective programs of study and apply it to the design and development of a complete system. Design teams will meet weekly with their project supervisor and attend several guest lectures during the semester. By the end of this first course, students will have completed the first stages of the engineering design process for their project culminating with a preliminary design report and proof-of-concept prototype presentation and demonstration. Note that students will finish the design and development of their systems in ENGR 4222U: Capstone Systems Design II.

SOFE 4590U - Embedded Systems
Embedded systems range from microprocessor-based controllers to system-on-a-chip, and applications of embedded systems including consumer electronics, automotive systems, medical devices, and robotics to name a few. This course covers the characteristics, design and implementation of embedded systems, and issues in hardware/software interfacing. Topics include: specification languages for capturing system behavior, tools for validation and verification, microcontrollers and their programming models.

ARTE - 4200U - AI Engineering and Machine Learning Operations
This course focuses on the principles and best practices for deploying, managing, and maintaining AI and machine learning systems in real-world applications. Students will explore the full lifecycle of machine learning models, from data preprocessing and model training to deployment, monitoring, and continuous integration. Key topics include cloud-based AI services, containerization, model versioning, automated pipelines, and scalable deployment platforms. The course emphasizes reliability,

reproducibility, and ethical considerations in AI engineering, ensuring that students gain hands-on experience with industry-standard MLOps tools. By the end of the course, students will be able to build, deploy, and maintain robust AI solutions that align with software engineering best practices.

ENGR - 4222U - Capstone Systems Design II
In this course, students will complete the design and development of the system that they first started in ENGR 4111U: Capstone Systems Design I. Design teams will meet weekly with their project supervisor and attend several guest lectures during the semester. By the end of this second course, students will have completed the engineering design process for their project culminating with a final design report and final prototype presentation and demonstration. Students will also showcase their completed projects at the Capstone Design Exhibition held at the end of the semester.

ENGR 4760U - Ethics, Law and Professionalism for Engineers
Legal aspects of engineering practice; business organizations and corporations; intellectual and industrial property; conflict resolution; tort liability and contract law; employment and labour law; public safety and health considerations; occupational health and safety and WHMIS; Canadian and international engineering standards and commercial practices; international trade; environmental laws and regulations; environmental stewardship and sustainable development; corporate social responsibility; equity. Ethics and moral philosophy; applied ethics; ethical aspects of engineering practice; engineering codes of ethics and ethical obligations of engineers; detecting ethical dilemmas and methods for resolving them; research ethics. The engineering profession and its history; engineering associations and societies; engineering licensure; the role and responsibilities of the professional engineer in society; engineers in industry, management and private practice.

ENGR 4570U – Indigenous Design and Technology
This course will explore design and technology of Indigenous peoples in Canada and the impacts on technology development. Two-Eyed Seeing (where with one eye we view the subject through Indigenous ways of knowing and with the other eye we view it through Western approaches) will be used to study the evolution of Indigenous design and technology and its influence on modern systems. Indigenous approaches to sustainability and its role in Indigenous design and technology will be investigated with the goal of engineers and designers incorporating this knowledge and methodologies in the development of new sustainable technologies.

SOFE 4610U – Design and Analysis of IoT Software Systems
Internet of Things (IoT) systems are large scale complex systems integrating sensing, data analytics, software services, and actuation through the Internet. Design and development of software systems for the Internet of Things (IoT) and the related architectures, technologies, communication protocols and frameworks used to enable the IoT are described. The importance and benefits of IoT in society is presented through large scale IoT application examples like smart buildings, remote health monitoring, and smart cities. Students will learn to design and analyze IoT systems with an emphasis on software architecture, protocols at the sensor, actuation, and service layer, and data storage and analysis with the goal of facilitating the deployment of IoT services. IoT specific security concerns and solutions will be discussed. Experiential learning is emphasized through hands-on design and development of IoT prototypes.

SOFE 4630U – Cloud Computing
The objective of this course is to expose students to the state of the art in cloud computing. Students will learn about issues relevant to the design, implementation and operation of cloud computing

infrastructures, platforms, and services for the Internet of Things (IoT). Topics include web services, description languages, communication protocols, data centres, virtualization, storage, big data, and cloud programming models, services and resource management, and security, privacy and trust issues. In addition, students will learn about systems research through a research and development project.

SOFE 4640U – Mobile Application Development
The objective of this course is to expose students to the state of the art in mobile application development. Students will learn about mobile operating systems, wireless networks, communication protocols, native and cross-platform mobile application development, software architecture for mobile applications, mobile apps for the Internet of Things, performance evaluation and the mobile user experience, app stores, the full development and publishing lifecycle of mobile applications, and security/privacy/trust of mobile applications and services.

SOFE 4850U – User Interface and Experience Design
This course introduces the principles of human-computer interaction with a strong emphasis on creating optimal user interfaces. It covers the fundamentals of designing user-centric solutions, focusing on understanding user needs and behaviors to design effective user environments and user satisfaction. Students will learn about various aspects of user experience (UX) design, including usability, accessibility, and emotional impact. The course introduces methods for user research, usability testing, and rapid prototyping to iteratively improve and refine designs. It also explores the principles behind user perception and decision-making, providing insights into cognitive ergonomics.

COURSE CHANGE TEMPLATE

For new courses see New Course Template

Changes to courses must be entered into Curriculog prior to Faculty Council. Please use this template to provide the information to your Curriculog contact. If you are uncertain about a change or definitions of terms used on this form, please reach out to your Curriculog contact, or ciqe@ontariotechu.ca.

Faculty: Faculty of Engineering and Applied Science	
Course Level	☒ **Undergraduate** ☐ **Graduate**

COURSE CHANGES (check all that apply)

☐	Contact hours	☐	Cross-listings
☐	Co-requisites	☐	Experiential Learning
☐	Course description	☐	Grade Mode (N – alpha grade, P – Pass/Fail)
☐	Course mode of delivery (online, hybrid, in-person etc.).	☐	Learning outcomes
☐	Course number or course Subject code	☒	Prerequisites
☐	Course title (include new short form title)	☐	Delete course from Academic Calendar
☐	Credit restrictions and/or Equivalencies	☐	Teaching and assessment methods
☐	Credit weighting	☐	Course restrictions
☐	Deleting an Elective Shown in the Program Map	☐	Other (please specify):

IS THIS COURSE CHANGE ASSOCIATED WITH A PROGRAM PROPOSAL? ☒ **Yes** ☐ **No**

REASON FOR CHANGE AND WAYS IN WHICH IT MAINTAINS/ENHANCES COURSE/PROGRAM OBJECTIVES

Prerequisite change to replace "SOFE 3620U Machine Learning and Data Mining "with "SOFE 3720U Introduction to Artificial Intelligence" so AI Engineering students can take this course.

FINANCIAL IMPLICATIONS

None

CALENDAR START DATE (When the course should first appear in the Academic Calendar e.g. 2020-2021)

Fall 2027

REGISTRATION START DATE (The first time the course will be open for registration e.g. Fall 2020)

Fall 2027

ADDITIONAL SUPPORTING INFORMATION (optional; please indicate if you are attaching any additional documentation)

COURSE INFORMATION

Subject Code: ARTE	Course Number: 4100U
Full Course Title: Foundation Models and Generative AI	
Short-Form Course Title (max. 30 characters):	

CHANGE TO CALENDAR DESCRIPTION (if required)

Current	Proposed
This course explores the principles, architectures, and applications of foundation models and generative AI, including large language models (LLMs), diffusion models, and multimodal AI systems. Students will study the underlying techniques behind models such as GPT, BERT, and Stable Diffusion, focusing on training methodologies, fine-tuning strategies, and deployment considerations. The course covers key topics such as transfer learning, prompt engineering, ethical implications, and real-world applications in text, image, and code generation. Through hands-on projects, students will gain practical experience in building, customizing, and integrating generative AI models into software systems, preparing them for the rapidly evolving AI landscape. Credit hours: 3 Lecture hours: 3 Prerequisite(s): ~~SOFE 3620U~~	This course explores the principles, architectures, and applications of foundation models and generative AI, including large language models (LLMs), diffusion models, and multimodal AI systems. Students will study the underlying techniques behind models such as GPT, BERT, and Stable Diffusion, focusing on training methodologies, fine-tuning strategies, and deployment considerations. The course covers key topics such as transfer learning, prompt engineering, ethical implications, and real-world applications in text, image, and code generation. Through hands-on projects, students will gain practical experience in building, customizing, and integrating generative AI models into software systems, preparing them for the rapidly evolving AI landscape. Credit hours: 3 Lecture hours: 3 Prerequisite(s): SOFE 3720

CHANGE TO CREDIT AND CONTACT HOURS [if applicable, indicate changes to total contact hours only; changes to frequency (e.g. 1x3 hours to 2X1.5 hours) not required]:

Credit Hours	
Lecture	Lab
Tutorial	Other

OTHER CHANGES (if applicable)

Cross-listings	
Prerequisites for Calendar and Banner	SOFE 3720
Co-requisites	
Prerequisites with concurrency (pre or co-requisite)	
Credit restrictions	☐ Equivalency*

Recommended Prerequisites	
Course Restrictions	
Course Type	☐ **Core** ☐ **Elective** ☐ **Core or Elective**
Grading mode	☐ **N (normal alpha grade)** ☐ **P (pass/fail)**

***Equivalency:** Two courses are similar enough in content that they are considered equivalent so students can register in either course but they will only receive credit for one course in their program.

CHANGES TO COURSE INSTRUCTIONAL METHOD (MODE OF DELIVERY): *Values of CLS, HYB, IND, OFF, WB1 and WEB are being phased out. If you are changing the mode of delivery for this course, please make your selection from the values below:*

IN-PERSON		HYBRID	
ONLINE		OFF-SITE	

CHANGES TO TEACHING AND ASSESSMENT METHODS (if applicable)

CHANGES TO LEARNING OUTCOMES (if applicable; for assistance developing course learning outcomes, please refer to the Teaching and Learning [website](), or contact them at teachingandlearning@ontariotechu.ca.)

DOES THIS COURSE CONTAIN ANY EXPERIENTIAL LEARNING COMPONENTS?
If yes:

Case Study		Simulated Workplace Project	
Consulting project/workplace project		Applied Research	
Field Experiences			
Other Types of Experiences:			

IMPACT AND CONSULTATION

(Curriculog contact to complete an Impact Report)

DOES THIS COURSE CHANGE IMPACT BOTH THE UNDERGRADUATE AND GRADUATE CALENDARS?
☐ **Yes** ☒ **No**

WHAT CONSIDERATIONS HAVE BEEN MADE FOR EQUITY, DIVERSITY, INCLUSION AND DECOLONIZATION?*

N/A

For more information and guidance on incorporating equity, diversity and inclusion principles in curricula, please visit the Diversity, Inclusion and Belonging resource section of the CIQE website.

CONSULTATION

Consultation is central to governance at Ontario Tech. Faculties are required to consult with all areas impacted by this change, and the home faculty dean is responsible for all consultation decisions in this section of the form. Note that any false statements related to consultation may require re-submission of proposals.

FACULTY CONSULTATION

WILL THIS CHANGE IMPACT ANY OTHER FACULTIES? SOME EXAMPLES MAY INCLUDE, BUT ARE NOT LIMITED TO, THE SCENARIOS LISTED BELOW.*

☐ **Yes** ☒ **No**

Examples:
- *A course from another faculty is being added or removed from the program map.*
- *Changes to joint and/or service programs (e.g., 'and Management' programs, targeted minors).*
- *Changes to year of offering for courses from another faculty (e.g., moving a course from Year 1 to Year 2).*

Additional examples can be found in the Resources section of the CIQE website.

IF YOU ANSWERED YES TO THE QUESTION ABOVE, PLEASE EXPLAIN AND OUTLINE THE CONSULTATION PROCESS IN DETAIL. ATTACH RELEVANT DOCUMENTS (EMAILS, FACULTY COUNCIL MINUTES, ETC.) OR INCLUDE LINKS TO CORRESPONDING DOCUMENTS.*

N/A

INDIGENOUS CONTENT AND CONSULTATION

DOES THIS COURSE CONTAIN ANY INDIGENOUS CONTENT? ☐ **Yes** ☒ **No** ☐ **Unsure**

For more information on how Indigenous content is defined at Ontario Tech University and how to consult with the Indigenous Education Advisory Circle (IEAC), please refer to the Protocol for Consultation with the Indigenous Education Advisory Circle.

HAS THE IEAC BEEN CONTACTED? ☐ **Yes** ☒ **No**

If yes, when?

WHAT WAS THE ADVICE YOU RECEIVED FROM THE IEAC, AND HOW HAS IT BEEN INCLUDED IN YOUR PROPOSAL? Please attach or provide links to documents that outline the consultation process and advice given.

DID THE IEAC ASK YOU TO RETURN THE PROPOSAL TO THEM FOR REVIEW? ☐ **Yes** ☐ **No** ☒ **N/A**

IF YES, HAVE THEY COMPLETED THEIR REVIEW? ☐ **Yes** ☐ **No** ☒ **N/A**

OTHER CONSULTATION

HAVE YOU CONSULTED WITH STUDENTS, THE SCHOOL OF GRADUATE AND POSTDOCTORAL STUDIES, OFFICE OF THE REGISTRAR, STUDENT LIFE, THE LIBRARY AND/OR ANY OTHER AREAS ON CAMPUS THAT MAY BE IMPACTED?*

☐ **Yes** ☒ **No**

If yes, please explain and outline the consultation process in detail.*

N/A

Does this change involve co-op?*

☐ **Yes** ☒ **No**

If yes, please acknowledge that you have consulted with the Director, External Relations and Partnerships by checking the box below.

☐ Yes, we have consulted

Pre-Faculty Council Approval Dates (e.g. Curriculum Committee, Program Committee):

COURSE CHANGE TEMPLATE

For new courses see New Course Template
Changes to courses must be entered into Curriculog prior to Faculty Council. Please use this template to provide the information to your Curriculog contact. If you are uncertain about a change or definitions of terms used on this form, please reach out to your Curriculog contact, or ciqe@ontariotechu.ca.

Faculty: Faculty of Engineering and Applied Science	
Course Level	☒ **Undergraduate** ☐ **Graduate**

COURSE CHANGES (check all that apply)

☒	Contact hours	☐	Cross-listings
☐	Co-requisites	☐	Experiential Learning
☐	Course description	☐	Grade Mode (N – alpha grade, P – Pass/Fail)
☐	Course mode of delivery (online, hybrid, in-person etc.).	☐	Learning outcomes
☐	Course number or course Subject code	☐	Prerequisites
☐	Course title (include new short form title)	☐	Delete course from Academic Calendar
☐	Credit restrictions and/or Equivalencies	☐	Teaching and assessment methods
☐	Credit weighting	☐	Course restrictions
☐	Deleting an Elective Shown in the Program Map	☐	Other (please specify):

IS THIS COURSE CHANGE ASSOCIATED WITH A PROGRAM PROPOSAL? ☒ **Yes** ☐ **No**

REASON FOR CHANGE AND WAYS IN WHICH IT MAINTAINS/ENHANCES COURSE/PROGRAM OBJECTIVES

Need to add a 1.5 hr tutorial

FINANCIAL IMPLICATIONS

None

CALENDAR START DATE (When the course should first appear in the Academic Calendar e.g. 2020-2021)

Fall 2027

REGISTRATION START DATE (The first time the course will be open for registration e.g. Fall 2020)

Fall 2027

ADDITIONAL SUPPORTING INFORMATION (optional; please indicate if you are attaching any additional documentation)

COURSE INFORMATION

Subject Code: ARTE	**Course Number: 4110U**
Full Course Title: Deep Learning Architecture & Algorithms	
Short-Form Course Title (max. 30 characters):	

CHANGE TO CALENDAR DESCRIPTION (if required)

Current	Proposed
This course provides an in-depth exploration of deep learning techniques and their applications in modern artificial intelligence systems, with a strong focus on the underlying algorithms that drive these models. Students will study neural network architectures, including feedforward networks, convolutional neural networks (CNNs), recurrent neural networks (RNNs), transformers, and generative adversarial networks (GANs), examining the mathematical foundations and algorithmic strategies behind their design and training. The course covers essential topics such as gradient-based optimization methods, backpropagation, regularization techniques, and scalability of deep learning models. Emphasis is placed on practical implementation using deep learning libraries and frameworks, enabling students to build and deploy deep learning models for tasks in computer vision, natural language processing, and reinforcement learning. Ethical considerations and the limitations of deep learning are also discussed to foster responsible AI development. Credit hours: 3 **Lecture hours: 3** **Prerequisite(s):** SOFE 3620U	**This course provides an in-depth exploration of deep learning techniques and their applications in modern artificial intelligence systems, with a strong focus on the underlying algorithms that drive these models. Students will study neural network architectures, including feedforward networks, convolutional neural networks (CNNs), recurrent neural networks (RNNs), transformers, and generative adversarial networks (GANs), examining the mathematical foundations and algorithmic strategies behind their design and training. The course covers essential topics such as gradient-based optimization methods, backpropagation, regularization techniques, and scalability of deep learning models. Emphasis is placed on practical implementation using deep learning libraries and frameworks, enabling students to build and deploy deep learning models for tasks in computer vision, natural language processing, and reinforcement learning. Ethical considerations and the limitations of deep learning are also discussed to foster responsible AI development. Credit hours: 3** **Lecture hours: 3** **Tutorial: 1.5 weekly** **Prerequisite(s):** SOFE 3620U

CHANGE TO CREDIT AND CONTACT HOURS [if applicable, indicate changes to total contact hours only; changes to frequency (e.g. 1x3 hours to 2X1.5 hours) not required]:

Credit Hours	
Lecture	Lab
Tutorial – 1.5 hr weekly	Other

OTHER CHANGES (if applicable)

Cross-listings	

Prerequisites for Calendar and Banner	
Co-requisites	
Prerequisites with concurrency (pre or co-requisite)	
Credit restrictions	☐ **Equivalency***
Recommended Prerequisites	
Course Restrictions	
Course Type	☐ **Core** ☐ **Elective** ☐ **Core or Elective**
Grading mode	☐ **N (normal alpha grade)** ☐ **P (pass/fail)**

***Equivalency:** Two courses are similar enough in content that they are considered equivalent so students can register in either course but they will only receive credit for one course in their program.

CHANGES TO COURSE INSTRUCTIONAL METHOD (MODE OF DELIVERY): *Values of CLS, HYB, IND, OFF, WB1 and WEB are being phased out. If you are changing the mode of delivery for this course, please make your selection from the values below:*

IN-PERSON		HYBRID	
ONLINE		OFF-SITE	

CHANGES TO TEACHING AND ASSESSMENT METHODS (if applicable)

CHANGES TO LEARNING OUTCOMES (if applicable; for assistance developing course learning outcomes, please refer to the Teaching and Learning website, or contact them at teachingandlearning@ontariotechu.ca.)

DOES THIS COURSE CONTAIN ANY EXPERIENTIAL LEARNING COMPONENTS?
If yes:

Case Study		Simulated Workplace Project	
Consulting project/workplace project		Applied Research	
Field Experiences			
Other Types of Experiences:			

IMPACT AND CONSULTATION

(Curriculog contact to complete an Impact Report)

DOES THIS COURSE CHANGE IMPACT BOTH THE UNDERGRADUATE AND GRADUATE CALENDARS?
☐ **Yes** ☒ **No**

WHAT CONSIDERATIONS HAVE BEEN MADE FOR EQUITY, DIVERSITY, INCLUSION AND DECOLONIZATION?*

N/A

For more information and guidance on incorporating equity, diversity and inclusion principles in curricula, please visit the Diversity, Inclusion and Belonging resource section of the CIQE website.

CONSULTATION

Consultation is central to governance at Ontario Tech. Faculties are required to consult with all areas impacted by this change, and the home faculty dean is responsible for all consultation decisions in this section of the form. Note that any false statements related to consultation may require re-submission of proposals.

FACULTY CONSULTATION

WILL THIS CHANGE IMPACT ANY OTHER FACULTIES? SOME EXAMPLES MAY INCLUDE, BUT ARE NOT LIMITED TO, THE SCENARIOS LISTED BELOW.*

☐ **Yes** ☒ **No**

Examples:

- *A course from another faculty is being added or removed from the program map.*
- *Changes to joint and/or service programs (e.g., 'and Management' programs, targeted minors).*
- *Changes to year of offering for courses from another faculty (e.g., moving a course from Year 1 to Year 2).*

Additional examples can be found in the Resources section of the CIQE website.

IF YOU ANSWERED YES TO THE QUESTION ABOVE, PLEASE EXPLAIN AND OUTLINE THE CONSULTATION PROCESS IN DETAIL. ATTACH RELEVANT DOCUMENTS (EMAILS, FACULTY COUNCIL MINUTES, ETC.) OR INCLUDE LINKS TO CORRESPONDING DOCUMENTS.*

N/A

INDIGENOUS CONTENT AND CONSULTATION

DOES THIS COURSE CONTAIN ANY INDIGENOUS CONTENT? ☐ **Yes** ☒ **No** ☐ **Unsure**

For more information on how Indigenous content is defined at Ontario Tech University and how to consult with the Indigenous Education Advisory Circle (IEAC), please refer to the Protocol for Consultation with the Indigenous Education Advisory Circle.

HAS THE IEAC BEEN CONTACTED? ☐ **Yes** ☒ **No**

If yes, when?

WHAT WAS THE ADVICE YOU RECEIVED FROM THE IEAC, AND HOW HAS IT BEEN INCLUDED IN YOUR PROPOSAL? Please attach or provide links to documents that outline the consultation process and advice given.

DID THE IEAC ASK YOU TO RETURN THE PROPOSAL TO THEM FOR REVIEW? ☐ **Yes** ☐ **No** ☒ **N/A**

IF YES, HAVE THEY COMPLETED THEIR REVIEW? ☐ **Yes** ☐ **No** ☒ **N/A**

OTHER CONSULTATION

HAVE YOU CONSULTED WITH STUDENTS, THE SCHOOL OF GRADUATE AND POSTDOCTORAL STUDIES, OFFICE OF THE REGISTRAR, STUDENT LIFE, THE LIBRARY AND/OR ANY OTHER AREAS ON CAMPUS THAT MAY BE IMPACTED?*

☐ **Yes** ☒ **No**

If yes, please explain and outline the consultation process in detail.*

N/A

Does this change involve co-op?*

☐ **Yes** ☒ **No**

If yes, please acknowledge that you have consulted with the Director, External Relations and Partnerships by checking the box below.

☐ Yes, we have consulted

Pre-Faculty Council Approval Dates (e.g. Curriculum Committee, Program Committee):

COURSE CHANGE TEMPLATE

For new courses see New Course Template

Changes to courses must be entered into Curriculog prior to Faculty Council. Please use this template to provide the information to your Curriculog contact. If you are uncertain about a change or definitions of terms used on this form, please reach out to your Curriculog contact, or ciqe@ontariotechu.ca.

Faculty: Faculty of Engineering and Applied Science	
Course Level	☒ **Undergraduate** ☐ **Graduate**

COURSE CHANGES (check all that apply)

☐	Contact hours	☐	Cross-listings
☐	Co-requisites	☐	Experiential Learning
☐	Course description	☐	Grade Mode (N – alpha grade, P – Pass/Fail)
☐	Course mode of delivery (online, hybrid, in-person etc.).	☐	Learning outcomes
☐	Course number or course Subject code	☒	Prerequisites
☐	Course title (include new short form title)	☐	Delete course from Academic Calendar
☐	Credit restrictions and/or Equivalencies	☐	Teaching and assessment methods
☐	Credit weighting	☐	Course restrictions
☐	Deleting an Elective Shown in the Program Map	☐	Other (please specify):

IS THIS COURSE CHANGE ASSOCIATED WITH A PROGRAM PROPOSAL? ☒ **Yes** ☐ **No**

REASON FOR CHANGE AND WAYS IN WHICH IT MAINTAINS/ENHANCES COURSE/PROGRAM OBJECTIVES

Prerequisite change to remove "SOFE 3700U Data Management Systems" so AI Engineering students can take this course.

FINANCIAL IMPLICATIONS

None

CALENDAR START DATE (When the course should first appear in the Academic Calendar e.g. 2020-2021)

Fall 2027

REGISTRATION START DATE (The first time the course will be open for registration e.g. Fall 2020)

Fall 2027

ADDITIONAL SUPPORTING INFORMATION (optional; please indicate if you are attaching any additional documentation)

COURSE INFORMATION

Subject Code: SOFE	**Course Number: 3290U**
Full Course Title: Software Quality and Project Management	
Short-Form Course Title (max. 30 characters):	

CHANGE TO CALENDAR DESCRIPTION (if required)

Current	**Proposed**
This course combines the essential elements of software quality assurance with software project management techniques. It covers the entire spectrum of software quality, including the assessment and maintenance of quality, various levels of software testing, and the nuances of test data generation and validation. The course also explores the balance between software cost, schedule, quality, and the integration of quality assurance in the software development process. On the project management side, it covers project planning, scheduling, cost estimation, organizational structure, and effective leadership of personnel, all within the framework of IEEE software engineering management standards. **Credit hours: 3** **Lecture hours: 3** **Laboratory hours: 3 (bi-weekly)** **Tutorial hours: 1.5** **Prerequisite(s): SOFE 3650U ~~and SOFE 3700U~~**	**This course combines the essential elements of software quality assurance with software project management techniques. It covers the entire spectrum of software quality, including the assessment and maintenance of quality, various levels of software testing, and the nuances of test data generation and validation. The course also explores the balance between software cost, schedule, quality, and the integration of quality assurance in the software development process. On the project management side, it covers project planning, scheduling, cost estimation, organizational structure, and effective leadership of personnel, all within the framework of IEEE software engineering management standards.** **Credit hours: 3** **Lecture hours: 3** **Laboratory hours: 3 (bi-weekly)** **Tutorial hours: 1.5** **Prerequisite(s): SOFE 3650U**

CHANGE TO CREDIT AND CONTACT HOURS [if applicable, indicate changes to total contact hours only; changes to frequency (e.g. 1x3 hours to 2X1.5 hours) not required]:

Credit Hours	
Lecture	Lab
Tutorial	Other

OTHER CHANGES (if applicable)

Cross-listings	
Prerequisites for Calendar and Banner	**SOFE 3650U**
Co-requisites	
Prerequisites with concurrency (pre or co-requisite)	
Credit restrictions	☐ **Equivalency***

Recommended Prerequisites	
Course Restrictions	
Course Type	☐ **Core** ☐ **Elective** ☐ **Core or Elective**
Grading mode	☐ **N (normal alpha grade)** ☐ **P (pass/fail)**

***Equivalency:** Two courses are similar enough in content that they are considered equivalent so students can register in either course but they will only receive credit for one course in their program.

CHANGES TO COURSE INSTRUCTIONAL METHOD (MODE OF DELIVERY): *Values of CLS, HYB, IND, OFF, WB1 and WEB are being phased out. If you are changing the mode of delivery for this course, please make your selection from the values below:*

IN-PERSON		HYBRID	
ONLINE		OFF-SITE	

CHANGES TO TEACHING AND ASSESSMENT METHODS (if applicable)

CHANGES TO LEARNING OUTCOMES (if applicable; for assistance developing course learning outcomes, please refer to the Teaching and Learning website, or contact them at teachingandlearning@ontariotechu.ca.)

DOES THIS COURSE CONTAIN ANY EXPERIENTIAL LEARNING COMPONENTS?
If yes:

Case Study		Simulated Workplace Project	
Consulting project/workplace project		Applied Research	
Field Experiences			
Other Types of Experiences:			

IMPACT AND CONSULTATION

(Curriculog contact to complete an Impact Report)

DOES THIS COURSE CHANGE IMPACT BOTH THE UNDERGRADUATE AND GRADUATE CALENDARS?
☐ **Yes** ☒ **No**

WHAT CONSIDERATIONS HAVE BEEN MADE FOR EQUITY, DIVERSITY, INCLUSION AND DECOLONIZATION?*

N/A

For more information and guidance on incorporating equity, diversity and inclusion principles in curricula, please visit the [Diversity, Inclusion and Belonging resource section] of the CIQE website.

CONSULTATION

Consultation is central to governance at Ontario Tech. Faculties are required to consult with all areas impacted by this change, and the home faculty dean is responsible for all consultation decisions in this section of the form. Note that any false statements related to consultation may require re-submission of proposals.

FACULTY CONSULTATION

WILL THIS CHANGE IMPACT ANY OTHER FACULTIES? SOME EXAMPLES MAY INCLUDE, BUT ARE NOT LIMITED TO, THE SCENARIOS LISTED BELOW.*

☐ **Yes** ☒ **No**

Examples:

- *A course from another faculty is being added or removed from the program map.*
- *Changes to joint and/or service programs (e.g., 'and Management' programs, targeted minors).*
- *Changes to year of offering for courses from another faculty (e.g., moving a course from Year 1 to Year 2).*

Additional examples can be found in the Resources section of the CIQE website.

IF YOU ANSWERED YES TO THE QUESTION ABOVE, PLEASE EXPLAIN AND OUTLINE THE CONSULTATION PROCESS IN DETAIL. ATTACH RELEVANT DOCUMENTS (EMAILS, FACULTY COUNCIL MINUTES, ETC.) OR INCLUDE LINKS TO CORRESPONDING DOCUMENTS.*

N/A

INDIGENOUS CONTENT AND CONSULTATION

DOES THIS COURSE CONTAIN ANY INDIGENOUS CONTENT? ☐ **Yes** ☒ **No** ☐ **Unsure**

For more information on how Indigenous content is defined at Ontario Tech University and how to consult with the Indigenous Education Advisory Circle (IEAC), please refer to the Protocol for Consultation with the Indigenous Education Advisory Circle.

HAS THE IEAC BEEN CONTACTED? ☐ **Yes** ☒ **No**

If yes, when?

WHAT WAS THE ADVICE YOU RECEIVED FROM THE IEAC, AND HOW HAS IT BEEN INCLUDED IN YOUR PROPOSAL? Please attach or provide links to documents that outline the consultation process and advice given.

DID THE IEAC ASK YOU TO RETURN THE PROPOSAL TO THEM FOR REVIEW? ☐ Yes ☐ No ☒ N/A

IF YES, HAVE THEY COMPLETED THEIR REVIEW? ☐ Yes ☐ No ☒ N/A

OTHER CONSULTATION

HAVE YOU CONSULTED WITH STUDENTS, THE SCHOOL OF GRADUATE AND POSTDOCTORAL STUDIES, OFFICE OF THE REGISTRAR, STUDENT LIFE, THE LIBRARY AND/OR ANY OTHER AREAS ON CAMPUS THAT MAY BE IMPACTED?*

☐ Yes ☒ No

If yes, please explain and outline the consultation process in detail.*

N/A

Does this change involve co-op?*

☐ Yes ☒ No

If yes, please acknowledge that you have consulted with the Director, External Relations and Partnerships by checking the box below.

☐ Yes, we have consulted

Pre-Faculty Council Approval Dates (e.g. Curriculum Committee, Program Committee):

COURSE CHANGE TEMPLATE

For new courses see New Course Template
Changes to courses must be entered into Curriculog prior to Faculty Council. Please use this template to provide the information to your Curriculog contact. If you are uncertain about a change or definitions of terms used on this form, please reach out to your Curriculog contact, or ciqe@ontariotechu.ca.

Faculty: Faculty of Engineering and Applied Science	
Course Level	☒ **Undergraduate** ☐ **Graduate**

COURSE CHANGES (check all that apply)

☐	Contact hours	☐	Cross-listings
☐	Co-requisites	☐	Experiential Learning
☐	Course description	☐	Grade Mode (N – alpha grade, P – Pass/Fail)
☐	Course mode of delivery (online, hybrid, in-person etc.).	☐	Learning outcomes
☐	Course number or course Subject code	☒	Prerequisites
☐	Course title (include new short form title)	☐	Delete course from Academic Calendar
☐	Credit restrictions and/or Equivalencies	☐	Teaching and assessment methods
☐	Credit weighting	☐	Course restrictions
☐	Deleting an Elective Shown in the Program Map	☐	Other (please specify):

IS THIS COURSE CHANGE ASSOCIATED WITH A PROGRAM PROPOSAL? ☒ **Yes** ☐ **No**

REASON FOR CHANGE AND WAYS IN WHICH IT MAINTAINS/ENHANCES COURSE/PROGRAM OBJECTIVES

Prerequisite change to add new course "ARTE 2000U Foundations of AI Engineering" for AI Engineering students to take this course.

FINANCIAL IMPLICATIONS

None

CALENDAR START DATE (When the course should first appear in the Academic Calendar e.g. 2020-2021)

Fall 2027

REGISTRATION START DATE (The first time the course will be open for registration e.g. Fall 2020)

Fall 2027

ADDITIONAL SUPPORTING INFORMATION (optional; please indicate if you are attaching any additional documentation)

COURSE INFORMATION

Subject Code: SOFE	**Course Number: 3650U**
Full Course Title: Software Design and Architectures	
Short-Form Course Title (max. 30 characters):	

CHANGE TO CALENDAR DESCRIPTION (if required)

Current	**Proposed**
This course covers common software architectural patterns, styles, reference software architectures, and frameworks. There is a strong emphasis on the influence of software quality attributes such as performance, adaptability, energy, safety, security, etc. to the shape and structure of the architecture. A core component of the course is the adoption of software architectural design processes and modeling languages. A major team-based project is leveraged in the course to teach these concepts. **Credit hours: 3** **Lecture hours: 3** **Laboratory hours: 3 (biweekly)** **Tutorial hours: 1.5** **Prerequisite(s): SOFE 2720U**	**This course covers common software architectural patterns, styles, reference software architectures, and frameworks. There is a strong emphasis on the influence of software quality attributes such as performance, adaptability, energy, safety, security, etc. to the shape and structure of the architecture. A core component of the course is the adoption of software architectural design processes and modeling languages. A major team-based project is leveraged in the course to teach these concepts.** **Credit hours: 3** **Lecture hours: 3** **Laboratory hours: 3 (biweekly)** **Tutorial hours: 1.5** **Prerequisite(s): SOFE 2720U or ARTE 2000U Foundations of AI Engineering**

CHANGE TO CREDIT AND CONTACT HOURS [if applicable, indicate changes to total contact hours only; changes to frequency (e.g. 1x3 hours to 2X1.5 hours) not required]:

Credit Hours	
Lecture	Lab
Tutorial	Other

OTHER CHANGES (if applicable)

Cross-listings	
Prerequisites for Calendar and Banner	**SOFE 2720U or ARTE 2000U Foundations of AI Engineering**
Co-requisites	
Prerequisites with concurrency (pre or co-requisite)	
Credit restrictions	☐ **Equivalency***
Recommended Prerequisites	
Course Restrictions	
Course Type	☐ **Core** ☐ **Elective** ☐ **Core or Elective**

Grading mode	☐ N (normal alpha grade) ☐ P (pass/fail)

***Equivalency:** Two courses are similar enough in content that they are considered equivalent so students can register in either course but they will only receive credit for one course in their program.

CHANGES TO COURSE INSTRUCTIONAL METHOD (MODE OF DELIVERY): *Values of CLS, HYB, IND, OFF, WB1 and WEB are being phased out. If you are changing the mode of delivery for this course, please make your selection from the values below:*

IN-PERSON		HYBRID	
ONLINE		OFF-SITE	

CHANGES TO TEACHING AND ASSESSMENT METHODS (if applicable)

CHANGES TO LEARNING OUTCOMES (if applicable; for assistance developing course learning outcomes, please refer to the Teaching and Learning website, or contact them at teachingandlearning@ontariotechu.ca.)

DOES THIS COURSE CONTAIN ANY EXPERIENTIAL LEARNING COMPONENTS?
If yes:

Case Study		Simulated Workplace Project	
Consulting project/workplace project		Applied Research	
Field Experiences			
Other Types of Experiences:			

IMPACT AND CONSULTATION

(Curriculog contact to complete an Impact Report)

DOES THIS COURSE CHANGE IMPACT BOTH THE UNDERGRADUATE AND GRADUATE CALENDARS?
☐ **Yes** ☒ **No**

WHAT CONSIDERATIONS HAVE BEEN MADE FOR EQUITY, DIVERSITY, INCLUSION AND DECOLONIZATION?*

N/A

For more information and guidance on incorporating equity, diversity and inclusion principles in curricula, please visit the Diversity, Inclusion and Belonging resource section of the CIQE website.

CONSULTATION

Consultation is central to governance at Ontario Tech. Faculties are required to consult with all areas impacted by this change, and the home faculty dean is responsible for all consultation decisions in this section of the form. Note that any false statements related to consultation may require re-submission of proposals.

FACULTY CONSULTATION

WILL THIS CHANGE IMPACT ANY OTHER FACULTIES? SOME EXAMPLES MAY INCLUDE, BUT ARE NOT LIMITED TO, THE SCENARIOS LISTED BELOW.*

☐ **Yes** ☒ **No**

Examples:

- *A course from another faculty is being added or removed from the program map.*
- *Changes to joint and/or service programs (e.g., 'and Management' programs, targeted minors).*
- *Changes to year of offering for courses from another faculty (e.g., moving a course from Year 1 to Year 2).*

Additional examples can be found in the [Resources section] of the CIQE website.

IF YOU ANSWERED YES TO THE QUESTION ABOVE, PLEASE EXPLAIN AND OUTLINE THE CONSULTATION PROCESS IN DETAIL. ATTACH RELEVANT DOCUMENTS (EMAILS, FACULTY COUNCIL MINUTES, ETC.) OR INCLUDE LINKS TO CORRESPONDING DOCUMENTS.*

N/A

INDIGENOUS CONTENT AND CONSULTATION

DOES THIS COURSE CONTAIN ANY INDIGENOUS CONTENT? ☐ **Yes** ☒ **No** ☐ **Unsure**

For more information on how Indigenous content is defined at Ontario Tech University and how to consult with the Indigenous Education Advisory Circle (IEAC), please refer to the Protocol for Consultation with the Indigenous Education Advisory Circle.

HAS THE IEAC BEEN CONTACTED? ☐ **Yes** ☒ **No**

If yes, when?

WHAT WAS THE ADVICE YOU RECEIVED FROM THE IEAC, AND HOW HAS IT BEEN INCLUDED IN YOUR PROPOSAL? Please attach or provide links to documents that outline the consultation process and advice given.

DID THE IEAC ASK YOU TO RETURN THE PROPOSAL TO THEM FOR REVIEW? ☐ **Yes** ☐ **No** ☒ **N/A**

IF YES, HAVE THEY COMPLETED THEIR REVIEW? ☐ **Yes** ☐ **No** ☒ **N/A**

OTHER CONSULTATION

HAVE YOU CONSULTED WITH STUDENTS, THE SCHOOL OF GRADUATE AND POSTDOCTORAL STUDIES, OFFICE OF THE REGISTRAR, STUDENT LIFE, THE LIBRARY AND/OR ANY OTHER AREAS ON CAMPUS THAT MAY BE IMPACTED?*

☐ **Yes** ☒ **No**

If yes, please explain and outline the consultation process in detail.*

N/A

Does this change involve co-op?*

☐ **Yes** ☒ **No**

If yes, please acknowledge that you have consulted with the Director, External Relations and Partnerships by checking the box below.

☐ Yes, we have consulted

Pre-Faculty Council Approval Dates (e.g. Curriculum Committee, Program Committee):

COURSE CHANGE TEMPLATE

For new courses see New Course Template
Changes to courses must be entered into Curriculog prior to Faculty Council. Please use this template to provide the information to your Curriculog contact. If you are uncertain about a change or definitions of terms used on this form, please reach out to your Curriculog contact, or ciqe@ontariotechu.ca.

Faculty: Faculty of Engineering and Applied Science	
Course Level	☒ **Undergraduate** ☐ **Graduate**

COURSE CHANGES (check all that apply)

☐	Contact hours	☐	Cross-listings
☐	Co-requisites	☐	Experiential Learning
☐	Course description	☐	Grade Mode (N – alpha grade, P – Pass/Fail)
☐	Course mode of delivery (online, hybrid, in-person etc.).	☐	Learning outcomes
☐	Course number or course Subject code	☒	Prerequisites
☐	Course title (include new short form title)	☐	Delete course from Academic Calendar
☐	Credit restrictions and/or Equivalencies	☐	Teaching and assessment methods
☐	Credit weighting	☐	Course restrictions
☐	Deleting an Elective Shown in the Program Map	☐	Other (please specify):

IS THIS COURSE CHANGE ASSOCIATED WITH A PROGRAM PROPOSAL? ☒ **Yes** ☐ **No**

REASON FOR CHANGE AND WAYS IN WHICH IT MAINTAINS/ENHANCES COURSE/PROGRAM OBJECTIVES

Prerequisite change to add "ARTE 4100U - Foundation Models and Generative AI" for AI Engineering students to take this course.

FINANCIAL IMPLICATIONS

None

CALENDAR START DATE (When the course should first appear in the Academic Calendar e.g. 2020-2021)

Fall 2027

REGISTRATION START DATE (The first time the course will be open for registration e.g. Fall 2020)

Fall 2027

ADDITIONAL SUPPORTING INFORMATION (optional; please indicate if you are attaching any additional documentation)

COURSE INFORMATION

Subject Code: SOFE	**Course Number: 4590U**
Full Course Title: Embedded Systems	
Short-Form Course Title (max. 30 characters):	

CHANGE TO CALENDAR DESCRIPTION (if required)

Current	**Proposed**
Embedded systems range from microprocessor-based controllers to system-on-a-chip, and applications of embedded systems including consumer electronics, automotive systems, medical devices, and robotics to name a few. This course covers the characteristics, design and implementation of embedded systems, and issues in hardware/software interfacing. Topics include: specification languages for capturing system behavior, tools for validation and verification, microcontrollers and their programming models. **Credit hours: 3** **Lecture hours: 3** **Laboratory hours: 3 (biweekly)** **Prerequisite(s): SOFE 3950U**	**Embedded systems range from microprocessor-based controllers to system-on-a-chip, and applications of embedded systems including consumer electronics, automotive systems, medical devices, and robotics to name a few. This course covers the characteristics, design and implementation of embedded systems, and issues in hardware/software interfacing. Topics include: specification languages for capturing system behavior, tools for validation and verification, microcontrollers and their programming models.** **Credit hours: 3** **Lecture hours: 3** **Laboratory hours: 3 (biweekly)** **Prerequisite(s): SOFE 3950U or ARTE 4100U Foundation Models and Generative AI**

CHANGE TO CREDIT AND CONTACT HOURS [if applicable, indicate changes to total contact hours only; changes to frequency (e.g. 1x3 hours to 2X1.5 hours) not required]:

Credit Hours	
Lecture	Lab
Tutorial	Other

OTHER CHANGES (if applicable)

Cross-listings	
Prerequisites for Calendar and Banner	**SOFE 3950U or ARTE 4100U Foundation Models and Generative AI**
Co-requisites	
Prerequisites with concurrency (pre or co-requisite)	
Credit restrictions	☐ **Equivalency***
Recommended Prerequisites	
Course Restrictions	

Course Type	☐ **Core**	☐ **Elective**	☐ **Core or Elective**
Grading mode	☐ **N (normal alpha grade)**	☐ **P (pass/fail)**	

***Equivalency:** Two courses are similar enough in content that they are considered equivalent so students can register in either course but they will only receive credit for one course in their program.

CHANGES TO COURSE INSTRUCTIONAL METHOD (MODE OF DELIVERY): *Values of CLS, HYB, IND, OFF, WB1 and WEB are being phased out. If you are changing the mode of delivery for this course, please make your selection from the values below:*

IN-PERSON		HYBRID	
ONLINE		OFF-SITE	

CHANGES TO TEACHING AND ASSESSMENT METHODS (if applicable)

CHANGES TO LEARNING OUTCOMES (if applicable; for assistance developing course learning outcomes, please refer to the Teaching and Learning website, or contact them at teachingandlearning@ontariotechu.ca.)

DOES THIS COURSE CONTAIN ANY EXPERIENTIAL LEARNING COMPONENTS?
If yes:

Case Study		Simulated Workplace Project	
Consulting project/workplace project		Applied Research	
Field Experiences			
Other Types of Experiences:			

IMPACT AND CONSULTATION

(Curriculog contact to complete an Impact Report)

DOES THIS COURSE CHANGE IMPACT BOTH THE UNDERGRADUATE AND GRADUATE CALENDARS?
☐ **Yes** ☒ **No**

WHAT CONSIDERATIONS HAVE BEEN MADE FOR EQUITY, DIVERSITY, INCLUSION AND DECOLONIZATION?*

N/A

For more information and guidance on incorporating equity, diversity and inclusion principles in curricula, please visit the Diversity, Inclusion and Belonging resource section of the CIQE website.

CONSULTATION

Consultation is central to governance at Ontario Tech. Faculties are required to consult with all areas impacted by this change, and the home faculty dean is responsible for all consultation decisions in this section of the form. Note that any false statements related to consultation may require re-submission of proposals.

FACULTY CONSULTATION

WILL THIS CHANGE IMPACT ANY OTHER FACULTIES? SOME EXAMPLES MAY INCLUDE, BUT ARE NOT LIMITED TO, THE SCENARIOS LISTED BELOW.*

☐ **Yes** ☒ **No**

Examples:

- *A course from another faculty is being added or removed from the program map.*
- *Changes to joint and/or service programs (e.g., 'and Management' programs, targeted minors).*
- *Changes to year of offering for courses from another faculty (e.g., moving a course from Year 1 to Year 2).*

Additional examples can be found in the Resources section of the CIQE website.

IF YOU ANSWERED YES TO THE QUESTION ABOVE, PLEASE EXPLAIN AND OUTLINE THE CONSULTATION PROCESS IN DETAIL. ATTACH RELEVANT DOCUMENTS (EMAILS, FACULTY COUNCIL MINUTES, ETC.) OR INCLUDE LINKS TO CORRESPONDING DOCUMENTS.*

N/A

INDIGENOUS CONTENT AND CONSULTATION

DOES THIS COURSE CONTAIN ANY INDIGENOUS CONTENT? ☐ **Yes** ☒ **No** ☐ **Unsure**

For more information on how Indigenous content is defined at Ontario Tech University and how to consult with the Indigenous Education Advisory Circle (IEAC), please refer to the Protocol for Consultation with the Indigenous Education Advisory Circle.

HAS THE IEAC BEEN CONTACTED? ☐ **Yes** ☒ **No**

If yes, when?

WHAT WAS THE ADVICE YOU RECEIVED FROM THE IEAC, AND HOW HAS IT BEEN INCLUDED IN YOUR PROPOSAL? Please attach or provide links to documents that outline the consultation process and advice given.

DID THE IEAC ASK YOU TO RETURN THE PROPOSAL TO THEM FOR REVIEW? ☐ **Yes** ☐ **No** ☒ **N/A**

IF YES, HAVE THEY COMPLETED THEIR REVIEW? ☐ **Yes** ☐ **No** ☒ **N/A**

OTHER CONSULTATION

HAVE YOU CONSULTED WITH STUDENTS, THE SCHOOL OF GRADUATE AND POSTDOCTORAL STUDIES, OFFICE OF THE REGISTRAR, STUDENT LIFE, THE LIBRARY AND/OR ANY OTHER AREAS ON CAMPUS THAT MAY BE IMPACTED?*

☐ **Yes** ☒ **No**

If yes, please explain and outline the consultation process in detail.*

N/A

Does this change involve co-op?*

☐ **Yes** ☒ **No**

If yes, please acknowledge that you have consulted with the Director, External Relations and Partnerships by checking the box below.

☐ Yes, we have consulted

Pre-Faculty Council Approval Dates (e.g. Curriculum Committee, Program Committee):

NEW COURSE TEMPLATE

For changes to existing courses see Course Change Template

New courses must be entered into Curriculog prior to Faculty Council. Please use this template to provide the information to your Curriculog contact.

Faculty: Faculty of Engineering and Applied Science

This new course is associated with: ☐ Minor Program Adjustment ☐ Major Program Modification ☒ New Program ☐ None

Will this course appear anywhere other than the course description section of the Calendar?	☒ **Yes** ☐ **No**

If you answered yes to the above, please complete:

A new core course for an existing program, specialization or minor*: Minor Program Adjustment*
A new elective course for an existing program, specialization or minor, listed in the program map*: Course Placement*
A new course (core or elective) related to a Major Program Modification*: Major Program Modification*
A new course (core or elective) related to a New Program*: New Program proposal*

Programs impacted: [Please list all impacted programs including any applicable fields or specializations.]

BEng in Artificial Intelligence Engineering

Calendar start date: (When the course should first appear in the Academic Calendar 2020-2021)

Fall 2027

Registration start date: (The first time the course will be open for registration e.g. Fall 2020)

Fall 2027

Additional supporting information (optional; please indicate if you are attaching any additional documentation)

Subject Code: ARTE	**Course Number: 2000U**
Full Course Title: Foundations of AI Engineering	

Short-Form Course Title (max. 30 characters)**:** Foundations of AI Engineering

Course Description

This course introduces the principles and practices involved in engineering artificial intelligence (AI) systems, including technologies such as recommendation systems, computer vision, and generative AI. The course provides a conceptual introduction to AI engineering and examines the roles of data, machine learning models, and computing infrastructure in building intelligent applications. The engineering lifecycle of AI systems is explored, including problem formulation, data preparation, model development and evaluation, and system integration and deployment. Real-world applications of AI across industry and society are considered, along with ethical, societal, and professional issues related to the responsible development and deployment of AI technologies.

Credit Hours: 3	
Contact Hours – please indicate total number of hours for each component	
Lecture: 3	**Lab:**
Tutorial: 1.5 hr weekly	**Other:**
Cross-listings	
Prerequisites for Calendar	ENGR 1200U
Prerequisites for Banner	
Co-requisites	
Prerequisites with concurrency (pre or co-requisite)	
Credit restrictions	☐ **Equivalency***
Recommended Prerequisites	
Course Restrictions	
Course Type	☒ **Core** ☐ **Elective** ☐ **Core or Elective**
Is the course: ☒ Undergraduate ☐ Graduate ☐ Professional (e.g. some Education courses)	
Grading scheme	☒ **N (normal alpha grade)** ☐ **P (pass/fail)**

***Equivalency:** Two courses are similar enough in content that they are considered equivalent so students can register in either course but they will only receive credit for one course in their program.

Course instructional method:

CLS (In Class Delivery)	x	HYB (In Class and Online Delivery)	
IND (Individual Studies)		OFF (Off Site)	
WB1 (Virtual Meet Time – Synchronous)		WEB (Fully Online – Asynchronous)	
Not Applicable			

Teaching and assessment methods:

Assignments, midterms, project, and final exam as determined by the instructor.

Learning outcomes: (for assistance developing course learning outcomes, please refer to the Teaching and Learning website, or contact them at teachingandlearning@ontariotechu.ca.)

CEAB Graduate Attributes:

Attributes	**Covered in the Course**
Design	D
Professionalism	D
Impact of engineering on society and the environment	D
Ethics and equity	I
Economics and project management	I

CEAB Course Content Breakdown:

Math	Basic Science	Complementary Studies	Engineering Science	Engineering Design
0%	0%	0%	40%	60%

Students who successfully complete the course should have reliably demonstrated the ability to:

1. Explain the AI engineering lifecycle, including problem formulation, data preparation, model development, evaluation, system integration and deployment.
2. Explain fundamental concepts of artificial intelligence and machine learning and their role in modern computing systems.
3. Describe the components and architecture of AI-enabled systems, including data, models, and software infrastructure.
4. Identify and select appropriate AI approaches for different types of real-world problems and applications.
5. Evaluate the performance and limitations of AI systems using appropriate metrics and testing approaches.
6. Design and implement a simple AI-enabled application that integrates data, models, and software components.
7. Analyze and communicate ethical, societal, and professional issues related to the development and deployment of AI technologies.

Topics

1. Introduction to Artificial Intelligence and AI Engineering
2. AI Systems and Real-World Applications
3. Data and Datasets for AI Systems
4. Foundations of Machine Learning
5. Classification, Prediction, and Pattern Recognition
6. Evaluating and Testing AI Systems
7. Architecture of AI-Enabled Systems
8. The AI Engineering Lifecycle
9. Generative AI and Foundation Models
10. Limitations, Failures, and Risks of AI Systems
11. Ethical and Societal Implications of AI
12. Responsible AI Engineering and Emerging Trends

Does this course contain any experiential learning components? ☐ **Yes** ☒ **No**

If yes:

Case Study		Simulated Workplace Project	
Consulting project/workplace project		Applied Research	
Field Experiences			
Other Types of Experiences:			

We have consulted with all impacted areas: ☒ **Yes** ☐ **NA**

Process of consultation, if applicable:

Have you considered the principles of Equity, Diversity, Inclusion, or Decolonization included when creating this new course? ☐ **Yes** ☐ **No** **Please explain:**

The Faculty of Engineering and Applied Science (FEAS) is fully committed to Equity, Diversity, and Inclusion (EDI), including in all of its courses. For students who have accommodation needs, existing Student Accessibility Services (SAS) support will be available to students who require specific accommodations.

Does this course contain any Indigenous content? ☐ **Yes** ☒ **No** ☐ **Unsure**

For more information on how Indigenous content is defined at Ontario Tech University and how to consult with the Indigenous Education Advisory Circle (IEAC), please refer to the Protocol for Consultation with the Indigenous Education Advisory Circle.

Has the IEAC been contacted? ☐ **Yes** ☐ **No**

If yes, when?

What was the advice you received from the IEAC, and how has it been included in your proposal?

Did the IEAC ask you to return the proposal to them for review? ☐ **Yes** ☐ **No**

If yes, have they completed their review? ☐ **Yes** ☐ **No** ☐ **N/A**

Financial Implications

There will be no significant financial impact, as the course will be delivered by the department's existing full-time faculty members.

Pre-Faculty Council Approval Dates (e.g. Curriculum Committee, Program Committee):

NEW COURSE TEMPLATE

For changes to existing courses see Course Change Template

New courses must be entered into Curriculog prior to Faculty Council. Please use this template to provide the information to your Curriculog contact.

Faculty: Faculty of Engineering and Applied Science

This new course is associated with:
☐ Minor Program Adjustment ☐ Major Program Modification ☒ New Program ☐ None

Will this course appear anywhere other than the course description section of the Calendar?	☒ **Yes** ☐ **No**

If you answered yes to the above, please complete:

A new core course for an existing program, specialization or minor*: Minor Program Adjustment*
A new elective course for an existing program, specialization or minor, listed in the program map*: Course Placement*
A new course (core or elective) related to a Major Program Modification*: Major Program Modification*
A new course (core or elective) related to a New Program*: New Program proposal*

Programs impacted: [Please list all impacted programs including any applicable fields or specializations.]

BEng in Artificial Intelligence Engineering

Calendar start date: (When the course should first appear in the Academic Calendar 2020-2021)

Fall 2027

Registration start date: (The first time the course will be open for registration e.g. Fall 2020)

Fall 2027

Additional supporting information (optional; please indicate if you are attaching any additional documentation)

Subject Code: ARTE	**Course Number: 2100U**
Full Course Title: Bio-Inspired Computing	

Short-Form Course Title (max. 30 characters)**:** Bio-Inspired Computing

Course Description

This course explores a range of popular nature-inspired computing methods that draw inspiration from biological, physical, and natural systems. These computational paradigms have been successfully applied to solve complex problems across diverse real-world domains. Topics covered include cellular automata, artificial life, neural networks, evolutionary computation, and swarm intelligence. Students will gain both theoretical insights and practical experience in modelling and applying these techniques to problem-solving scenarios.

Credit Hours: 3	
Contact Hours – please indicate total number of hours for each component	
Lecture: 3	**Lab: 2hr bi-weekly**
Tutorial:	**Other:**
Cross-listings	
Prerequisites for Calendar	ENGR 1025U
Prerequisites for Banner	
Co-requisites	
Prerequisites with concurrency (pre or co-requisite)	
Credit restrictions	☐ **Equivalency***
Recommended Prerequisites	
Course Restrictions	
Course Type	☒ **Core** ☐ **Elective** ☐ **Core or Elective**
Is the course: ☒ Undergraduate ☐ Graduate ☐ Professional (e.g. some Education courses)	
Grading scheme	☒ **N (normal alpha grade)** ☐ **P (pass/fail)**

***Equivalency:** Two courses are similar enough in content that they are considered equivalent so students can register in either course but they will only receive credit for one course in their program.

Course instructional method:

CLS (In Class Delivery)	x	HYB (In Class and Online Delivery)	
IND (Individual Studies)		OFF (Off Site)	
WB1 (Virtual Meet Time – Synchronous)		WEB (Fully Online – Asynchronous)	
Not Applicable			

Teaching and assessment methods:

Assignments, midterms, project, and final exam as determined by the instructor.

Learning outcomes: (for assistance developing course learning outcomes, please refer to the Teaching and Learning [website](), or contact them at teachingandlearning@ontariotechu.ca.)

CEAB Graduate Attributes:

Attributes	Covered in the Course
Investigation	D
Communication	D
Impact of engineering on society and the environment	I
Ethics and equity	I
Life Long Learning	D

CEAB Course Content Breakdown:

Math	Basic Science	Complementary Studies	Engineering Science	Engineering Design
0%	80%	0%	20%	0%

Students who successfully complete the course should have reliably demonstrated the ability to:

1. Describe Core Nature-Inspired Computing Paradigms
2. Explain the Biological and Natural Analogies Behind Computing Models
3. Apply Nature-Inspired Techniques to Solve Computational Problems
4. Compare and Evaluate Nature-Inspired Approaches
5. Implement and Experiment with Nature-Inspired Algorithms

Does this course contain any experiential learning components? ☐ **Yes** ☒ **No**

If yes:

Case Study		Simulated Workplace Project	
Consulting project/workplace project		Applied Research	
Field Experiences			
Other Types of Experiences:			

We have consulted with all impacted areas: ☒ **Yes** ☐ **NA**

Process of consultation, if applicable:

Have you considered the principles of Equity, Diversity, Inclusion, or Decolonization included when creating this new course? ☐ **Yes** ☐ **No** **Please explain:**

The Faculty of Engineering and Applied Science (FEAS) is fully committed to Equity, Diversity, and Inclusion (EDI), including in all of its courses. For students who have accommodation needs, existing Student Accessibility Services (SAS) support will be available to students who require specific accommodations.

Does this course contain any Indigenous content? ☐ **Yes** ☒ **No** ☐ **Unsure**

For more information on how Indigenous content is defined at Ontario Tech University and how to consult with the Indigenous Education Advisory Circle (IEAC), please refer to the Protocol for Consultation with the Indigenous Education Advisory Circle.

Has the IEAC been contacted? ☐ **Yes** ☐ **No**

If yes, when?

What was the advice you received from the IEAC, and how has it been included in your proposal?

Did the IEAC ask you to return the proposal to them for review? ☐ **Yes** ☐ **No**

If yes, have they completed their review? ☐ **Yes** ☐ **No** ☐ **N/A**

Financial Implications

There will be no significant financial impact, as the course will be delivered by the department's existing full-time faculty members.

Pre-Faculty Council Approval Dates (e.g. Curriculum Committee, Program Committee):

NEW COURSE TEMPLATE

For changes to existing courses see Course Change Template

New courses must be entered into Curriculog prior to Faculty Council. Please use this template to provide the information to your Curriculog contact.

Faculty: Faculty of Engineering and Applied Science

This new course is associated with:
☐ Minor Program Adjustment ☐ Major Program Modification ☒ New Program ☐ None

Will this course appear anywhere other than the course description section of the Calendar?	☒ **Yes** ☐ **No**

If you answered yes to the above, please complete:

A new core course for an existing program, specialization or minor*: Minor Program Adjustment*
A new elective course for an existing program, specialization or minor, listed in the program map*: Course Placement*
A new course (core or elective) related to a Major Program Modification*: Major Program Modification*
A new course (core or elective) related to a New Program*: New Program proposal*

Programs impacted: [Please list all impacted programs including any applicable fields or specializations.]

BEng in Artificial Intelligence Engineering

Calendar start date: (When the course should first appear in the Academic Calendar 2020-2021)

Fall 2027

Registration start date: (The first time the course will be open for registration e.g. Fall 2020)

Fall 2027

Additional supporting information (optional; please indicate if you are attaching any additional documentation)

Subject Code: ARTE	**Course Number: 2200U**
Full Course Title: Introduction to Data Analytics	

Short-Form Course Title (max. 30 characters)**:** Intro. to Data Analytics

Course Description

This course provides an introduction to the field of data analytics, focusing on the use of data, statistical and quantitative analysis, and predictive modeling to uncover meaningful patterns and insights. Students will explore the principles and techniques used to analyze both structured and unstructured data. Emphasis is placed on applying standard data mining algorithms and interpreting their results in the context of real-world decision-making. The course combines theoretical foundations with practical exercises to equip students with the skills necessary to perform data-driven analysis and support data-informed decision processes across various domains.

Credit Hours: 3	
Contact Hours – please indicate total number of hours for each component	
Lecture: 3	**Lab:**
Tutorial: 1.5 hr weekly	**Other:**
Cross-listings	
Prerequisites for Calendar	ATRE 2xxxU Foundations of AI Engineering and SOFE 2710U
Prerequisites for Banner	
Co-requisites	
Prerequisites with concurrency (pre or co-requisite)	
Credit restrictions	☐ **Equivalency***
Recommended Prerequisites	
Course Restrictions	
Course Type	☒ **Core** ☐ **Elective** ☐ **Core or Elective**
Is the course: ☒ Undergraduate ☐ Graduate ☐ Professional (e.g. some Education courses)	
Grading scheme	☒ **N (normal alpha grade)** ☐ **P (pass/fail)**

***Equivalency:** Two courses are similar enough in content that they are considered equivalent so students can register in either course but they will only receive credit for one course in their program.

Course instructional method:

CLS (In Class Delivery)	x	HYB (In Class and Online Delivery)	
IND (Individual Studies)		OFF (Off Site)	
WB1 (Virtual Meet Time – Synchronous)		WEB (Fully Online – Asynchronous)	
Not Applicable			

Teaching and assessment methods:

Assignments, midterms, project, and final exam as determined by the instructor.

Learning outcomes: (for assistance developing course learning outcomes, please refer to the Teaching and Learning website, or contact them at teachingandlearning@ontariotechu.ca.)

CEAB Graduate Attributes:

Attributes	**Covered in the Course**
Investigation	I
Design	I
Use of Engineering Tools	D
Individual and team work	D
Life Long Learning	I

CEAB Course Content Breakdown:

Math	Basic Science	Complementary Studies	Engineering Science	Engineering Design
0%	0%	0%	75%	25%

Students who successfully complete the course should have reliably demonstrated the ability to:

1. Explain the core concepts and significance of data analytics in modern decision-making processes.
2. Apply statistical, exploratory, and predictive modeling techniques to analyze structured and unstructured datasets.
3. Utilize standard data mining algorithms to extract insights and patterns from data.
4. Evaluate the effectiveness and limitations of analytic models in various real-world applications.
5. Communicate findings and recommendations derived from data analysis to both technical and non-technical audiences.

Does this course contain any experiential learning components? ☐ **Yes** ☒ **No**

If yes:

Case Study		Simulated Workplace Project	
Consulting project/workplace project		Applied Research	
Field Experiences			
Other Types of Experiences:			

We have consulted with all impacted areas: ☒ **Yes** ☐ **NA**

Process of consultation, if applicable:

Have you considered the principles of Equity, Diversity, Inclusion, or Decolonization included when creating this new course? ☐ **Yes** ☐ **No** **Please explain:**

The Faculty of Engineering and Applied Science (FEAS) is fully committed to Equity, Diversity, and Inclusion (EDI), including in all of its courses. For students who have accommodation needs, existing Student Accessibility Services (SAS) support will be available to students who require specific accommodations.

Does this course contain any Indigenous content? ☐ **Yes** ☒ **No** ☐ **Unsure**
For more information on how Indigenous content is defined at Ontario Tech University and how to consult with the Indigenous Education Advisory Circle (IEAC), please refer to the [Protocol for Consultation with the Indigenous Education Advisory Circle.]()

Has the IEAC been contacted? ☐ **Yes** ☐ **No**

If yes, when?

What was the advice you received from the IEAC, and how has it been included in your proposal?

Did the IEAC ask you to return the proposal to them for review? ☐ **Yes** ☐ **No**

If yes, have they completed their review? ☐ **Yes** ☐ **No** ☐ **N/A**

Financial Implications

There will be no significant financial impact, as the course will be delivered by the department's existing full-time faculty members.

Pre-Faculty Council Approval Dates (e.g. Curriculum Committee, Program Committee):

NEW COURSE TEMPLATE

For changes to existing courses see Course Change Template

New courses must be entered into Curriculog prior to Faculty Council. Please use this template to provide the information to your Curriculog contact.

Faculty: Faculty of Engineering and Applied Science

This new course is associated with: ☐ Minor Program Adjustment ☐ Major Program Modification ☒ New Program ☐ None

Will this course appear anywhere other than the course description section of the Calendar?	☒ **Yes** ☐ **No**

If you answered yes to the above, please complete:

***A new core course for an existing program, specialization or minor**: Minor Program Adjustment*
***A new elective course for an existing program, specialization or minor, listed in the program map**: Course Placement*
***A new course (core or elective) related to a Major Program Modification**: Major Program Modification*
***A new course (core or elective) related to a New Program**: New Program proposal*

Programs impacted: [Please list all impacted programs including any applicable fields or specializations.]

BEng in Artificial Intelligence Engineering

Calendar start date: (When the course should first appear in the Academic Calendar 2020-2021)

Fall 2027

Registration start date: (The first time the course will be open for registration e.g. Fall 2020)

Fall 2027

Additional supporting information (optional; please indicate if you are attaching any additional documentation)

Subject Code: ARTE	**Course Number: 3000U**
Full Course Title: Data and Feature Engineering	

Short-Form Course Title (max. 30 characters)**:** Data and Feature Engineering

Course Description

This course introduces the principles and practices of preparing data for artificial intelligence and machine learning systems. Students learn how to design data pipelines, manage and transform datasets, and construct effective features for predictive models. Topics include data ingestion, cleaning and transformation, feature engineering, dataset versioning, and reproducible data workflows using modern data processing tools and libraries. Emphasis is placed on building reliable, scalable, and ethical data preparation processes that support machine learning applications.

Credit Hours: 3	
Contact Hours – please indicate total number of hours for each component	
Lecture: 3	**Lab:2 hr bi-weekly**
Tutorial: 1.5 hr weekly	**Other:**
Cross-listings	
Prerequisites for Calendar	SOFE 2715U and ARTE 2200U: Introduction to Data Analytics
Prerequisites for Banner	
Co-requisites	
Prerequisites with concurrency (pre or co-requisite)	
Credit restrictions	☐ **Equivalency***
Recommended Prerequisites	
Course Restrictions	
Course Type	☒ **Core** ☐ **Elective** ☐ **Core or Elective**
Is the course: ☒ Undergraduate ☐ Graduate ☐ Professional (e.g. some Education courses)	
Grading scheme	☒ **N (normal alpha grade)** ☐ **P (pass/fail)**

***Equivalency:** Two courses are similar enough in content that they are considered equivalent so students can register in either course but they will only receive credit for one course in their program.

Course instructional method:

CLS (In Class Delivery)	x	HYB (In Class and Online Delivery)	
IND (Individual Studies)		OFF (Off Site)	
WB1 (Virtual Meet Time – Synchronous)		WEB (Fully Online – Asynchronous)	
Not Applicable			

Teaching and assessment methods:

Assignments, midterms, project, and final exam as determined by the instructor.

Learning outcomes: (for assistance developing course learning outcomes, please refer to the Teaching and Learning website, or contact them at teachingandlearning@ontariotechu.ca.)

CEAB Graduate Attributes:

Attributes	Covered in the Course
Investigation	D
Design	D
Communication	D
Ethics and equity	D

CEAB Course Content Breakdown:

Math	Basic Science	Complementary Studies	Engineering Science	Engineering Design
0%	0%	0%	30%	70%

Students who successfully complete the course should have reliably demonstrated the ability to:

1. Design and implement basic data pipelines for acquiring and processing datasets used in AI systems.
2. Clean, transform, and manage structured and unstructured datasets using modern data processing tools.
3. Apply feature engineering techniques to prepare data for machine learning models.
4. Evaluate dataset quality, bias, and suitability for training and testing AI models.
5. Implement reproducible workflows for dataset preparation and management.
6. Integrate prepared datasets into machine learning pipelines for downstream modeling tasks.

Topics
1. Data Engineering in AI Systems
2. Data Ingestion and Data Sources
3. Data Storage, Schemas, and Data Formats
4. Data Cleaning and Validation Pipelines
5. Data Transformation for Machine Learning
6. Feature Engineering Fundamentals
7. Advanced Feature Engineering Techniques
8. Dataset Construction for Machine Learning
9. Data Leakage, Bias, and Dataset Integrity
10. Reproducible Data Workflows and Versioning
11. Feature Pipelines and ML Data Pipelines
12. Preparing Data for Machine Learning Systems

Does this course contain any experiential learning components? ☐ **Yes** ☒ **No**

If yes:

Case Study		Simulated Workplace Project	
Consulting project/workplace project		Applied Research	
Field Experiences			

We have consulted with all impacted areas: ☒ **Yes** ☐ **NA**

Process of consultation, if applicable:

Have you considered the principles of Equity, Diversity, Inclusion, or Decolonization included when creating this new course? ☐ **Yes** ☐ **No** **Please explain:**

The Faculty of Engineering and Applied Science (FEAS) is fully committed to Equity, Diversity, and Inclusion (EDI), including in all of its courses. For students who have accommodation needs, existing Student Accessibility Services (SAS) support will be available to students who require specific accommodations.

Does this course contain any Indigenous content? ☐ **Yes** ☒ **No** ☐ **Unsure**

For more information on how Indigenous content is defined at Ontario Tech University and how to consult with the Indigenous Education Advisory Circle (IEAC), please refer to the Protocol for Consultation with the Indigenous Education Advisory Circle.

Has the IEAC been contacted? ☐ **Yes** ☐ **No**

If yes, when?

What was the advice you received from the IEAC, and how has it been included in your proposal?

Did the IEAC ask you to return the proposal to them for review? ☐ **Yes** ☐ **No**

If yes, have they completed their review? ☐ **Yes** ☐ **No** ☐ **N/A**

Financial Implications

There will be no significant financial impact, as the course will be delivered by the department's existing full-time faculty members.

Pre-Faculty Council Approval Dates (e.g. Curriculum Committee, Program Committee):

____

NEW COURSE TEMPLATE

For changes to existing courses see Course Change Template

New courses must be entered into Curriculog prior to Faculty Council. Please use this template to provide the information to your Curriculog contact.

Faculty: Faculty of Engineering and Applied Science

This new course is associated with:
☐ Minor Program Adjustment ☐ Major Program Modification ☒ New Program ☐ None

Will this course appear anywhere other than the course description section of the Calendar?	☒ **Yes** ☐ **No**

If you answered yes to the above, please complete:

A new core course for an existing program, specialization or minor*: Minor Program Adjustment*

A new elective course for an existing program, specialization or minor, listed in the program map*: Course Placement*

A new course (core or elective) related to a Major Program Modification*: Major Program Modification*

A new course (core or elective) related to a New Program*: New Program proposal*

Programs impacted: [Please list all impacted programs including any applicable fields or specializations.]

BEng in Artificial Intelligence Engineering

Calendar start date: (When the course should first appear in the Academic Calendar 2020-2021)

Fall 2027

Registration start date: (The first time the course will be open for registration e.g. Fall 2020)

Fall 2027

Additional supporting information (optional; please indicate if you are attaching any additional documentation)

Subject Code: ARTE	**Course Number: 3200U**
Full Course Title: Natural Language Processing	

Short-Form Course Title (max. 30 characters)**:** Natural Language Processing

Course Description

This course introduces the fundamental theories and practical skills required for Natural Language Processing (NLP). Students will explore core concepts such as text preprocessing, syntactic and semantic analysis, language modelling, and sentiment analysis. Emphasis is placed on developing the ability to collect, clean, and analyze text data using a variety of NLP algorithms and machine learning techniques. Through hands-on projects and coding assignments, students will gain experience building real-world NLP applications, including chatbots, information extraction tools, and text classifiers. The course bridges linguistic theory with computational techniques, preparing students for further research or industry applications in language technology

Credit Hours: 3	
Contact Hours – please indicate total number of hours for each component	
Lecture: 3	**Lab:**
Tutorial: 1.5 hr weekly	**Other:**
Cross-listings	
Prerequisites for Calendar	SOFE 3720U and SOFE 3770U
Prerequisites for Banner	
Co-requisites	
Prerequisites with concurrency (pre or co-requisite)	
Credit restrictions	☐ **Equivalency***
Recommended Prerequisites	
Course Restrictions	
Course Type	☒ **Core** ☐ **Elective** ☐ **Core or Elective**
Is the course: ☒ Undergraduate ☐ Graduate ☐ Professional (e.g. some Education courses)	
Grading scheme	☒ **N (normal alpha grade)** ☐ **P (pass/fail)**

***Equivalency:** Two courses are similar enough in content that they are considered equivalent so students can register in either course but they will only receive credit for one course in their program.

Course instructional method:

CLS (In Class Delivery)	x	HYB (In Class and Online Delivery)	
IND (Individual Studies)		OFF (Off Site)	
WB1 (Virtual Meet Time – Synchronous)		WEB (Fully Online – Asynchronous)	
Not Applicable			

Teaching and assessment methods:

Assignments, midterms, project, and final exam as determined by the instructor.

Learning outcomes: (for assistance developing course learning outcomes, please refer to the Teaching and Learning website, or contact them at teachingandlearning@ontariotechu.ca.)

CEAB Graduate Attributes:

Attributes	**Covered in the Course**
Problem Analysis	D
Design	A
Use of Engineering Tools	A
Impact of engineering on society and the environment	D
Life Long Learning	A

CEAB Course Content Breakdown:

Math	Basic Science	Complementary Studies	Engineering Science	Engineering Design
0%	0%	0%	75%	25%

Students who successfully complete the course should have reliably demonstrated the ability to:

1. Explain the foundational concepts and algorithms in natural language processing, including tokenization, stemming, parsing, and language modelling.
2. Preprocess and analyze text data using standard NLP libraries and techniques.
3. Design and implement programs to solve basic NLP tasks such as text classification, named entity recognition, and sentiment analysis.
4. Apply machine learning and deep learning approaches to build NLP applications.
5. Evaluate the performance of NLP models using appropriate metrics and methods.

Does this course contain any experiential learning components? ☐ **Yes** ☒ **No**

If yes:

Case Study		Simulated Workplace Project	
Consulting project/workplace project		Applied Research	
Field Experiences			
Other Types of Experiences:			

We have consulted with all impacted areas: ☒ **Yes** ☐ **NA**

Process of consultation, if applicable:

Have you considered the principles of Equity, Diversity, Inclusion, or Decolonization included when creating this new course? ☐ **Yes** ☐ **No** **Please explain:**

The Faculty of Engineering and Applied Science (FEAS) is fully committed to Equity, Diversity, and Inclusion (EDI), including in all of its courses. For students who have accommodation needs, existing Student Accessibility Services (SAS) support will be available to students who require specific accommodations.

Does this course contain any Indigenous content? ☐ **Yes** ☒ **No** ☐ **Unsure**

For more information on how Indigenous content is defined at Ontario Tech University and how to consult with the Indigenous Education Advisory Circle (IEAC), please refer to the Protocol for Consultation with the Indigenous Education Advisory Circle.

Has the IEAC been contacted? ☐ **Yes** ☐ **No**

If yes, when?

What was the advice you received from the IEAC, and how has it been included in your proposal?

Did the IEAC ask you to return the proposal to them for review? ☐ **Yes** ☐ **No**

If yes, have they completed their review? ☐ **Yes** ☐ **No** ☐ **N/A**

Financial Implications

There will be no significant financial impact, as the course will be delivered by the department's existing full-time faculty members.

Pre-Faculty Council Approval Dates (e.g. Curriculum Committee, Program Committee):

NEW COURSE TEMPLATE

For changes to existing courses see Course Change Template

New courses must be entered into Curriculog prior to Faculty Council. Please use this template to provide the information to your Curriculog contact.

Faculty: Faculty of Engineering and Applied Science

This new course is associated with: ☐ Minor Program Adjustment ☐ Major Program Modification ☒ New Program ☐ None

Will this course appear anywhere other than the course description section of the Calendar?	☒ **Yes** ☐ **No**

If you answered yes to the above, please complete:

A new core course for an existing program, specialization or minor*: Minor Program Adjustment*
A new elective course for an existing program, specialization or minor, listed in the program map*: Course Placement*
A new course (core or elective) related to a Major Program Modification*: Major Program Modification*
A new course (core or elective) related to a New Program*: New Program proposal*

Programs impacted: [Please list all impacted programs including any applicable fields or specializations.]

BEng in Artificial Intelligence Engineering

Calendar start date: (When the course should first appear in the Academic Calendar 2020-2021)

Fall 2027

Registration start date: (The first time the course will be open for registration e.g. Fall 2020)

Fall 2027

Additional supporting information (optional; please indicate if you are attaching any additional documentation)

Subject Code: ARTE	**Course Number: 4120U**
Full Course Title: AI Agents and Multi-Agent Systems	

Short-Form Course Title (max. 30 characters)**:** AI Agents and Multi-Agent Systems

Course Description

This course introduces the principles and practices for designing, deploying, and coordinating AI agent-based systems. Students will learn how to build intelligent agents that can operate autonomously, collaborate effectively, and solve complex, multi-step tasks in dynamic environments. Key topics include role specialization, memory management, tool integration, task decomposition, error handling, and agent cooperation strategies. Through case studies and hands-on projects, students will automate six common business processes using coordinated teams of AI agents equipped with memory, tools, and strategic workflows.

Credit Hours: 3			
Contact Hours – please indicate total number of hours for each component			
Lecture: 3		**Lab: 2 hr bi-weekly**	
Tutorial:		**Other:**	
Cross-listings			
Prerequisites for Calendar	**ARTE 3200U: Natural Language Processing**		
Prerequisites for Banner			
Co-requisites			
Prerequisites with concurrency (pre or co-requisite)			
Credit restrictions			**☐ Equivalency***
Recommended Prerequisites			
Course Restrictions			
Course Type	**☒ Core**	**☐ Elective**	**☐ Core or Elective**
Is the course: ☒ Undergraduate	☐ Graduate	☐ Professional (e.g. some Education courses)	
Grading scheme	**☒ N (normal alpha grade)**	**☐ P (pass/fail)**	

***Equivalency:** Two courses are similar enough in content that they are considered equivalent so students can register in either course but they will only receive credit for one course in their program.

Course instructional method:

CLS (In Class Delivery)	x	HYB (In Class and Online Delivery)	
IND (Individual Studies)		OFF (Off Site)	
WB1 (Virtual Meet Time – Synchronous)		WEB (Fully Online – Asynchronous)	
Not Applicable			

Teaching and assessment methods:

Assignments, midterms, project, and final exam as determined by the instructor.

Learning outcomes: (for assistance developing course learning outcomes, please refer to the Teaching and Learning [website](), or contact them at [teachingandlearning@ontariotechu.ca]().)

CEAB Graduate Attributes:

Attributes	Covered in the Course
Problem Analysis	D
Investigation	D
Design	D
Use of Engineering Tools	D
Life Long Learning	I

CEAB Course Content Breakdown:

Math	Basic Science	Complementary Studies	Engineering Science	Engineering Design
0%	0%	0%	75%	25%

Students who successfully complete the course should have reliably demonstrated the ability to:

1. Design autonomous AI agents with distinct roles and capabilities tailored to specific tasks.
2. Implement memory architectures for AI agents, including short-term, long-term, and shared memory to support decision-making.
3. Integrate tools and APIs into agent workflows to enhance their problem-solving and data-gathering capabilities.
4. Decompose complex tasks into sub-goals and assign them across multiple agents to improve performance and scalability.
5. Apply guardrails and safety mechanisms to handle agent errors, hallucinations, and unbounded loops.
6. Coordinate multi-agent systems using serial, parallel, and hierarchical cooperation models to automate real-world business processes.

Does this course contain any experiential learning components? ☐ **Yes** ☒ **No**

If yes:

Case Study		Simulated Workplace Project	
Consulting project/workplace project		Applied Research	
Field Experiences			
Other Types of Experiences:			

We have consulted with all impacted areas: ☒ **Yes** ☐ **NA**

Process of consultation, if applicable:

Have you considered the principles of Equity, Diversity, Inclusion, or Decolonization included when creating this new course? ☐ **Yes** ☐ **No** **Please explain:**

The Faculty of Engineering and Applied Science (FEAS) is fully committed to Equity, Diversity, and Inclusion (EDI), including in all of its courses. For students who have accommodation needs, existing Student Accessibility Services (SAS) support will be available to students who require specific accommodations.

Does this course contain any Indigenous content? ☐ **Yes** ☒ **No** ☐ **Unsure**

For more information on how Indigenous content is defined at Ontario Tech University and how to consult with the Indigenous Education Advisory Circle (IEAC), please refer to the Protocol for Consultation with the Indigenous Education Advisory Circle.

Has the IEAC been contacted? ☐ **Yes** ☐ **No**

If yes, when?

What was the advice you received from the IEAC, and how has it been included in your proposal?

Did the IEAC ask you to return the proposal to them for review? ☐ **Yes** ☐ **No**

If yes, have they completed their review? ☐ **Yes** ☐ **No** ☐ **N/A**

Financial Implications

There will be no significant financial impact, as the course will be delivered by the department's existing full-time faculty members.

Pre-Faculty Council Approval Dates (e.g. Curriculum Committee, Program Committee):

NEW COURSE TEMPLATE

For changes to existing courses see Course Change Template

New courses must be entered into Curriculog prior to Faculty Council. Please use this template to provide the information to your Curriculog contact.

Faculty: Faculty of Engineering and Applied Science

This new course is associated with: ☐ Minor Program Adjustment ☐ Major Program Modification ☒ New Program ☐ None

Will this course appear anywhere other than the course description section of the Calendar?	☒ **Yes** ☐ **No**

If you answered yes to the above, please complete:

A new core course for an existing program, specialization or minor*: Minor Program Adjustment*
A new elective course for an existing program, specialization or minor, listed in the program map*: Course Placement*
A new course (core or elective) related to a Major Program Modification*: Major Program Modification*
A new course (core or elective) related to a New Program*: New Program proposal*

Programs impacted: [Please list all impacted programs including any applicable fields or specializations.]

BEng in Artificial Intelligence Engineering

Calendar start date: (When the course should first appear in the Academic Calendar 2020-2021)

Fall 2027

Registration start date: (The first time the course will be open for registration e.g. Fall 2020)

Fall 2027

Additional supporting information (optional; please indicate if you are attaching any additional documentation)

Subject Code: ARTE	**Course Number: 4210U**
Full Course Title: Autonomous and Connected Systems	
Short-Form Course Title (max. 30 characters)**:** Autonomous & Connected Systems	

Course Description

This course introduces students to the foundational concepts and technologies behind autonomous and connected systems, with applications in areas such as self-driving vehicles, smart cities, robotics, and the Internet of Things (IoT). Topics include system architectures, sensor integration, localization and mapping, control and decision-making algorithms, vehicle-to-vehicle (V2V) and vehicle-to-infrastructure (V2I) communication, data fusion, safety and ethical considerations. The course also explores the use of machine learning for perception, prediction, and planning in autonomous systems. Students will engage in hands-on labs and projects to design, simulate, and analyze autonomous and connected systems.

Credit Hours: 3			
Contact Hours – please indicate total number of hours for each component			
Lecture: 3		**Lab: 2 hr bi-weekly**	
Tutorial:		**Other:**	
Cross-listings			
Prerequisites for Calendar	SOFE 4590U		
Prerequisites for Banner			
Co-requisites			
Prerequisites with concurrency (pre or co-requisite)			
Credit restrictions	☐ **Equivalency***		
Recommended Prerequisites			
Course Restrictions			
Course Type	☒ **Core**	☐ **Elective**	☐ **Core or Elective**
Is the course: ☒ Undergraduate	☐ Graduate	☐ Professional (e.g. some Education courses)	
Grading scheme	☒ **N (normal alpha grade)**	☐ **P (pass/fail)**	

***Equivalency:** Two courses are similar enough in content that they are considered equivalent so students can register in either course but they will only receive credit for one course in their program.

Course instructional method:

CLS (In Class Delivery)	x	HYB (In Class and Online Delivery)	
IND (Individual Studies)		OFF (Off Site)	
WB1 (Virtual Meet Time – Synchronous)		WEB (Fully Online – Asynchronous)	
Not Applicable			

Teaching and assessment methods:

Assignments, midterms, project, and final exam as determined by the instructor.

Learning outcomes: (for assistance developing course learning outcomes, please refer to the Teaching and Learning website, or contact them at teachingandlearning@ontariotechu.ca.)

CEAB Graduate Attributes:

Attributes	Covered in the Course
Problem Analysis	A
Design	A
Use of Engineering Tools	A
Individual and team work	A
Impact of engineering on society and the environment	A

CEAB Course Content Breakdown:

Math	Basic Science	Complementary Studies	Engineering Science	Engineering Design
0%	0%	0%	75%	25%

Students who successfully complete the course should have reliably demonstrated the ability to:

1. Explain the key components, architecture, and operation of autonomous and connected systems.
2. Apply algorithms for localization, mapping, and motion planning in autonomous systems.
3. Integrate communication protocols (e.g., V2V, V2I) into connected system designs.
4. Implement basic sensor fusion and control strategies using real-time data inputs.
5. Analyze challenges related to safety, security, and ethics in autonomous and connected systems.

Does this course contain any experiential learning components? ☐ **Yes** ☒ **No**

If yes:

Case Study		Simulated Workplace Project	
Consulting project/workplace project		Applied Research	
Field Experiences			
Other Types of Experiences:			

We have consulted with all impacted areas: ☒ **Yes** ☐ **NA**

Process of consultation, if applicable:

Have you considered the principles of Equity, Diversity, Inclusion, or Decolonization included when creating this new course? ☐ **Yes** ☐**No** **Please explain:**

The Faculty of Engineering and Applied Science (FEAS) is fully committed to Equity, Diversity, and Inclusion (EDI), including in all of its courses. For students who have accommodation needs, existing Student Accessibility Services (SAS) support will be available to students who require specific accommodations.

Does this course contain any Indigenous content? ☐ **Yes** ☒ **No** ☐ **Unsure**

For more information on how Indigenous content is defined at Ontario Tech University and how to consult with the Indigenous Education Advisory Circle (IEAC), please refer to the [Protocol for Consultation with the Indigenous Education Advisory Circle.]

Has the IEAC been contacted? ☐ **Yes** ☐ **No**

If yes, when?

What was the advice you received from the IEAC, and how has it been included in your proposal?

Did the IEAC ask you to return the proposal to them for review? ☐ **Yes** ☐ **No**

If yes, have they completed their review? ☐ **Yes** ☐ **No** ☐ **N/A**

Financial Implications

There will be no significant financial impact, as the course will be delivered by the department's existing full-time faculty members.

Pre-Faculty Council Approval Dates (e.g. Curriculum Committee, Program Committee):

NEW COURSE TEMPLATE

For changes to existing courses see Course Change Template

New courses must be entered into Curriculog prior to Faculty Council. Please use this template to provide the information to your Curriculog contact.

Faculty: Faculty of Engineering and Applied Science

This new course is associated with: ☐ Minor Program Adjustment ☐ Major Program Modification ☒ New Program ☐ None

Will this course appear anywhere other than the course description section of the Calendar?	☒ **Yes** ☐ **No**

If you answered yes to the above, please complete:

A new core course for an existing program, specialization or minor*: Minor Program Adjustment*

A new elective course for an existing program, specialization or minor, listed in the program map*: Course Placement*

A new course (core or elective) related to a Major Program Modification*: Major Program Modification*

A new course (core or elective) related to a New Program*: New Program proposal*

Programs impacted: [Please list all impacted programs including any applicable fields or specializations.]

BEng in Artificial Intelligence Engineering

Calendar start date: (When the course should first appear in the Academic Calendar 2020-2021)

Fall 2027

Registration start date: (The first time the course will be open for registration e.g. Fall 2020)

Fall 2027

Additional supporting information (optional; please indicate if you are attaching any additional documentation)

Subject Code: ARTE	**Course Number: 4300U**
Full Course Title: Computer Vision and Robotics	

Short-Form Course Title (max. 30 characters)**:** Computer Vision and Robotics

Course Description

This course provides an introduction to key aspects of computer vision with a focus on applications in robotics. Students will explore fundamental concepts and techniques in image processing and 3D vision that enable robots to perceive and interact with their environment. The course combines theoretical foundations with practical applications and case studies of real-world robotic vision systems.

Credit Hours: 3		
Contact Hours – please indicate total number of hours for each component		
Lecture: 3		**Lab:2hr bi-weekly**
Tutorial:		**Other:**
Cross-listings		
Prerequisites for Calendar	SOFE 3720U	
Prerequisites for Banner		
Co-requisites		
Prerequisites with concurrency (pre or co-requisite)		
Credit restrictions		☐ **Equivalency***
Recommended Prerequisites		
Course Restrictions		
Course Type	☐ **Core** ☒ **Elective** ☐ **Core or Elective**	
Is the course: ☒ Undergraduate ☐ Graduate ☐ Professional (e.g. some Education courses)		
Grading scheme	☒ **N (normal alpha grade)** ☐ **P (pass/fail)**	

***Equivalency:** Two courses are similar enough in content that they are considered equivalent so students can register in either course but they will only receive credit for one course in their program.

Course instructional method:

CLS (In Class Delivery)	x	HYB (In Class and Online Delivery)	
IND (Individual Studies)		OFF (Off Site)	
WB1 (Virtual Meet Time – Synchronous)		WEB (Fully Online – Asynchronous)	
Not Applicable			

Teaching and assessment methods:

Assignments, midterms, project, and final exam as determined by the instructor.

Learning outcomes: (for assistance developing course learning outcomes, please refer to the Teaching and Learning website, or contact them at teachingandlearning@ontariotechu.ca.)

CEAB Graduate Attributes:

Attributes	Covered in the Course
Design	A
Use of Engineering Tools	A
Professionalism	A
Economics and Project Management	A

CEAB Course Content Breakdown:

Math	Basic Science	Complementary Studies	Engineering Science	Engineering Design
10%	0%	0%	20%	70%

Students who successfully complete the course should have reliably demonstrated the ability to:

1. Explain the Principles of Image Formation and Camera Calibration
   Students will be able to describe the geometry of image formation and apply camera calibration techniques for robotic vision systems.
2. Apply Image Processing and Feature Detection Techniques
   Students will apply foundational image processing methods and feature detection/matching algorithms to extract meaningful visual information.
3. Analyze 3D Vision Techniques for Robotic Perception
   Students will analyze and implement methods such as stereo vision and structure from motion to reconstruct 3D scenes from images.
4. Evaluate the Role of Machine Learning in Robotic Vision
   Students will evaluate the application of machine learning and deep learning techniques in robotic vision tasks such as segmentation, object detection, and tracking.
5. Assess Real-World Robotic Vision Systems
   Students will critically assess case studies of robotic vision systems, understanding how visual perception integrates with robotic tasks and decision-making.

Does this course contain any experiential learning components? ☐ **Yes** ☒ **No**

If yes:

Case Study		Simulated Workplace Project	
Consulting project/workplace project		Applied Research	
Field Experiences			
Other Types of Experiences:			

We have consulted with all impacted areas: ☒ **Yes** ☐ **NA**

Process of consultation, if applicable:

Have you considered the principles of Equity, Diversity, Inclusion, or Decolonization included when creating this new course? ☐ **Yes** ☒ **No** **Please explain:**

The Faculty of Engineering and Applied Science (FEAS) is fully committed to Equity, Diversity, and Inclusion (EDI), including in all of its courses. For students who have accommodation needs, existing Student Accessibility Services (SAS) support will be available to students who require specific accommodations.

Does this course contain any Indigenous content? ☐ **Yes** ☒ **No** ☐ **Unsure**

For more information on how Indigenous content is defined at Ontario Tech University and how to consult with the Indigenous Education Advisory Circle (IEAC), please refer to the Protocol for Consultation with the Indigenous Education Advisory Circle.

Has the IEAC been contacted? ☐ **Yes** ☐ **No**

If yes, when?

What was the advice you received from the IEAC, and how has it been included in your proposal?

Did the IEAC ask you to return the proposal to them for review? ☐ **Yes** ☐ **No**

If yes, have they completed their review? ☐ **Yes** ☐ **No** ☐ **N/A**

Financial Implications

There will be no significant financial impact, as the course will be delivered by the department's existing full-time faculty members.

Pre-Faculty Council Approval Dates (e.g. Curriculum Committee, Program Committee):

Appendix F - Faculty Information

Please include here only those currently at the institution and affiliated with the program.

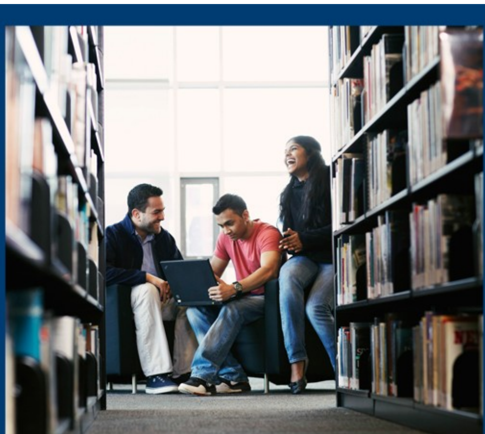
Name and Faculty Status/Rank	Terminal Degree	Home Faculty/Unit	Areas of Expertise	Role in New Program (Note if faculty will be teaching and/or supervising in the program)	Total Undergraduate Teaching (including New Program) (Note in bold type if faculty is a core course developer for the program)
Dr. Anwar Abdalbari Associate Teaching Professor	PhD	FEAS	Electrical, Computer and Software Engineering	Teaching - SOFE 2710U, SOFE2715, SOFE 2720U, Intro to AI	6-7 courses Software/Electrical Engineering
Dr. Khalid Elgazzar Associate Professor	PhD	FEAS	Electrical, Computer and Software Engineering	Teaching - ENGR 1200U, SOFE 4590U New courses Intro to Data, Deep Learning Architecture & Algorithms)	3-4 courses Software and the AI program
Dr. Khalid Abdel Hafeez Associate Teaching Professor	PhD	FEAS	Electrical, Computer and Software Engineering	Teaching - SOFE 3770U, SOFE 2250U, SOFE 4620, Intro to AI (new course Learning Architecture & Algorithms)	6-7 courses Software and the AI program
Dr. Qusay Mahmoud Professor	PhD	FEAS	Middleware	Teaching software development, distributed systems, and supervision of capstone projects.	3-4 courses
Dr. Sanaa Alwidian Assistant Professor	PhD	FEAS	Requirements Engineering, AI for Software Engineering, Software Modeling and Analysis	Teaching Requirements Engineering and AI for Software Engineering courses	3-4 courses

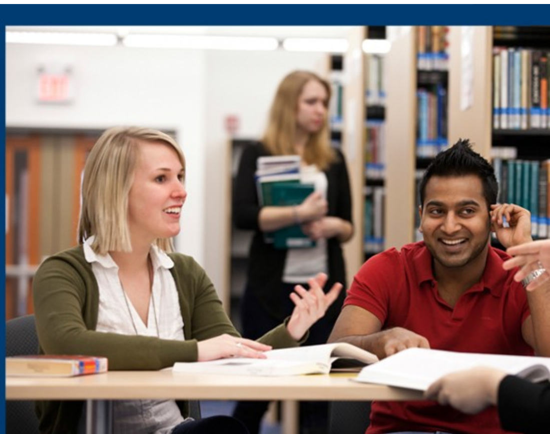
Dr. Masoud Makrehchi Associate Professor	PhD	FEAS	AI, Machine Learning, Natural Language Processing, Data mining	Teaching a broad range of courses in AI and Machine Learning and Algorithm Design, SOFE 3720U, SOFE 4620U	3-4 Courses
Dr. Akramul Azim Associate Professor	PhD	FEAS	Embedded systems, cyber physical systems, AI-based software systems, Software Testing, DevOps, AI/ML	Teaching courses related to AI-based systems and DevOps, SOFE 4590U	3-4 Courses
Masoud Farzam Associate Teaching Professor	PhD	FEAS		Teaching labs & ENGR 2100U/ELEE 2200U	6-7 courses Laboratory
Dr. Tarlochan Sidhu Professor	PhD	FEAS	Electrical, Computer and Software Engineering	ENGR 1015U, ENGR 1025U	3-4 Courses
Dr. Hani Sami Assistant Professor	PhD	FEAS	Electrical, Computer and Software Engineering	SOFE 3650U	3-4 Courses
Dr. Mohamed El-Darieby Associate Professor	PhD	FEAS	Electrical, Computer and Software Engineering	SOFE 3290U	3-4 Courses
Dr. Nasim Moallemi Associate Teaching Professor	PhD	FEAS	Electric Circuit, Electronics, Digital Systems, and Electrical Engineering Fundamentals, Microprocessor and Embedded Systems	Teaching - ENGR 4760U & ENGR 3360U	6-7 courses
Various faculty members from the Faculty of Science	PhD	FSCI	Calculus, Physics, Chemistry, Linear Algebra, Statistics,	Teaching - Foundational Mathematics and Physics courses	6-7 courses Mathematics/Science/Engineering

New Program Assessment: Bachelor of Engineering (Honours), Artificial Intelligence Engineering

Library Statement of Support Provided to Ontario Tech University

Prepared by: Kate Gibbings, Faculty of Engineering and Applied Science Liaison Librarian, July 8, 2025





OntarioTech Library

Contents

Summary

Ontario Tech University Library's holdings in Artificial Intelligence Engineering are strong.

Library collections support artificial intelligence topics in all engineering program areas, and particularly in the disciplines of software and computer engineering. Topic coverage includes machine learning, information theory, algorithms, models, data mining, deep learning, neural networks, supervised learning, and multiagent systems.

The Library's research holdings, as well as archives and special collections total more than 98,368 print volumes and 187,387 journal subscriptions. In addition, our holdings include more than 1,484,750 e-books, and primary source materials. Collection strengths support the research and instructional programs at Ontario Tech University.

Opportunities exist to incorporate information literacy instruction directly into the Bachelor of Engineering (Honours), Artificial Intelligence Engineering program. Student feedback from information literacy sessions overwhelmingly shows that students find the skills to be useful and that information literacy instruction should ideally be incorporated into first year classes. The following are examples of undergraduate engineering courses that could benefit from information literacy instruction due to assignments that require research skills and research-related information resources.

- SSCI 1470U: Impact of Science and Technology on Society
- ENGR 3150: Artificial Intelligence and Machine Learning
- ENGR 4940: Capstone Systems Design for Electrical, Computer and Software Engineering I

Resource Requirements

Resource	Rationale	Budget Requirement	OTO or Ongoing
Total			

Introduction

The Library supports the teaching, learning and research missions of Ontario Tech University and Durham College. Ontario Tech students have access to a joint collection of more than 98,368 print books. Additionally, our collections include extensive online resources such as e-books and online databases that are selected to meet curricular needs. Students and faculty are supported by a team of subject specialist librarians and trained library technicians who provide an array of research and teaching support services including information literacy instruction, workshops, research help and reference service.

Library Collections

The Library's collections budget for 2024-25 totaled $1,995,032. Approximately 95% of this budget is directed to online resources, while the remainder is allocated to acquisition of other formats, including journals, print books, multimedia and other specialized material.

Library collections provide strong support for artificial intelligence topics in all engineering program areas, and particularly in the disciplines of software and computer engineering. Given the importance of artificial intelligence in curriculum and research across the Faculty, the Library has both built up subject coverage over time and taken steps to maintain the currency of resources. Topic coverage includes machine learning, information theory, algorithms, models, data mining, deep learning, neural networks, supervised learning, and multiagent systems.

Collection suggestions are welcome and faculty and students are encouraged to contact their subject specialist. All recommended purchases are evaluated according to the Collection Development Policy and with consideration to budget constraints.

Consortial Licensing

By virtue of our membership in two key consortia, the Ontario Tech University community benefits from the increased bargaining power of a collective through which we subscribe to a wide array of scholarly content. Canadian Research Knowledge Network (CRKN) members represent 81 institutions across Canada that include world-class academic libraries and research institutions, two national libraries, and Canada's largest public library system.

The Ontario Council of University Libraries (OCUL) is a consortium of Ontario's 21 university libraries which works together to maximize our collective expertise and resources. OCUL enhances information services in Ontario and beyond through collective purchasing and shared digital information infrastructure, collaborative planning, advocacy, assessment, research, partnerships, communications, and professional development.

Journals

Our journal holdings in disciplines related to Artificial Intelligence Engineering are strong, including coverage of artificial intelligence, software engineering, and computer science.

Students and researchers can access nearly complete journal suites, in many cases including archives, from publishers such as ACM, ASME, Elsevier, IEEE, SAE, Springer, and Wiley.

We provide access, through subscription, to most of the relevant journals with the highest impact factors, according to Clarivate's Journal Citation Reports (JCR) database 2024.

By subject category:

JCR Subject Category	Ontario Tech Access	Select Titles
Computer Science, Artificial Intelligence	19 of Top 20	• Nature Machine Intelligence • IEEE Transactions on Pattern Analysis and Machine Intelligence • Artificial Intelligence Review
Computer Science, Software Engineering	20 of Top 20	• Computational Visual Media • Communications of the ACM • IEEE Transactions on Dependable and Secure Computing
Engineering, Electrical and Electronic	20 of Top 20	• Nature Electronics • IEEE Transactions on Fuzzy Systems

Books & E-Books

In total, the Library provides access to over 98,368 print books and over 1,484,750 e-books that support teaching, learning and research across all programs and disciplines. Through the Omni Library Search, students and faculty have access to books from Ontario Tech and other Omni member universities by searching Ontario Tech + Omni Libraries. Articles and books that are not available through Omni Libraries, can be requested through our interlibrary loan service. Students and faculty have access to books and e-books from major academic publishers, including: ASME, Cambridge University Press, Cengage, CRC Press, IEEE, IET, Elsevier, McGraw Hill, O'Reilly, Packt, Pearson, SAE, SIAM, Springer, Taylor & Francis, and Wiley.

The Library has a Demand-Driven Acquisition (DDA) Engineering collection that adds more than 5,800 recently published engineering e-books from major publishers to the Omni Search tool, with titles updated regularly. As users access specific e-books, those titles are then added to the Library's permanent collection. This allows the Library to vastly increase the availability of relevant titles, while focusing budget funds on e-books that have proven value to students and faculty.

The following table highlights Library holdings by subject heading for print books and e-books that have particular relevance to Artificial Intelligence Engineering. No significant gaps were identified, but the Library will address the collection development needs of this rapidly developing field as follows:

- The Library prioritizes e-book purchases because digital formats facilitate accessibility, convenience and currency. While print book totals are low in some subject areas, this often reflects a necessary focus of funds on e-books. Having said that, it is important for the Library to maintain carefully managed print budgets as some highly relevant books cannot be licensed digitally by libraries due to publisher limitation or cost.

- One way the Library can facilitate access to books on the most current and important topics is by maintaining subscriptions to highly relevant collections such as O'Reilly for Higher Education that continuously add new curated titles, and funds for Demand-Driven Acquisition.

Subject	# Print Books	# E-Books
Artificial Intelligence	210	37,420
Data Mining	141	10,572
Computational Intelligence	28	10,571
Algorithms	158	10,553
Machine Learning	54	8,803
Natural Language Processing or Natural Language Generation (Computer Science)	16	3,059
Neural Networks (Computer)	27	2,734
Deep Learning	2	513
Multiagent Systems	4	594

Search Tools

The Library subscribes to many research databases and indexes that provide access to the literature in Artificial Intelligence Engineering. Systematic searching of these resources enables students and faculty to access journals and other academic resources such as conference proceedings, theses and dissertations, trade publications and reports.

Highly Relevant Databases: Engineering & Computer Science	Relevant Databases: STEM & Multidisciplinary	Relevant Databases: Standards
• ACM Digital Library • ASME • ASTM Digital Library • Computers & Applied Sciences Complete • Engineering Village (INSPEC and Compendex) • IEEE Xplore • O'Reilly for Higher Education • SAE Mobilus • SPIE	• Elsevier ScienceDirect • IOP Science • SciTech Premium Collection • Scopus • SIAM Journals • SpringerLINK • Web of Science	• CSA OnDemand • ASME Standards • ASTM Standards • IEEE Standards • Techstreet Enterprise

Other Library Resources

Standards

The Library subscribes to full standards collections from selected publishers as noted in the table above, but also purchases standards from other publishers via Techstreet Enterprise. Faculty, research teams and students can request standards which are then made available in Techstreet.

Data Resources

The Library provides access to Borealis: The Canadian Dataverse Repository, which supports research data management and open access data requirements for Tri-Agency research funding compliance. To support research that requires statistics and datasets, the Library subscribes to three main resources. Data Liberation Initiative (DLI), odesi and ICPSR provide access to Canadian and American datasets.

Multimedia Resources

Multimedia resources are selected individually or as part of standing subscriptions. Our collection includes 74,347 streaming videos. The collections below are relevant to Engineering programs.

Relevant Streaming Video Collections

Streaming Video Collection	Relevant Titles
O'Reilly for Higher Education	Video content includes videos from courses, conferences and case studies. Titles in Skill category Artificial Intelligence: 131
Kanopy Streaming	Computer Science and Technology: 497

Select Recently Added Multimedia Titles

- Using AI Responsibly. (2024). O'Reilly Media.
- A.I. Revolution. (2024). PBS Nova.

- Introduction to Machine Learning. (2020). The Great Courses.

Library Services

A range of library services support teaching, learning and research at the University. Students and faculty in the Faculty of Engineering and Applied Science have access to services in-person, online and via email or telephone.

Research Support

The Library plays a vital role in supporting student and faculty research at Ontario Tech.

Reference Service & Research Consultations

Students and faculty have access to research support in-person and online, via telephone, email and through online chat help. In the 2024-25 academic year, library staff answered 2,979 research questions from the Ontario Tech community. Of these questions, 224 were from faculty or graduate students.

Librarians provide individualized research consultations with students and faculty, in person or online. These consultations are tailored to meet the needs of individual researchers and can cover a range of topics from basic introductions to more advanced search techniques and support for literature reviews. In the 2024-25 academic year, Librarians participated in 155 research consultations. The Engineering Librarian engaged in ten research consultations with Faculty of Engineering and Applied Science students.

Open Access & Research Data Management

We provide support to faculty and students in complying with the Tri-Agency Open Access Policy (SSHRC, NSERC, CIHR). Faculty and students can make their work open by publishing in an open access or hybrid journal, by depositing their work in a subject repository, or by depositing their work in Ontario Tech's institutional repository, eScholar (https://ir.library.ontariotechu.ca).

We also provide direct support to Faculties through dedicated subject specialist/liaison librarians and online guidance with the Library's Open Access Guide (http://guides.library.ontariotechu.ca/openaccess). The Library has a Research Data Management guide (http://guides.library.ontariotechu.ca/rdm) to support faculty and students in creating data management plans and sharing research data.

During the 2024-2025 academic year, these guides were viewed 1,481 times.

Research Metrics & Impact

The Library supports various departments on campus by fielding requests for reports on author, article, journal and institutional metrics. Subscribed tools include: Web of Science, Scopus and Journal Citation Reports (JCR).

Our Research Metrics guide (http://guides.library.ontariotechu.ca/researchmetrics) provides background information and support for these tools.

Theses & Dissertations

To ensure that the Ontario Tech community has access to national and international thesis and dissertation databases, we provide access to PQDT (ProQuest Dissertations and Theses) and the Theses

Canada Portal. The Library plays a key role in the dissemination and preservation of Ontario Tech theses, managing copies in the institutional open-access digital repository, E-Scholar, as well as maintaining print copies in the Library archives.

Teaching & Learning Support

As partners in teaching and learning at Ontario Tech, we provide a range of instructional and curriculum supports, both in person and online.

Information Literacy Instruction

In collaboration with teaching faculty, Librarians deliver customized information literacy instruction that support the development of students' 21st century skills to successfully search, evaluate and ethically use scholarly resources in their course requirements. These library services are aligned with the Association of College and Research Libraries (ACRL) Framework for Information Literacy for Higher Education. Information literacy sessions are tailored to the specific requirements of the course or assignment. Information literacy may be delivered synchronously or asynchronously to classes, in person or online. Library information literacy modules are available in the Canvas Learning Management System and can be adapted and added directly into courses, or instructors can opt for asynchronous recordings.

In the 2024-25 academic year, 129 students in the Faculty of Engineering and Applied Science received course-integrated instructional support from a Librarian. Information literacy instruction is not integrated into any undergraduate courses in the Software or Electrical Engineering programs, though it is integrated into the following courses:

- NUCL 4610: Corrosion for Engineers
- NUCL 4625: Radioactive Waste Management
- NUCL 4994: Capstone Design I
- ENGR 5003/6003: MASc Seminar for Automotive and Mechanical Engineering
- ENGR 5007/6007: MASc Seminar for Electrical, Computer and Software Engineering

The Librarian-created asynchronous guide Library Research for Engineering Students, noted below, is well used by Engineering students. Students may also receive Information Literacy instruction from a Librarian in their elective or communications courses, as well as voluntary workshops.

Ideally, Information Literacy instruction is scaffolded across the required curriculum, enabling students to build increasingly sophisticated research skills throughout their program of study. Student feedback from information literacy sessions indicates that 78% of students felt more confident using the library after receiving library instruction, 84% of students felt that they learned something new, and that students often wish they could have received this training earlier in their program.

The following courses have been identified as potential Information Literacy touchpoints, due to assignments or projects with research components:

- SSCI 1470U: Impact of Science and Technology on Society
- ENGR 3150U: Artificial Intelligence and Machine Learning
- ENGR 4940: Capstone Systems Design for Electrical, Computer and Software Engineering I

Co-curricular Workshops

In addition to Information Literacy instruction that is integrated into the curriculum, the library offers a number of co-curricular workshops that help develop student and faculty skills. Some examples of workshops offered to Ontario Tech students in the past include:

- Ridgeback Ramp Up: Finding and Reading Peer Reviewed Journal Articles
- 3D Printing Workshops
- Making an Impact: Your Research Identity
- EndNote Essentials: Streamline your Research Process

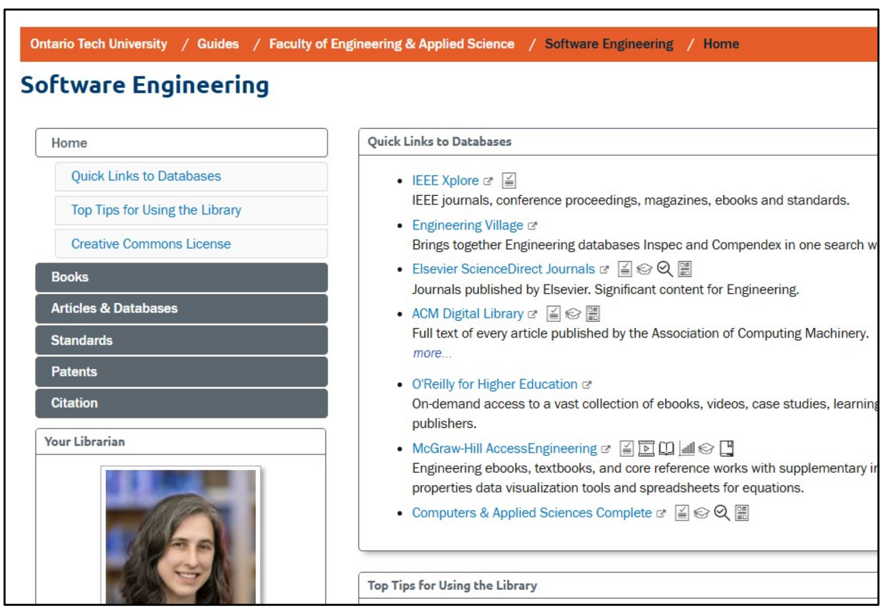
Workshop offerings are regularly updated in response to the changing needs of the community.

Online Research Guides

Subject specialist librarians create custom Research Guides for each subject area that are available from the Library website. Research Guides include program and course guides that are directly related to the program and course curriculum, as well as topic guides that have cross-disciplinary relevance.

- Software Engineering Research Guide: https://guides.library.ontariotechu.ca/soft-eng
- Library Research for Engineering Students: https://guides.library.ontariotechu.ca/engineering
- Standards and Codes Research Guide: https://guides.library.ontariotechu.ca/standards

During the 2024-2025 academic year, these guides were viewed a combined 4,754 times. The Library's Citation Guide, which covers IEEE citation, was viewed 5,865 times.



Software Engineering Research Guide

Copyright & Academic Integrity

The Library provides copyright guidance for faculty and students. Library staff advise on license terms and the integration of content into the Learning Management System (LMS). We also help faculty find, evaluate and integrate Open Educational Resources into their courses.

Our research support services including our citation guides help students avoid plagiarism and comply with the University's Academic Conduct policy.

Course Reserves

Instructors can place materials on course reserve in the library, or make course materials available online through our electronic course reserves system. Online course reserves can include the library's print holdings, as well as digitized chapters, and links to journals, e-book chapters, videos and more. We are dedicated to providing equitable access to resources, and our online reserves are subject to copyright compliance and licensing restrictions.

3D Printing & Equipment Loans

Students have access to 3D printers and 3D printing workshops and can borrow equipment such as laptops and device chargers.

Library Staffing

The anticipated intake for students in the Bachelor of Engineering (Honours), Artificial Intelligence Engineering program is as follows:

- Information provided by Program Quality office

We anticipate that there will be additional staffing requirements associated with growth in graduate and undergraduate degree programs across the University. These requests will be part of the regular budget planning process, following a fulsome and strategic analysis of our staffing needs.

Conclusion

The Library is well-positioned to support the Bachelor of Engineering in Artificial Intelligence Engineering. Our suite of services and programs will meet the needs of students and faculty in this program.

We look forward to working in collaboration with students and faculty in this new program.

Existing student supports
Ontario Tech University, as a relatively small campus community, has a centralized delivery model for student supports. All undergraduate students have access to an extensive support system that ensures a quality student experience. Each Faculty may provide additional, Faculty- or program-specific supports. In addition to the outlined services below, students may also take advantage of the Campus Bookstore, Housing and Living Resources as well as the Ontario Tech Student Union. Further information can be found at: http://studentlife.ontariotechu.ca/.

Faculty-Specific Support

The FEAS Academic Advising Office empowers all engineering students to take ownership of their education by providing personalized, comprehensive academic advising in a confidential and safe environment. The office strives to promote the personal growth of students by instilling a sense of responsibility and independence. The Academic Advisors are committed to helping students develop and reach their academic and personal goals.

The FEAS Academic Advising Office is comprised of four full-time advisors. They include one First Year Advisor and three Upper Years Advisors, along with a Manager of First Year Advising and a Manager of Upper Year Advising. The Academic Advisors work closely with the Department Chair for program related matters and to ensure that the advising needs of students in the program are met.

In recent initiatives by the University, both Managers have dual reporting to the Director of Academic Advising in the Office of the Deputy Provost (for all issues related to Human Resources, Training, and University wide policies and procedures) and to the Associate Dean, Academic within the Faculty (for all issues related to academic matters including but not limited to: course selection, academic standing, readmission, etc.) This model ensures consistency of Academic Advising across the University by developing University wide procedures and providing the required training/professional development while also ensuring that academic matters are contained within the program and the Faculty. It must be stated here that this new structure provides our engineering programs with the expected autonomy to better serve the students in each engineering discipline and relieve the Associate Dean of non-academic matters.

The services provided by Academic Advisors include, but are not limited to:
- Address questions and concerns related to all aspects of student life
- Help establish realistic educational goals and future planning
- Assist in appropriate course planning and sequencing according to the approved program map
- Assess and discusses academic performance, progress, and standing
- Provide strategies and resources for academic success
- Interpret academic policies and procedures
- Ensure all degree requirements are met for timely and successful graduation

- Provide guidance to students on the selection of engineering and liberal studies electives

Student Life

Student Learning Centre

Ontario Tech University fosters a high level of academic excellence by working with students, undergraduate and graduate, to achieve educational success. Faculty specific academic resources are available online and include tip sheets and videos. Academic specialists offer one-on-one support services in mathematics, writing, study skills, ESL and physics. With the additional support of peer tutors and workshops, the Student Learning Centre can also accommodate the needs of a specific course or program.

Student Accessibility Services

Ontario Tech University ensures that students with disabilities have equal opportunities for academic success. Student Accessibility Services operates under the Ontario Human Rights Code and the Accessibility for Ontarians with Disabilities Act. Services and accommodation support are provided for students with documented disabilities and include:

- Adaptive technology training
- Alternate format course material
- Learning skills support
- Testing support
- Transition support for incoming students

Student Accessibility Services also provides inclusive peer spaces, support groups, and skills workshops for students.

Career Readiness

Ontario Tech University offers comprehensive career service assistance, co-op and internship support and a variety of valuable resources to help students along their career paths, including:

- Assistance with creating effective job-search documents
- Career counselling
- Co-op and internships
- Interview preparation
- Job market information
- Job search strategies

The Career Centre hosts a variety of events during the academic year including employer information and networking sessions, job fairs and interviews conducted by leading employers.

Student Engagement, Equity and Inclusion, and ***Indigenous Education and Cultural Services***

The university supports students' successful transition and provides opportunities to develop leadership and professional skills throughout their university career. Services provided include:

- Equity and inclusivity programming and support groups
- Indigenous Education and Cultural Services provides space and supports for students to connect with Indigenous culture and resources
- Opportunities to grow and develop leadership skills through the Ambassador and Peer Mentorship program
- Orientation and events through first year
- Peer mentoring
- Services and supports for international and exchange students
- Specialized programming for first-generation, graduate, Indigenous, international, mature, online, transfer and diploma-to-degree pathways students

Student Mental Health Services

Student Mental Health Services helps students learn how to better manage the pressures of student life. Students can:

- Access short term counselling and therapy services
- Access tools and resources online to learn about mental health and how to maintain good health and wellness
- Attend drop-in sessions
- Participate in events, activities or support groups that promote positive health and well-being
- Work with a mental health professional to address concerns

Students in distress will also be provided with support and counselling as needed. There is no cost to students and services are confidential. For those who need long-term counselling support or specialized mental health services, Ontario Tech University will provide referrals to assist the student in accessing resources in the local community or in the student's home community.

Athletics and Recreation Facilities

Ontario Tech University offers a number of recreation facilities and fitness opportunities to meet all lifestyles and needs. On-campus facilities include the state-of-the-art FLEX Fitness Centre which overlooks Oshawa Creek, five gymnasiums, a 200-metre indoor track, two aerobic/dance studios, the Campus Ice Centre, Campus Fieldhouse, a soccer pitch, a fastball diamond, squash courts and an indoor golf training centre. Students are able to participate in varsity and intramural sports as well as group fitness classes and personal training sessions.

Campus Health Centre

The Campus Health Centre provides assistance in numerous confidential health-care options including:

- A medical clinic with daily access to physician and nursing staff
- Treatment of disease, illness, and injury
- Allergy injections, immunizations, and influenza injections
- Complementary Health Services featuring acupuncture, chiropractic, custom orthotics, massage therapy, nutritional counselling, and physical therapy
- An on-site laboratory (blood work, STI testing, throat swabs, etc.)
- Gynaecological health-care and prescriptions

Student Awards and Financial Aid

Student Awards and Financial Aid (SAFA) is dedicated to helping students understand the variety of options available to finance their education. Budgeting and financial planning are essential to their success and SAFA is on hand to help create the right financial plan. Financial assistance can be in the form of bursaries, employment (both on-campus and off), parental resources, scholarships, student lines of credit and the Ontario Student Assistance Program (OSAP).

Teaching & Learning Centre

The mission of the Teaching and Learning Centre (TLC) at Ontario Tech University is to empower faculty to reach their potential as educators and to create a culture where effective teaching is valued. We champion the scholarship of teaching and implementation of pedagogy. We create valuable teaching and learning professional development experiences. We move Ontario Tech University towards being a leader in teaching excellence, ultimately leading to greater student success.

The TLC provides faculty with a range of tools and facilities to assist them in providing a rich learning experience for students. Experts at the TLC provide support in various areas including curriculum development, multimedia design, learning technology and in the overall improvement of teaching practice.

In addition, the TLC funds teaching-related projects from the Teaching Innovation Fund (TIF) for proposals by faculty members aimed at developing new methods in teaching and learning. The TLC facilitates teaching awards at the University and supports faculty in their application for external awards and funding opportunities that focus on teaching and learning.

Information Technology Resources

Ontario Tech University is a leader among North American universities in implementing and using curriculum and industry specific software in a technology-enriched learning environment (TELE). Our unique environment is adapted to each discipline based on faculty requirements and input for optimal student learning. We are committed to providing the greatest value for students' investment in education and technology while studying at Ontario Tech University.

One of the greatest advantages of Ontario Tech University's approach to TELE is that all students have equal access to the same technology, resources and services. Whether you are inside or outside of the classroom, your course-specific software allows you to work on your own or with others and enjoy seamless access to all Ontario Tech online resources. TELE supports Bring-your-own-device (BYOD) which provides you with laptop standards when acquiring the right laptop for your program and software support services onsite and online. An annual fee for TELE covers a wide range of program-specific software, technical software support, exam support and virus protection.

IT Services strives to provide quality services to students at Ontario Tech. To support these objectives, the following components are included:

Wireless network

Wireless internet connection is available in public areas and open-air locations around the Ontario Tech campus where students congregate (North Oshawa and Downtown locations).

Wired network

To ensure the success of the technology-enriched learning environment, a comprehensive data network has been installed on campus. This includes network drops in lecture halls and designated areas as well as network drops for each residence suite.

Ontario Tech students benefit from networked classrooms and learning spaces. Each ergonomically-designed space has data network connection access and electrical connections to ensure battery regeneration. In addition, classrooms include electronic projection equipment and full multimedia support.

Exam support services

IT Services provide hardware, software and technical support during examinations. IT team will be equipped with loaner laptops in the event of major technical issues.

Laptop repairs

IT Services provide on campus repairs on eligible laptop models.

IT Service Desk

The IT Service Desk is equipped with certified technicians and experienced IT professionals offering technical support services on a drop-in, call-in or email basis.

General Use Workstations (GUWs)
Ontario Tech undergraduate students are able to use general workstations available at the library and have access to Bring Your Own Device Technology-Enriched Learning Environment (BYOD TELE) model course-specific software.

Software Support
Software Support specialists are available to students on-site and online to assist in downloading/installing University software and support any other software related issues.

Printing services
Printing services are available to students in the following areas: labs, classrooms, study common areas, the Learning Commons and the Library. All Ontario Tech students receive print credits every year, more Printpacks can be purchased through the Campus Bookstore if students require additional printing services.

REVIEWERS' REPORT FOR NEW PROGRAMS

Reviewers' Report on the Proposed Bachelor of Engineering (Honours) in Artificial Intelligence Engineering at Ontario Tech University

Houari Sahraoui
Department of Computer Science and Operations Research (DIRO)
Université de Montréal
Pavillon André-Aisenstadt
PO Box 6128 Centre-Ville STN
Montréal, QC
H3C 3J7 Canada

Ladan Tahvildari
Department of Electrical and Computer Engineering
University of Waterloo
200 University Ave West
Waterloo, Ontario
N2L 3G1 Canada

1. OUTLINE OF THE REVIEW

Please indicate whether this review was conducted by desk audit or site visit. For those reviews that included a site visit, please indicate the following:

- Who was interviewed
- What facilities were seen
- Any other activities relevant to the appraisal

This review was conducted as a site visit. Prior to the visit, the external reviewers received program documentation, including the program proposal and supporting appendices, which informed the on-site discussions and appraisal.

During the site visit, the reviewers met with senior academic leadership, program leadership, faculty members involved in the delivery of the proposed program, and representatives from key academic and student support services. Meetings were also held with undergraduate and graduate students to gather feedback on student perspectives and expectations related to the proposed program.

The visit included a guided tour of campus facilities, with particular attention to existing engineering laboratories and a fabrication laboratory that could support experiential and applied components of the Artificial Intelligence Engineering curriculum. Dedicated sessions were also held with learning resources and student support units, including academic advising, co-operative education and career development, library services, IT services, counselling and accessibility services, and the Student Learning Centre.

In addition to interviews and facility visits, the reviewers participated in presentations outlining the institutional context, program objectives, and curriculum structure. Time was allocated for private deliberation among the external reviewers, followed by concluding discussions with program leadership to clarify outstanding questions and summarize preliminary observations.

2. EVALUATION CRITERIA

NOTE: Reviewers are asked to provide feedback on each of the following Evaluation Criteria (Quality Assurance Framework 2021, Section 2.1.2).

2.1 Program Objectives

- Clarity of the program's objectives
- Appropriateness of degree nomenclature given the program's objectives

- Consistency of the program's objectives with the institution's mission and academic plans

The program objectives are clearly articulated and well aligned with the proposed degree designation of Bachelor of Engineering (Honours), Artificial Intelligence Engineering. They are also consistent with the mission and academic plans of the Faculty of Engineering and Applied Science and with the broader institutional emphasis on technology-driven innovation and societal impact.

While the objectives are appropriate and coherent, the review identified a need for clearer articulation of how this program is distinct from having an Artificial Intelligence option within the existing Software Engineering program. The absence of a clearly communicated differentiation may create confusion for prospective students; a concern echoed during discussions with undergraduate students. Explicitly defining this unique identity will be essential to strengthening the program's market positioning.

2.2 Program requirements

- Appropriateness of the program's structure and the requirements to meet its objectives and program-level learning outcomes
- Appropriateness of the program's structure, requirements and program-level learning outcomes in meeting the undergraduate or graduate Degree Level Expectations
- Appropriateness of the proposed mode(s) of delivery to facilitate students' successful completion of the program-level learning outcomes
- Ways in which the curriculum addresses the current state of the discipline or area of study

The overall structure of the program and its requirements are appropriate for achieving the stated objectives and program-level learning outcomes of a BEng (Honours) degree. The learning outcomes align with provincial Undergraduate Degree Level Expectations (UDLEs) and demonstrate the appropriate engineering rigor and specialized AI competencies expected of such a program.

While the foundation is solid, several aspects of the curriculum warrant refinement. Notably, core AI coursework is currently concentrated in the third and fourth years; introducing these concepts earlier in the program would likely enhance curricular coherence and sustain student engagement. Furthermore, the integration of courses leveraged from the Software Engineering program requires closer attention to ensure consistent alignment of content and a logical learning progression. Finally, streamlining the prerequisite chains would improve transparency and overall structural clarity.

The proposed modes of delivery are appropriate and support students' successful completion of the program-level learning outcomes. While the curriculum broadly reflects the current state of the discipline, the program's impact could be further enhanced by more explicitly bridging the gap between AI theory, engineering practice, and their diverse application domains.

2.3 Program requirements for graduate programs only

- Clear rationale for program length that ensures that students can complete the program level learning outcomes and requirements within the proposed time
- 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
- For research-focused graduate programs, clear indication of the nature and suitability of the major research requirements for degree completion

2.4 Assessment of teaching and learning

- Appropriateness of the methods for assessing student achievement of the program-level learning outcomes and degree level expectations
- Appropriateness of the plans to monitor and assess:
  i. The overall quality of the program
  ii. Whether the program is achieving in practice its proposed objectives
  iii. Whether its students are achieving the program-level learning outcomes
  iv. How the resulting information will be documented and subsequently used to inform continuous program improvement

The program employs a diverse and appropriate set of assessment methods to evaluate student achievement of program-level learning outcomes and degree level expectations. These include traditional assessments such as exams and assignments, as well as applied labs, coding exercises, design projects, and communication-focused assessments.

A two-semester capstone design project provides a strong culminating experience, requiring students to address real-world engineering problems while considering economic, ethical, and safety constraints. Experiential learning opportunities, including co-operative education, further support applied learning and professional development.

The plans for monitoring and assessing program quality are well defined and multi-layered. These include launch and post-launch reporting, cyclical program reviews, curriculum mapping, direct and indirect assessment measures, and alignment with Engineers Canada accreditation requirements. The framework provides a sound basis for documenting outcomes and supporting continuous program improvement.

2.5 Admission requirements

- Appropriateness of the program's admission requirements given the program's objectives and program-level learning outcomes
- Sufficient explanation of alternative requirements, if applicable, for admission into a graduate, second-entry or undergraduate program, e.g., minimum grade point average, additional languages or portfolios, and how the program recognizes prior work or learning experience

The admission requirements for the program are appropriate and clearly justified given the program's objectives and learning outcomes. They ensure that incoming students possess the necessary foundations in mathematics, science, and communication to succeed in a rigorous engineering and AI-focused curriculum.

The inclusion of alternative pathways, such as recognition of transfer and mature students, offers necessary flexibility without compromising academic rigor. Overall, the admission framework is well aligned with professional and accreditation expectations.

2.6 Resources for all programs

Given the program's planned /anticipated class sizes and cohorts as well as its program-level learning outcomes:

- Participation of a sufficient number and quality of core faculty who are competent to teach and/or supervise in and achieve the goals of the program and foster the appropriate academic environment

- If applicable, discussion/explanation of the role and approximate percentage of adjunct and part-time faculty/limited term appointments used in the delivery of the program and the associated plans to ensure the sustainability of the program and quality of the student experience
- If required, provision of supervision of experiential learning opportunities
- Adequacy of the administrative unit's planned utilization of existing human, physical and financial resources, including implications for the impact on other existing programs at the university
- Evidence that there are adequate resources to sustain the quality of scholarship and research activities produced by students, including library support, information technology support, and laboratory access
- If necessary, additional institutional resource commitments to support the program in step with its ongoing implementation

With the recent hiring of two new faculty members, the number and quality of core faculty appear appropriate to deliver the program, particularly given the presence of teaching-stream faculty with higher teaching capacities. While faculty expertise in AI-related domains is a notable strength, the allocation of teaching responsibilities requires further clarification. The development of multiple new courses—coupled with overlaps in existing offerings from other faculties—raises concerns regarding faculty workload and the long-term sustainability of the program's delivery model.

Non-academic resources are generally strong, and support staff demonstrate a solid understanding of the challenges associated with launching a new AI-focused engineering program. Several areas, however, warrant further development. Library resources should be more explicitly planned to address the specific and evolving needs of AI engineering. Co-operative education services would benefit from a more targeted strategy to identify industry partners and internship opportunities aligned with AI application domains.

The absence of a clearly articulated plan for dedicated computing infrastructure, including access to advanced resources such as GPUs, represents a notable gap. Additional human resources with appropriate technical expertise may be required to support and maintain such infrastructure. Existing engineering laboratories and a fabrication lab offer valuable opportunities, and further work is encouraged to more explicitly connect these facilities to the AI engineering curriculum. Finally, operational effectiveness would be strengthened by improved coordination and enhanced AI literacy across key service units, including co-op services, academic advising, and accessibility and learning supports.

2.7 Resources for graduate programs only

Given the program's planned /anticipated class sizes and cohorts as well as its program-level learning outcomes:

- Evidence that faculty have the recent research or professional/clinical expertise needed to sustain the program, promote innovation, and foster an appropriate intellectual climate
- Where appropriate to the program, evidence that financial assistance for students will be sufficient to ensure adequate quality and numbers of students
- Evidence of how supervisory loads will be distributed, in light of qualifications and appointment status of the faculty

2.8 Quality and other indicators

- Evidence of quality of the faculty (*e.g.*, qualifications, funding, honours, awards, research, innovation and scholarly record; appropriateness of collective faculty

expertise to contribute substantively to the program and commitment to student mentoring)
- Any other evidence that the program and faculty will ensure the intellectual quality of the student experience

NOTE: Reviewers are urged to avoid using references to individuals. Rather, they are asked to assess the ability of the faculty as a whole to deliver the program and to comment on the appropriateness of each of the areas of the program (fields) that the university has chosen to emphasize, in view of the expertise and scholarly productivity of the faculty.

The overall quality of the faculty involved in the program is good, with strengths in both research and teaching. Faculty expertise is well aligned with the intended focus areas of the program, and collectively, the faculty are well positioned to provide a strong intellectual and educational environment for students.

To fully leverage this faculty strength and ensure the program attracts top-tier talent, the establishment of dedicated scholarships is highly recommended. Such financial support would not only enhance recruitment but also solidify the program's standing as a premier destination for Artificial Intelligence Engineering.

3. EQUITY, DIVERSITY, INCLUSION, AND DECOLONIZATION

Please comment on any consideration of the principles of equity, diversity, inclusion, and decolonization in the new program.

The program demonstrates meaningful consideration of Equity, Diversity, Inclusion, and Decolonization principles. An integrated ethical AI stream runs throughout the curriculum, supported by core courses that address professional responsibility, equity, and ethical engineering practice. The program also critically engages with issues such as algorithmic bias and data colonialism and adopts principles of Universal Design for Learning to enhance accessibility.

Institutional support structures, including Indigenous education services and equity-focused student engagement units, further reinforce these commitments. Faculty research addressing bias and social responsibility in technology aligns well with the institution's broader mandate and supports the integration of EDID principles as a core component of engineering education.

4. OTHER ISSUES

- Please highlight any unique curriculum or program innovation, creative components, or significant high-impact practices
- Please identify any other issues that may not be covered above

No further concerns or issues were identified beyond those previously addressed in this report.

5. SUMMARY AND RECOMMENDATIONS

Please provide a summary of your conclusions and include a numbered list of each of your recommendations.

NOTE: The responsibility for arriving at a recommendation on the final classification of the program belongs to the Appraisal Committee. Individual reviewers are asked to refrain from making recommendations in this respect.

Overall, the proposed Bachelor of Engineering (Honours) in Artificial Intelligence Engineering is solid and well grounded, with clear objectives, appropriate learning outcomes, strong assessment *practices, and a capable faculty base. While the program aligns seamlessly with institutional priorities and professional accreditation standards, strategic refinements are necessary to improve its structural coherence, competitive differentiation, and long-term resource planning.*

Recommendations:

R1: Program Differentiation. *Clearly articulate and communicate the unique identity of the Artificial Intelligence Engineering program to distinguish it from the AI option in Software Engineering. This will ensure clarity for prospective students and strengthen the program's market positioning.*

R2: Curricular Sequencing and Coherence. *Revisit the curriculum structure to introduce core AI concepts earlier in the program while ensuring seamless alignment between newly developed courses and those leveraged from Software Engineering. This will improve student engagement and create a more logical learning progression.*

R3: Faculty Workload and Sustainability. *Formally define teaching responsibilities and resource allocations to ensure faculty workloads remain sustainable as new courses are developed. Addressing potential overlaps with other faculties will be essential for the program's long-term operational health.*

R4: Computing Infrastructure and Technical Support. *Develop a comprehensive strategy for AI-specific computing infrastructure, specifically ensuring reliable access to high-performance GPU resources. This plan should include the recruitment or allocation of technical personnel dedicated to maintaining these specialized systems.*

R5: Support Service Coordination and Literacy. *Enhance coordination between academic advising, co-op services, and learning support units to ensure they are equipped with the specific AI literacy required to assist students in this discipline. This integrated approach will improve the overall student experience and operational effectiveness.*

R6: Integration of Experiential Facilities. *Strengthen the explicit connections between the curriculum and existing engineering and fabrication laboratories to maximize opportunities for applied learning. Formalizing these links will better support the experiential requirements of the Artificial Intelligence Engineering degree.*

R7: Student Recruitment and Financial Support. *Consider exploring a suite of dedicated scholarships specifically for the Artificial Intelligence Engineering program to attract and retain top-tier applicants. Providing targeted financial incentives will ensure the student body matches the high caliber of the faculty and enhances the program's competitive standing.*

Signature:____________________

Date: Feb. 3, 2026

Signature:____________________

Date: February 3, 2026

Faculty Response to the External Review for the

____

BACHELOR OF ENGINEERING (HONOURS) - ARTIFICAL INTELLIGENCE

Submitted By:

Dr. Anwar Abdalbari, IAT Chair

March 13, 2026

Dr. Scott Nokleby, Interim Dean

March 23, 2026

Introduction

The external reviewers have provided positive feedback on the proposed Artificial Intelligence Engineering program. The external reviewers have made some recommendations to further improve the program. We have addressed all of them and updated the proposal accordingly. Below is a summary of the reviewers' comments and our response.

Summary of Recommendations and Faculty Responses

- *Restate the recommendations summarized in the external reviewers' report and provide the Program's comments and responses*
- *The Dean should then provide summative comments/responses from an overarching Faculty perspective for each recommendation and program response*

Recommendation 1
Program Differentiation. Clearly articulate and communicate the unique identity of the Artificial Intelligence Engineering program to distinguish it from the AI option in Software Engineering. This will ensure clarity for prospective students and strengthen the program's market positioning.

Program's Response

The Software Engineering program does not offer an Artificial Intelligence option or specialization. The proposed Artificial Intelligence Engineering program is therefore a distinct standalone engineering degree rather than a specialization within Software Engineering.

The two programs share a common first-year engineering curriculum, consistent with our standard engineering program structure, which provides foundational knowledge in mathematics, physics, programming, and engineering design.

Beyond the first year, the programs diverge significantly. The Artificial Intelligence Engineering program includes eight core AI-focused courses that are not part of the Software Engineering curriculum. These courses emphasize areas such as machine learning, deep learning architectures, natural language processing, computer vision, generative AI, and AI engineering practices including MLOps.

In contrast, the Software Engineering program focuses more heavily on software systems infrastructure, including operating systems, computer networks, distributed systems, software security, and user interface design.

The Artificial Intelligence Engineering program therefore prepares students specifically for designing, building, and deploying intelligent systems, while the Software Engineering program prepares students primarily for designing large-scale software systems and infrastructure.

Program materials, recruitment communications, and advising will clearly communicate these distinctions to prospective students.

Dean's response
The Dean agrees with the Program's response.

Recommendation 2
Curricular Sequencing and Coherence. Revisit the curriculum structure to introduce core AI concepts earlier in the program while ensuring seamless alignment between newly developed courses and those leveraged from Software Engineering. This will improve student engagement and create a more logical learning progression.

Program's Response

The program appreciates the external reviewers' suggestion regarding the early introduction of AI concepts and the importance of maintaining strong curricular coherence.

The current curriculum was designed intentionally to ensure that students first acquire foundational knowledge in programming, mathematics, statistics, and software engineering, which are essential prerequisites for advanced AI topics such as machine learning, deep learning, and generative AI.

Accordingly, the first year provides common engineering foundations, while the second year introduces key computational and mathematical concepts that support later AI courses.

That said, the program recognizes the value of introducing AI-related exposure earlier in the curriculum to strengthen student engagement and provide early context for later courses. Several adjustments are therefore being considered, including:

- integrating generative AI into ENGR 1200U (Introduction to Programming for Engineers) to develop students' awareness of its capabilities, limitations, and appropriate use in programming early in the program,
- introducing AI-focused second-year courses, such as "Introduction to Data Analytics", and replacing "Principles of Software and Requirements Engineering" with "Foundations of AI Engineering", to distinguish the AI program from Software Engineering earlier in the curriculum, also adding "Bio-Inspired Computing" to replace "Natural Foundations for Information Technology" across the programs,
- replacing "Computer Vision and Robotics" with "Data and Feature Engineering" keeping core AI methodologies (Artificial Intelligence, Machine Learning, Data & Feature Engineering, NLP) in third year,
- renaming "Agent-Based Systems" to "AI Agents and Multi-Agent Systems to better reflect modern developments in agentic AI systems.

The program will ensure that any such changes maintain strong alignment between newly developed AI courses and existing Software Engineering courses that provide essential computational foundations.

Overall, the curriculum will continue to emphasize a progressive learning structure, moving from foundational computational and mathematical principles to advanced AI methods and applications in the upper years.

Dean's response
The Dean agrees with the Program's response. The new program capitalizes on existing courses and supports the Program's consideration of adjustments that provide earlier exposure to AI concepts. Students will now learn the responsible use of AI-assisted programming tools in the beginning of their studies in ENGR 1200U. The proposed updates support a strong progression from foundational knowledge to advanced AI topics, while maintaining alignment with common courses offered in Software Engineering.

Recommendation 3
Faculty Workload and Sustainability. Formally define teaching responsibilities and resource allocations to ensure faculty workloads remain sustainable as new courses are developed. Addressing potential overlaps with other faculties will be essential for the program's long-term operational health.

Program's Response

The program recognizes the importance of ensuring that faculty workload remains sustainable as the Artificial Intelligence Engineering program is implemented. The Faculty has recently strengthened its academic capacity through the hiring of three new faculty members in Software Engineering, with expertise that supports both the existing Software Engineering program and the proposed Artificial Intelligence Engineering program. These hires provide additional instructional and research capacity in areas aligned with artificial intelligence and software systems.

Teaching responsibilities within the Faculty are assigned through established departmental processes that ensure balanced teaching loads and alignment between faculty expertise and course assignments. As the Artificial Intelligence Engineering program develops, newly introduced courses will be integrated into these existing workload planning processes.

The Faculty will also continue to monitor enrollment and instructional needs across both programs. Should demand increase significantly, additional faculty recruitment may be pursued through the University's standard hiring procedures, consistent with past practice.

In addition, the University has established governance structures that review new programs to ensure appropriate differentiation and avoid duplication across faculties, thereby supporting efficient allocation of instructional resources. Collaboration across programs will also occur through multidisciplinary capstone projects, allowing faculty supervision and teaching efforts to be shared across related engineering disciplines where appropriate.

Dean's response
The Faculty will ensure that teaching loads are assigned according to the University's collective agreement, while ensuring delivery of both existing and new courses within the program.

Recommendation 4
Computing Infrastructure and Technical Support. Develop a comprehensive strategy for AI-specific computing infrastructure, specifically ensuring reliable access to high-performance GPU resources. This plan should include the recruitment or allocation of technical personnel dedicated to maintaining these specialized systems.

Program's Response

The program recognizes that access to high-performance computing resources, including GPU-enabled systems, is essential for supporting coursework and research in areas such as machine learning, deep learning, computer vision, and generative AI.

Students in the Artificial Intelligence Engineering program will have access to a combination of:

- existing University high-performance computing resources
- recommended student laptops equipped with GPU capabilities, which will allow students to run AI development environments locally for experimentation and project work
- GPU-enabled laboratory workstations
- cloud-based computing platforms where appropriate for coursework and project work

These resources will support both instructional activities and student projects throughout the program.

The program will ensure that GPU resources remain available and scalable as the program grows. In addition, technical support staff responsible for maintaining computing infrastructure will assist with the deployment and management of AI-related software environments required for teaching and student projects.

Dean's response
The Dean agrees with the Program's response. Note, the Faculty is committed to providing a number of GPU-enabled workstations that will be accessible to students in the program.

Recommendation 5
Support Service Coordination and Literacy. Enhance coordination between academic advising, co-op services, and learning support units to ensure they are equipped with the specific AI literacy required to assist students in this discipline. This integrated approach will improve the overall student experience and operational effectiveness

Program's Response

Students in the Artificial Intelligence Engineering program will be supported through the University's existing advising, co-op, and academic support structures, which already serve students across engineering and computing disciplines.

The program will work closely with these units to ensure that advisors, co-op coordinators, and learning support staff are familiar with the structure and learning objectives of the Artificial Intelligence Engineering program. This will allow them to effectively guide students on matters such as course planning, co-op opportunities, and academic support resources.

In addition, regular communication between the program leadership and student support units will ensure that these services remain informed about developments in the AI curriculum and emerging industry trends relevant to student placements and career pathways.

Dean's response
The Dean agrees with the program's response.

Recommendation 6
Integration of Experiential Facilities. Strengthen the explicit connections between the curriculum and existing engineering and fabrication laboratories to maximize opportunities for applied learning. Formalizing these links will better support the experiential requirements of the Artificial Intelligence Engineering degree.

Program's Response

Experiential learning is an important component of the program. Students will engage in applied learning through several mechanisms, including project-based coursework, laboratory activities within existing engineering courses, and industry-related projects.

The Faculty maintains a number of engineering laboratories and fabrication facilities that support hands-on learning in areas such as embedded systems, robotics, prototyping, and hardware development. These facilities provide opportunities for students to develop and test AI-enabled systems that integrate software, sensors, and hardware platforms. In addition, students in the Artificial Intelligence Engineering program will participate in the co-op program, which provides structured opportunities to apply classroom knowledge in professional settings.

Experiential learning will culminate in the fourth-year capstone design sequence, where students work in multidisciplinary teams to design and implement engineering solutions to real-world problems. Capstone projects may involve collaboration with industry partners or research groups and may integrate artificial intelligence techniques with hardware systems, software platforms, or data-driven applications.

Dean's response
The Dean agrees with the Program's response.

Recommendation 7
Student Recruitment and Financial Support. Consider exploring a suite of dedicated scholarships specifically for the Artificial Intelligence Engineering program to attract and retain top-tier applicants. Providing targeted financial incentives will ensure the student body matches the high caliber of the faculty and enhances the program's competitive standing.

Program's Response
Entrance scholarships and financial awards for incoming students are administered centrally by the University and are available to students across all programs based on academic merit and other criteria. These scholarships provide important financial support for students entering engineering and other disciplines.

While the Faculty does not currently administer program-specific entrance scholarships, the Artificial Intelligence Engineering program will benefit from the University's existing scholarship framework, which supports high-achieving students entering engineering programs.

The program will continue to work with the University's advancement and recruitment offices to promote the program and will explore opportunities for external partnerships or donor-supported scholarships that could further support students in this emerging field.

Dean's response
The Dean agrees with the Program's response.

Suggested Revisions for the Proposal following External Review

- *Program to list all suggested revisions to the proposal*
- *For each suggested revision, the Dean should include a comment indicating whether the revision will proceed. If the revision will not proceed, please indicate a rationale*

Recommendations are incorporated in the revised proposal. Please see 'Summary of changes made to proposal of external report'.

Summary of Changes Made to the Proposal Following External Review

List all revisions to the proposal and appendices, noting the Section number from the document. Include this form with the final proposal.

Recommendation 2 Section Changes

I) Introduce AI-related modules within ENGR 1200U (Introduction to Programming for Engineers) in Year 1-2 to expose students to basic AI concepts early in the program;
II) Move “Introduction to Data Analytics” from 2-1 to 2-2;
III) add “Foundations of AI Engineering” to Year 2-1;
IV) Replace “Natural Foundations for Information Technology” with “Bio-Inspired Computing” in Year 2-1;
V) replacing "Principles of Software and Requirements Engineering” with “Introduction to Data Analytics
VI) Replace “Computer Vision and Robotics” in 3-1 with “Data and Feature Engineering”
VII) Rename “Agent-Based Systems” to “AI Agents and Multi-Agent Systems” and move from 3-2 to 4-1;
VIII) Move Foundation Models and Generative AI from 3-2 to 4-1.

UNDERGRADUATE STUDIES COMMITTEE REPORT

ACTION REQUESTED:

Recommendation ☐
Decision ☒
Discussion/Direction ☐
Information ☐

DATE: **19 May 2026**

FROM: **Faculty of Business and Information Technology**

SUBJECT: **Minor Program Adjustment – Bachelor of Commerce**

COMMITTEE MANDATE:
In accordance with the Undergraduate Studies Committee (USC) Terms of Reference, USC has the responsibility “to approve minor program adjustments and report them to Academic Council for information.”

MOTION FOR CONSIDERATION:
That USC hereby approves the Minor Program Adjustment to remove XBIT 2500U as a required course for all majors within the Bachelor of Commerce program.

BACKGROUND/CONTEXT & RATIONALE:

The operational load for this non-credit course outweighs the planned value that drove its introduction, and the planned value as a means for recruiting has not come to fruition.

Removing the requirement will allow us to re-allocate these resources in for-credit courses to positively impact the student experience**.**

RESOURCES REQUIRED:
No additional resources are required.

TRANSITION AND COMMUNICATION PLAN:
The change will be communicated through Academic Advising. Current students would have the requirement waived immediately.

CONSULTATION AND APPROVAL:

- ✓ Curriculum Committee: 31 March 2026
- ✓ Faculty Council: 5 May 2026
- Undergraduate Studies Committee (for approval): 19 May 2026
- Academic Council (for information): 23 June 2026

NEXT STEPS:

Pending the approval of USC, this change will be presented for information to Academic Council and included in the 2027-2028 Academic Calendar.

SUPPORTING REFERENCE MATERIALS:

- Minor Program Adjustment proposal

ACADEMIC COUNCIL COMMITTEE REPORT

SESSION:		**ACTION REQUESTED:**	
Public	☒	**Decision**	☒
		Discussion/Direction	☐
		Information	☒

DATE: **19 May 2026**

FROM: **Centre for Institutional Quality Enhancement**

SUBJECT: **Institutional Quality Assurance Process (IQAP) Policy and Procedures**

MOTION FOR CONSIDERATION:
That the Undergraduate Studies Committee hereby approves the updated IQAP Curriculum Change Procedures, Cyclical Review and Auditing Procedures, and New Program Procedures.

MANDATES:
- In accordance with its mandate, the Centre for Institutional Quality Enhancement (CIQE) is responsible for quality enhancement and continuous improvement of the University's academic programs.
- The Ontario Universities Council on Quality Assurance (Quality Council), established by the Council of Ontario Universities in July 2010, is responsible for oversight of the Quality Assurance Framework (QAF) for Ontario Universities, including ratification of Institutional Quality Assurance Processes (IQAPs).
- As part of its responsibility, CIQE reviews the IQAP for compliance with provincial requirements and the University's academic standards, and ensures the University is following sector best practices.
- In accordance with their Terms of Reference, the Undergraduate and Graduate Studies Committees (USC and GSC) have the delegated authority "to establish, oversee, and periodically review the undergraduate/graduate academic, admissions, and scholarship procedures, guidelines, and directives, and revise when appropriate, and provide regular updates to Academic Council". Hence updates to the IQAP Curriculum Change Procedures, Cyclical Review and Auditing Procedures, and New Program Procedures are presented for approval to both Committees.
- In accordance with the Policy Framework, editorial amendments to the ACD category of policy instruments are approved by the policy owner. Editorial changes to the Institutional Quality Assurance Process Policy (the IQAP Policy) and associated Program Closure Procedures are therefore presented to USC and GSC for information.

BACKGROUND/CONTEXT & RATIONALE:
In 2019-2020 and 2021-2022 Academic Council and its Committees approved a number of substantive and editorial changes to the IQAP based on the 2017-2018 Ontario Universities Council on Quality Assurance (Quality Council) review and the revised Quality Assurance Framework (QAF) (2021). Since that time there have been ongoing minor revisions to the QAF, and the Guidance provided by the Quality Council. The Quality Council requires all Ontario Universities to align with this revised version of the QAF. Additionally,

the IQAP must align with the University Policy Framework, By-law No. 2, and current institutional and provincial practice.

As part of the regular review of policy documents, revisions have been made to the IQAP to once again bring it into alignment with the Quality Council's directives. The number and complexity of the new changes are minor and reflect this alignment. Following an online consultation period of two weeks, the two policy documents that have only editorial changes were approved by the Provost in accordance with the University's Policy Framework and presented to USC and GSC for information.

The three documents, referenced above, which have changes that are non-editorial in nature were presented to both USC and GSC in April. During those meetings there were lengthy discussions and feedback was provided. Both Committees were also provided an opportunity to submit written questions/comments to CIQE. Final, revised versions of these documents are now presented for approval.

Summary of Feedback and Responses from the Consultation Period
A number of comments and questions were received during the period of in-person and written consultation. A summary of the feedback, responses, and any changes made to the documents, as appropriate, is included in the attachments.

SUMMARY OF CHANGES:
A high-level summary of the changes is provided in the attachments.

Changes to other Policy Instruments
There are no associated changes to other policy instruments.

CONSULTATION AND APPROVAL:
In conjunction with the Policy Office, the following consultation and approval path was determined:

- ✓ Online Consultation – April 2026
- Approval Authority: USC and GSC – April 2026 (consultation), May 2026 (approval)
- Academic Council (for information) – June 2026
- Quality Council (for information) – June 2026

NEXT STEPS:
All approved changes will be reported to Academic Council for information and submitted to the Quality Council. The associated handbooks and templates will be updated as needed.

SUPPORTING REFERENCE MATERIALS:

- **Summary of Feedback and Responses from the Consultation Period**
- **Summary of Changes**
- **For Approval** - Draft Revised Procedures:
    - Clean Copies
        - ACD 1501.01 Curriculum Change Procedures Revised
        - ACD 1501.02 Cyclical Review and Auditing Procedures Revised
        - ACD 1501.03 New Program Procedures
    - Tracked Changes
        - ACD 1501.01 Curriculum Change Procedures Revised
        - ACD 1501.02 Cyclical Review and Auditing Procedures Revised
        - ACD 1501.03 New Program Procedures

- **For Information** - Revised Policy & Procedures:
    - Clean Copies
        - ACD 1501 Institutional Quality Assurance Process Policy
        - ACD 1501.04 Program Closure Procedures
    - Tracked Changes
        - ACD 1501 Institutional Quality Assurance Process Policy
        - ACD 1501.04 Program Closure Procedures

Summary of Feedback and Responses from the Consultation Period

Provided below is a summary of the feedback, responses, and any changes made to the documents, as appropriate, following the consultation period.

- Is this the right time to update the IQAP, given that the Quality Council is currently conducting an audit?
    - Yes. While the Council is currently undergoing an audit, and there is an expectation that this will lead to additional changes to the QAF for implementation as early as 2027, it is important to note that past audits and associated revisions to the QAF have not met their anticipated timelines.
    - Furthermore, at launch, the new QAF will have a long transition period to account for any unanticipated challenges and adjustments, and to allow universities to update their IQAPs.
    - Our current IQAP is due for review now, and there have been several updates to the QAF since the latest version launched in 2021. We have reached a critical mass for these changes, and the updates will have a positive impact on Faculty teams, staff, and students.
    - Our process of maintaining consistency with the QAF as minor changes occur continues to keep us current and the proposed changes align with their trends, which will likely mean fewer and less impactful changes when the new QAF is launched.

- How were changes to the Policy determined to be editorial? Which items are editorial in the three Procedures being approved?
    - The Policy Office oversees the process of amending policy instruments. Proposed amendments are reviewed to determine if they are editorial in nature or if they change the purpose, scope, or substantive content of the policy instrument. Amendments that clarify language without changing the intent are considered editorial. The changes to the Policy removed processes duplicated in Procedures (those processes remained in the Procedures) and provide clarification while maintaining existing practices.
    - Any Procedure with one or more changes determined not to be editorial requires the entire Procedure to be presented to the approval authority for approval. All proposed changes are available for review in the three Procedures presented and subject to the approval of USC. This includes any changes which could be individually classified as editorial.

- Are the Procedures that contain both editorial and non-editorial changes (Curriculum Change, Cyclical Review, New Program) being submitted through the correct approval path?
    - Yes. The Board of Governors delegated the authority to approve Academic Procedures to USC and GSC. The Terms of Reference for the committees approved by the Board of Governors include a mandate to establish Procedures. This was done in consultation with Academic Council (AC) and following a plan recommended by AC.
    - Where a policy instrument impacts both graduate and undergraduate study/students, it must be approved by both USC and GSC.

- What is the Scope of the IQAP? Do these changes impact the role of Faculty Council or govern proceedings at the Faculty level?
    - The IQAP begins from the point of approval at the Faculty Council, and above. Items that 'impact up' may be referenced in the IQAP to ensure they make their way appropriately to the various levels of governance after the Faculty Council fulfils its role. There are Terms of Reference (ToR), mandates, and processes for Faculty Council and the associated curriculum and other committees that outline their roles and responsibilities. It is important that the IQAP does not conflict with these ToR, mandates, and processes and it is best practice to avoid redundancy.

- Questions related to the Curriculum Change Procedures
    - Q: What does the term "for-academic-credit" mean? Why is this different from "for-credit" as originally listed? Does adding "academic" conflict with the QAF?

- A: The use of the term “for-academic-credit” in place of “for-credit" is included as this new term became defined when the Micro-credentials and Continuous Learning Policy was approved by Academic Council and the simple ‘for-credit’ became confusing in our context. It is important to note that ‘for-academic-credit’ applies to courses that lead to the completion of degree and diploma programs and the use of this term does not change the type of courses that can be used for these programs, including our ability to use pass/fail and zero credit hour courses. As it is best practice not to duplicate definitions across policy documents to ensure one instance does not contradict another, a hyperlink to the Micro-credentials and Continuous Learning Policy will be added in the final posted Procedures.
  A: Inclusion of “for-academic-credit” does not contradict the QAF, the alignment in this terminology isn't specific and the QAF does not expressly account for continuous learning, which we need to do in our context. The QAF does allow for university-specific context.

  <u>Section 5:</u>
- Q: Why are the items in Section 5.4 no longer considered curricular items and under the purview of the Faculty Council?
  A: The wording of the original draft implied that items in Section 5.1 are Minor Curricular Changes under the purview of the FC while items in 5.4 are not. The items in 5.1 are distinct and long-term, while items removed from the list are revised year by year and sometimes term by term with a requirement to be nimble with changes. Their removal does not remove them from curriculum, nor does it remove the responsibility of the Faculty Council. As this intent was unclear, the draft has been revised and Sections re-numbered to clarify that all items in Section 5 are Minor Curricular Changes and under the purview of the Faculty.

- Q: Why have references to the curriculum committees of the Faculty Councils been removed?
  A: As noted, the IQAP begins after items leave the Faculty. Removing the reference to committees or other bodies below the Faculty Council removes duplication and possible conflict with the ToR and mandates of Faculty Councils and their committees. This is important to ensure Faculty autonomy to determine how decisions are made within their own context, particularly as all Faculties have a different internal structure and many have requirements specific to accreditation.

- Q: Why has the term “of an individual course” been removed in reference to teaching and assessment methods?
  A: Teaching and assessment methods, along with a number of other items, were moved under the bullet “Changes to for-academic-credit courses, including” therefore making further reference to “an individual course” redundant.

  <u>Section 7:</u>
- Q: How are changes to the overall mode of delivery of courses in a program, and changes to the mode of delivery of the program itself, now documented and approved?
  A: Significant change to the program’s delivery is now one separate bullet covering all physical and resource changes related to program delivery, including mode of delivery. This section has been revised to align more closely with the QAF and capture items that were originally scattered throughout the Section and/or that were previously vague. The first draft included an ‘intent of permanent change’ in relation to mode of delivery, however, this was determined to be unclear and unhelpful and has been updated. When the courses begin being scheduled and taught in an altered manner across the program this is a significant change and the revised language more easily captures this intent.

- Q: Why does Section 7.1, bullet 3 in the Quality Council definitions refer to “essential physical resources”?
  A: The bullets in this section refer directly to the QAF and the term is duplicated as written.

- Questions related to the Cyclical Review and Auditing Procedures
  - Q: The term ‘sensitive’ has been added in relation to the creation of Final Assessment Reports, but it is unclear how this is determined, the term is not defined.
    A: This term was added after some recent discussions indicated sensitivity might need to be considered when items are publicly distributed. Based on the feedback it has been deemed unnecessary and has been removed.

  - Q: It appears that paraphrasing and combining recommendations and/or responses in the Final Assessment Reports would put burden on staffing resources having to check with the relevant parties that the original intent has not been altered. Should this requirement be added?
    A: This has always been the practice and effective processes are in place to do this. The statement was added to codify the existing practice.

  - Q: The added statement about the role of the committee is confusing, can you provide more information about this?
    A: This is a shortened version of the statements that are provided at each meeting where a Final Assessment Report is presented. While it was meant to eliminate the need for this, the statement does not provide the necessary clarity, is not helpful in the IQAP, and has therefore been removed.

  - Q: Should the Faculty Council be presented with the FAR and Follow Up reports after they are produced and approved?
    A: The Faculty Council reviews the Program and Dean responses, the Implementation Plan, the self-study and all documents used to produce the FAR and the FAR is posted publicly multiple times throughout the governance process and at the end of the review. Further presentation is not mandated by the IQAP. The Follow-up reports are related to the actions taken by the program and Dean are posted publicly multiple times throughout the governance process and at the end of the review. Further presentation is not mandated by the IQAP.

  - Q: What is being referenced in the statement “summary of the progress reports” and how are these related to the Follow-up reports?
    A: This is a legacy mix of terminology and has been corrected. The referenced “progress reports” are the Follow-up reports. “Follow-up report” has now been used consistently.

Summary of Changes

Editorial Changes (for information)

- *IQAP Policy*
- *Program Closure Procedures*

- *Inclusion/revision of definitions pulled from the revised QAF, the Program Nomenclature Directives, or other Ontario Tech policy instruments, that provide clarity and consistency within the University and with other universities across the province; inclusion of terms used for clarity; removal of duplication of definitions across multiple documents*
- *Changes to ensure consistency across all documents, where appropriate, to eliminate redundancy, or to clarify items that were unclear once they were put into practice*
- *Formatting and proofreading edits*
- *Updated web links for the Quality Council/QAF elements*

Editorial and Non-Editorial Changes (for approval)

- *Curriculum Change Procedures*
- *Cyclical Review and Auditing Procedures*
- *New Program Procedures*

- *Inclusion/revision of definitions pulled from the revised QAF, the Program Nomenclature Directives, or other Ontario Tech policy instruments, that provide clarity and consistency within the University and with other universities across the province; inclusion of terms used for clarity; removal of duplication of definitions across multiple documents*
- *Changes to ensure consistency across all documents, where appropriate, to eliminate redundancy, or to clarify items that were unclear once they were put into practice*
- *Formatting and proofreading edits*
- *Updated web links for the Quality Council/QAF elements*
- *Changes to reflect updates to the QAF to ensure established practices has been codified, or to correct errors and omissions in the last version of the documents*

Changes have been tracked and comments included throughout the documents as needed to describe the nature of the change.

Classification Number	ACD 1501.01
Parent Policy	Institutional Quality Assurance Process
Framework Category	Academic
Approving Authority	Academic Council
Policy Owner	Provost
Approval Date	TBA
Review Date	TBA
Supersedes	ACD 1501 (June 2010); Quality Assurance Handbook (June 2011); Curriculum Change Procedures (June 2020); Not-for-Academic Credit Digital Badges, Microcredentials, and Stackable Credentials Policy (July 2021)

OntarioTech UNIVERSITY

CURRICULUM CHANGE PROCEDURES

PURPOSE

1. The purpose of these Procedures is to establish a consistent process for defining and documenting changes to courses and programs that will facilitate their review and approval under the provincial quality assurance framework.

DEFINITIONS

2. For the purposes of these Procedures the definitions in the Policy apply.

SCOPE AND AUTHORITY

3. These procedures apply to the full range of for-academic-credit curricular and programmatic endeavours at both the graduate and undergraduate levels, including Micro-credentials, whether offered in full, in part, or conjointly by any institutions federated or affiliated with the University. It also applies to Programs offered in partnership, collaboration, or other such arrangement with other post-secondary institutions including colleges, universities, or other institutes.

4. The Provost, or successor thereof, is the Policy Owner and is responsible for overseeing the implementation, administration, and interpretation of these Procedures.

PROCEDURES

Modifications to existing Programs range from changes to individual courses and curricular offerings, through minor adjustments to programs and regulations, to major modifications, such as the introduction of new specializations and fields. The Centre for Institutional Quality Enhancement will provide access to an electronic workflow tracking system and repository for curricular changes. Individuals may use the templates provided at www.ontariotechu.ca/ciqe as a guide to assist in the planning of the changes prior to creating formal electronic proposals for approval in the electronic system.

5. Minor Curricular Changes

5.1. The following Minor Curricular Changes fall under the purview of the relevant Faculty(ies) and will be approved at the Faculty Council (s). Approved changes must be reported to the appropriate standing committee of Academic Council (USC or GSC) for information using the appropriate electronic proposal by the end of January each year for implementation in the upcoming Academic Calendar.

- The creation and closure of for-academic-credit courses
- Changes to for-academic-credit courses, including:
    - course titles, course descriptions, course numbers, credit hours, grade mode, total contact hours, prerequisites, co-requisites, cross-listed courses, credit restrictions and/or credit exclusions, course learning outcomes, core competencies, and teaching and assessment methods
- The addition or deletion of a lecture, lab, tutorial or other course component
- Changes to, or the addition of, experiential learning components, which are part of the course delivery

5.2. Consultation with other Faculty Councils is required if the course being modified is core to another program. Consultation, in accordance with the current procedures for Indigenous consultation, is required if the new course or course being modified has or will contain Indigenous content.

5.3. Minor Curricular Changes not listed in Section 5.1 are the responsibility of the Faculty Council(s) in accordance with any relevant policies and procedures.

5.3.1. Changes or additions to the mode of delivery (in-person, online, hybrid) of a course must be submitted using the appropriate electronic proposal to update the official course record.

6. Minor Program Adjustments

6.1. Minor Program Adjustments will include a full electronic proposal brief and are submitted to the appropriate standing committee of Academic Council for approval. Minor Program Adjustments include:

- Editorial changes to degree requirements, program learning outcomes, or core competencies which may include those completed as a result of a cyclical review
- New academic requirements or changes to existing requirements, including the addition or deletion of required courses
- The introduction of the option to complete a portion or portions of an existing program to receive a for-academic-credit Micro-credential
- The creation of a new, stand-alone, for-academic-credit Micro-credential related to the Program
- The creation of a new Minor program where an existing Major already exists
- A change in the name of a Diploma, Major, or Program Component (e.g. Minor, Specialization, or Field) that does not result in a change to the degree designation or the Program Learning Outcomes
- For clarity, changes to degree requirements will be defined as Minor Program Adjustments when the introduction, deletion, or modification of courses or requirements equals no more than one-third of the total course credit hours of the Program.

6.2. Minor Program Adjustments must be presented directly to the USC or GSC for consideration and approval following their recommendation by Faculty Council. Any changes must receive USC or GSC approval prior to their implementation and inclusion in the academic calendars. The outcome is subsequently reported to Academic Council for information.

6.2.1. To be included in the academic calendars for the subsequent academic year, proposals must be received by USC or GSC no later than the end of January.

6.2.2. Proposals that include the creation or introduction of a Micro-credential will also be reported to the appropriate micro-credential committee. Approved Micro-credentials will be submitted to the Ministry for designation as eligible for Ontario Student Assistance Program funding, if applicable.

6.3. Minor Program Adjustment proposal briefs must minimally include the following information:

a) A summary of the proposed change, setting out the rationale and context for it, including any consideration of the principles of equity, diversity, inclusion, and decolonization.

b) A description of the ways in which the proposed change will enhance the academic opportunities for students, or the issues or challenges that the proposed change are intended to address.

c) An account of the process of consultation with other units and measures taken to minimize the impact of the change on students if the proposed change involves students/faculty from other programs or courses. An account of the process of consultation related to Indigenous content is required if the proposed change has or will contain Indigenous content.

d) A timeline for the implementation of the proposed change and transition plan for current students if applicable.

e) An analysis of the resource and enrolment implications, including support for any proposed online or hybrid delivery.

f) Calendar copy and program maps for the proposed change that clearly highlight the revisions to be made to the existing curriculum.

g) Completed proposals for all new courses and changes to existing courses that result from the change.

7. Major Program Modifications

7.1. The Quality Council defines Major Program Modifications as "significant changes" to existing academic programs where "the impact on the quality of the program and degree of significance can be measured qualitatively and/or quantitatively." These include:

- Requirements that differ significantly from those existing at the time of the previous cyclical program review or at the time the program was first approved
- Significant changes to the learning outcomes
- Significant changes to the faculty engaged in delivering the program and/or to the essential physical resources as may occur, for example, where there have been changes to the existing mode(s) of delivery (e.g., different campus, online delivery, inter-institutional collaboration)

Examples from the Quality Council are provided in the Quality Assurance Guide.

For greater clarity, in the Ontario Tech context, the following examples illustrate changes that normally constitute a significant change and would therefore be considered a Major Program Modification:

- Significant changes to the academic requirements and program content, including the introduction, deletion, or permanent modification of courses or requirements that equals more than one-third of the total credit hours of the Program, but that do not meet the threshold for a new Program
- Significant changes to one or more of the program learning outcomes that alter the meaning of the learning outcome(s) that do not, however, meet the

threshold of a ‘new Program’; changes to the course configuration that impact the learning outcomes (e.g. a course that meets a learning outcome is moved to the list of electives)

- The merger of two related Programs in the absence of any other significant changes (e.g., no changes to the degree designation, learning outcomes, etc. that may meet the threshold for a New Program)
- New formal pathways options, i.e. bridging or advanced entry, to or from another college or university
- Significant change in the laboratory time of an undergraduate Program
- The introduction or deletion of an undergraduate thesis or capstone project
- The introduction or deletion of a Program-level work experience, cooperative education, internship, practicum, or portfolio
- At the master’s level, the introduction or deletion of a research project, research essay or thesis option, course-only option, co-operative education, internship, or practicum option
- The creation or deletion of a Type 1 Graduate Diploma
- The addition of a single new field to an existing graduate program. Note that universities are not required to declare fields for either master’s or doctoral programs. Note also that the creation of more than one field at one point in time or over subsequent years may need to go through the New Program Expedited Protocol
- The creation or deletion of a minor where no corresponding Major exists
- Any change to or the addition or deletion of requirements for graduate program candidacy examinations, field studies, residency requirements, and/or comprehensive examinations
- Significant changes to the Program’s delivery, including:
    - Changes to the Faculty delivering the Program that alter the areas of research and teaching interests (e.g. a large proportion of the faculty retires; new hires)
    - A change in the language of Program delivery
    - The introduction of inter-institutional collaboration or the establishment of an existing Program at another institution or location, including new dual Degree options
    - To the mode of delivery of the Program (e.g. offering an existing Program substantially online where it had previously been offered in face-to-face mode, or vice versa; the creation of multi-modal options) that meaningfully affects the student experience
    - Change to, or add, full- or part-time program options where one did not previously exist
    - Changes to the essential resources, where these changes impair the delivery of the Program
- Change in the degree designation; change in the name of a Major or Program Component (e.g. Specialization, Minor, or Field), when this results in a change in learning outcomes

Modifications that will result in a more substantial change to the Program's nature and content will require review and approval in accordance with the New Program Procedure. The final determination of whether a Program modification constitutes a significant change or a new Program will rest with the Provost. The Quality Council has final authority to decide if a Major Program Modification constitutes a new program and, therefore, must follow the New Program Procedures.

7.2. Major Program Modifications will include full electronic proposals and must include evidence that appropriate consultation has taken place. Once proposals are approved by Faculty Council, they will be subject to review by the appropriate standing committee of Academic Council (USC or GSC). The standing committee will submit its recommendation for approval to the Academic Council for final review and approval. Major Program Modifications are reported annually to the Quality Council.

7.2.1. To be included in the academic calendars for the subsequent academic year, Major Program Modifications must be received by USC/GSC no later than the last working day in December.

7.3. Major Program Modification electronic proposals must minimally include the following:

a) A brief background on the existing program and rationale for the modification, including any consideration of the principles of equity, diversity, inclusion, and decolonization.

b) Overview of the modification, indicating the opportunities for graduates and evidence of fit with the mission, mandate and strategic plans of the University and the Faculty Description of how the new program component fits into the broader array of Program offerings, particularly areas of teaching and research strengths and complementary areas of study.

c) A fully developed section outlining: any new or modified program learning outcomes; the alignment of the change with the program learning outcomes and the provincial degree level expectations and universal competencies; new or modified admission requirements; program structure Calendar copy and program maps, where relevant, for the new program component showing courses and/or research components offered each semester and indicating courses currently offered, new courses, and required courses provided by other units; the impact the modification/new component has on students and how it will improve the student experience; any experiential or other applied learning opportunities that are part of the new program component; and program content including course outlines, descriptions, modes of delivery and teaching methods, and assessment with a linkage between the course learning outcomes and the program learning outcomes.

d) A list of required faculty members, including current core faculty and required new faculty; additional academic and non-academic human resources that may be required to launch and maintain the modifications; physical resource requirements, with how current facilities will be used and what, if any, new resources may be required; and for graduate Programs, any student support (funding) requirements.

e) An outline of areas consulted, which must include an account of mandatory feedback from students and recent graduates, and the process of consultation regarding Indigenous content, where appropriate.

f) A summary statement of funding required to support the Program and a statement of current resource availability.

g) When changing the mode of delivery to online/hybrid for all or a significant portion of a Program, the following must also be addressed:

- Describe the adequacy of the technological platform to be used for online delivery
- Describe how the quality of education will be maintained
- Describe how the program objectives will be met
- Describe how the program learning outcomes will be met
- Describe the support services and training for teaching staff that will be made available
- Describe the sufficiency and type of supports that will be available to students

8. Admissions Changes

8.1. Changes made exclusively to admission requirements in the absence of other program changes will proceed through the governance structure to various levels of approval based on the nature and impact of the change.

8.1.1. Changes to admission requirements at the University level require final approval by Academic Council following recommendation by the USC/GSC. Changes of this nature are normally completed as a change to the relevant policy instrument.

8.1.2. Changes to admission requirements at the Faculty level require approval by the USC/GSC and are reported for information to Academic Council; this update is generally completed as a Minor Program Adjustment.

8.1.3. Changes to admission requirements at the individual program level are reported to the USC/GSC for information following approval by Faculty Council(s).

All decisions concerning admissions made within the scope of existing requirements are considered administrative decisions and can be approved by the Registrar or designate in consultation with the Dean.

QUALITY COUNCIL CYCLICAL AUDIT

9. In accordance with the Quality Assurance Framework, curricular changes as outlined in these Procedures are not normally subject to the University's Cyclical Audit.

MONITORING AND REVIEW

10. This procedure will be reviewed as necessary and at least every three years. The Provost's Office, through the Center for Institutional Quality Enhancement coordinates the day to day management of the quality assurance process, and works in collaboration with Deans and units to implement the procedures for developing and accessing academic programs. The Provost or successor thereof, is responsible to monitor and review this Policy.

RELATED POLICIES, PROCEDURES & DOCUMENTS

Ontario Universities Council on Quality Assurance - Quality Assurance Framework
Institutional Quality Assurance Policy
Program Nomenclature Directives
Protocols associated with consultation/development of Indigenous curriculum
Protocols associated with the development of Micro-credentials

Classification Number	ACD 1501.02
Parent Policy	Institutional Quality Assurance Process
Framework Category	Academic
Approving Authority	Academic Council
Policy Owner	Provost
Approval Date	June 2020
Review Date	June 2023
Supersedes	ACD 1501 (June 2010); Quality Assurance Handbook (June 2011) Cyclical Program Review Procedures (June 2020); Not-for-Academic Credit Digital Badges, Microcredentials, and Stackable Credentials Policy (July 2021)

OntarioTech UNIVERSITY

CYCLICAL REVIEW AND AUDITING PROCEDURES

PURPOSE

1. The purpose of these Procedures is to set out the process for conducting the monitoring of new Degree and Diploma Programs and the cyclical review of existing Degree and Diploma Programs to ensure that they continue to meet provincial quality assurance requirements and to support their ongoing rigour and coherence. Further, these procedures set out the process for the cyclical audit conducted by the Quality Council, which reviews the University's institutional quality enhancement Polices, Procedures and processes. New Programs are monitored at the time of first intake and at least one year after the launch of the Program. Cyclical reviews of established Programs and the University audit occur at least once every 8 years.

DEFINITIONS

2. For the purposes of these Procedures the definitions in the Policy apply.

SCOPE AND AUTHORITY

3. These Procedures apply to undergraduate and graduate Degree and Diploma Programs and the associated governance processes, whether the Programs are offered in full, in part, or conjointly by any institutions federated or affiliated with the university. It also applies to Degree and Diploma programs offered in partnership, collaboration or other such arrangement with other post-secondary institutions including colleges, universities or other institutes.

4. For those Programs that are offered in more than one mode, at different locations, or having complementary components (e.g., bridging options, experiential education options, etc.), the distinct versions of the program will be identified and reviewed during new program monitoring and cyclical program review. The self-study brief will encompass all modes, locations, and components in one report.

5. Degree and Diploma Programs which have been approved but never launched, have been closed, or for which admission has been suspended, are not subject to these Procedures. Stand-alone Micro-credentials are also not subject to these Procedures.

6. The Provost, or successor thereof, is the Policy Owner and is responsible for overseeing the implementation, administration and interpretation of these Procedures.

PROCEDURES

7. Monitoring of New Academic Programs

7.1. At the time of first intake into the Program, CIQE, working with the Office of Institutional Research and Analysis, will prepare an initial report that will review admissions and enrolment data and report on any changes made to the program since it was approved. This report will be reviewed by the Office of the Provost, through the Resource Committee, to assess any issues that may arise and determine if alternate plans are required to ensure the overall success of the Program.

7.2. One year after the launch of the Program, CIQE, working with the Academic Unit, will prepare a report that will review: enrolment and admissions data; success in realizing the program objectives, requirements, and learning outcomes; any changes made to the program since approval; and other key metrics to assess New Program effectiveness. This report will be reviewed by the Provost, through the Resource Committee, to assess any issues and determine if alternate plans are required to ensure the overall success of the Program.

7.3. Should any recommendations arise from the one-year report, additional monitoring and review may be required at the request of the Provost or the Resource Committee. An additional monitoring report, if required, will analyze key curricular and student data (e.g. student evaluations, GPA, retention data, etc.) as well as address the recommendations from the initial report. Pending review, further documentation may be required for ongoing monitoring.

7.4. Should the Quality Council require any follow-up reports, as indicated at the time of approval, these shall be completed in accordance with the requirements outlined in the approval letter from the Quality Council.

7.5. Programs will then be reviewed and refined on an ongoing basis in accordance with the Institutional Quality Assurance Policy. Specifically, approved Programs will be entered into the schedule of academic program reviews and the first review will take place no more than eight years after the start of the Program, and every eight years hence, in accordance with Section 8 of these Procedures. The first cyclical review will take into consideration the outcomes of the intake, one-year, and any additional reports, as well as any aspects highlighted by the Quality Council as required during the program review.

8. Cyclical Review of Degree and Diploma Programs

Procedures for program reviews involve six components: the review and enhancement of program learning outcomes and assessment of core competencies; the development of a self-study brief by the program under review; external evaluation to provide recommendations on program quality improvement; internal response to the external evaluation and recommendations; preparation and approval of a final assessment report and implementation plan; and subsequent reporting on the implementation of recommendations. Individuals may use the templates provided at www.ontariotechu.ca/ciqe as a guide to assist in the planning and implementation of the components of the cyclical review. It is expected that, unless otherwise specified below, all information, documents, and reports are not publicly accessible and will be afforded an appropriate level of confidentiality.

8.1. Appointment of Internal Assessment Team

8.1.1. Upon notification that a program is up for review, the Faculty Dean will appoint an Internal Assessment Team (IAT), comprised of faculty, staff and students (current or recent graduate of the program). The Dean will also appoint a faculty member from the IAT to act as Chair. A faculty co-chair may be appointed, if necessary.

8.1.2. The proposed IAT will be submitted to CIQE and will be approved by the Provost.

8.2. Review and Enhancement of Program Learning Outcomes

The IAT chair, in consultation with the IAT, will review and enhance the program learning outcomes, and map them to the degree level expectations (either undergraduate or graduate) set out by the Ministry.

8.2.1. The IAT will engage in a program learning outcome enhancement process where they will review and revise their program learning outcomes. These revisions will lay the groundwork for the program for the upcoming seven years. The program and course learning outcomes must be reviewed and revised using resources provided by CIQE and the Teaching and Learning Centre (TLC). It is strongly recommended that the IAT and other program faculty participate in learning outcome sessions hosted by CIQE and TLC; alternatively, the revised program learning outcomes must be reviewed and approved by CIQE and TLC prior to the scheduling of the External Review. The IAT will then map the revised program learning outcomes to the appropriate degree level expectations (DLEs) with related skills and competencies using resources provided by CIQE and the Teaching and Learning Centre (TLC).

8.2.2. After the map to the degree level expectations is complete, the IAT will map their current course offerings to the revised program learning outcomes and analyze the results.

8.2.3. The revised program learning outcomes and DLE map, once finalized by the IAT, will be an appendix to the self-study document.

8.3. Self-Study Briefs

The self-study brief will form the basis of the program review and must clearly set out the indicators of program quality, as outlined in the Evaluation Criteria, against which the program is to be assessed. The brief may also identify specific aspects of the program on which feedback is sought. A template for the proposal will be provided through the Centre for Institutional Quality Enhancement via the website at www.ontariotechu.ca/ciqe.

8.3.1. Self-study briefs for each program under review must be prepared and reviewed by a Program Review Internal Assessment Team (IAT).

8.3.2. The IAT will work in collaboration with the Centre for Institutional Quality Enhancement (CIQE) to pull together key institutional data and other indicators of program quality that will inform the self-study.

8.3.3. The brief should be broad-based, reflective and forward-looking and should demonstrate how the program advances the University's mission.

8.3.4. The brief must also present evidence to support an assessment of the program requirements, program learning outcomes and degree level expectations with related skills and competencies, along with the human and physical resources involved.

8.3.5. The brief should address any concerns and recommendations raised in previous reviews.

8.3.6. The brief will include a short description of the process by which the self-study was prepared, including faculty, staff, and student input and involvement.

8.3.7. The brief will also identify specific aspects of the program on which feedback is sought, including any consideration of the principles of equity, diversity, inclusion, and decolonization; areas requiring improvement and those that hold promise for enhancement; any unique curriculum or program innovations, creative components, or significant high impact practices; as well as academic services that directly contribute to the academic quality of the program. The brief will incorporate feedback sought from representatives from industry, the professions or employers, where appropriate.

8.3.8. Upon its completion, the Faculty and the Dean will review the self-study brief to ensure that it presents the full range of evidence to support an assessment of program quality. The Dean may also highlight any areas of opportunity or institutional constraints that may need to be taken into account as part of the review.

8.4. External Review and Reporting

8.4.1. The Dean, in consultation with the IAT, will recommend to the Provost, at least 5 individuals to serve as external reviewers of the Program.

8.4.1.1. Reviewers must be external to the University, will normally be tenured (or equivalent) and will have suitable disciplinary expertise, qualifications and program management experience at another university, including an appreciation of pedagogy and learning outcomes, and be at arm's length to the program under review, as outlined in the Proposed External Reviewer's form and on the Quality Council's website.

8.4.1.2. For undergraduate programs, two reviewers are required, with both being external to the university. At least one of the reviewers must currently be at a Canadian post-secondary institution.

8.4.1.3. For graduate programs, at least two reviewers external to the university are required. At least one of the reviewers must currently be at a Canadian post-secondary institution. A third internal reviewer, external to the program, may additionally be included.

8.4.1.4. For each External reviewer candidate, the recommendation must be accompanied by a rationale for the selection and a detailed biographical statement, prepared by the IAT, that outlines their academic expertise, administrative experience, accomplishments, and research.

8.4.1.5. External reviewer forms are sent to CIQE to be reviewed and subsequently approved by the Provost. The Office of Planning and Analysis will contact approved proposed reviewers to maintain arms-length process and ensure that the required number of reviewers are engaged to review the Program.

8.4.2. CIQE, in consultation with the Faculty, will organize a site visit to provide an opportunity for the reviewers to assess the standards and quality of the program and to prepare a report that addresses the University's program quality review Evaluation Criteria.

8.4.2.1. External review of doctoral program must incorporate an on-site visit except in exceptional circumstances as determined by the Provost. External review of undergraduate, Master's, and Graduate Diploma programs will normally be conducted on-site, but at the request of the Dean, the Provost (or delegate) may approve that the review be conducted by desk audit, virtual site visit, or an equivalent method if the external reviewers are satisfied that the off-site option is acceptable. The Dean will provide a clear justification for the request to conduct the review without an on-site visit.

8.4.2.2. In advance of the site visit, or prior to the desk audit, CIQE will send to the reviewers the Program's self-study brief and any additional material or information that may be needed to inform the assessment.

8.4.2.3. At the beginning of the site visit, or prior to the desk audit, the Provost or their designate will meet with the reviewer(s) to outline the process for review and the roles and responsibilities of the reviewers.

8.4.2.4. During the site visit, reviewers will have an opportunity to meet with the IAT, and with other faculty, students, staff, senior academic administrators, and any others who can most appropriately provide informed comment, such as representatives from industry, the professions or employers, to discuss aspects of the self-study in the context of the program quality review criteria.

8.4.2.5. Reviewers will be required to respect the confidentiality of all aspects of the process and recognize the institution's autonomy to determine priorities for funding, space, and faculty allocation. Commentary or recommendations on issues such as faculty complement and/or space requirements, that are within the purview of the university's budgetary decision-making processes, must be tied directly to issues of program quality or sustainability.

8.4.3. Reviewers will submit a report to the Dean, through CIQE, which addresses the substance of the self-study and the program quality review Evaluation Criteria. A template for the report will be provided by CIQE.

8.4.3.1. Normally, the report will be prepared jointly by the reviewers and will contain at least three recommendations.

8.4.3.2. Reviewers will be invited to acknowledge and provide evidence of any clearly innovative aspects of the program, including in the content and/or delivery of the program relative to other such programs, together with recommendations on specific steps to be taken to improve the program, distinguishing between those the program can itself take, and those that require external action.

8.4.3.3. Reviewers will also be asked to identify and commend notably strong and creative attributes of the program; describe the program's strengths, areas for improvement, and opportunities for enhancement; and identify distinctive attributes of each discrete program/mode of delivery/site, where applicable.

8.4.3.4. Normally, the report will be completed within 30 days of the site visit.

8.4.3.5. Upon submission, CIQE will review the external reviewers' report to ensure it meets the requirements stated in Article 8.4.3. If additional details or clarification are needed from the reviewers, CIQE will reach out to the reviewers to request this in a revised report.

8.5. Response to Report

8.5.1. Upon receipt of the reviewers' report(s), the Dean and the IAT will consider its recommendations, including consideration of any financial or other resource implications.

8.5.1.1. The IAT Chair will solicit feedback from Program faculty and, in consultation with the IAT, will prepare and send to CIQE the Program's response to the reviewers' report that will include a summary of the program strengths, opportunities for improvement and a response to the recommendations put forward by the reviewers. A template for the Program's response report will be provided through CIQE.

8.5.1.2. Using the Program's response report as a guideline, the Dean, using a template provided by CIQE and working in consultation with the

Office of the Provost, will prepare a separate decanal response to the reviewers' report. The response will include the Dean's assessment and prioritization of the recommendations and an Implementation Plan (IP) including resource requirements, a timeline for acting on and monitoring the implementation of the recommendations, and persons/area responsible for acting on the recommendations. A template for the decanal response and IP will be provided through CIQE. The Dean must solicit feedback on the Implementation Plan through Faculty Council.

8.5.1.3. The IP will be reviewed by the Provost, through the Resource Committee, to examine resource implications and allocations. The Resource Committee will create a brief summary of its review.

8.6. Approval Process

8.6.1. Using the self-study brief, together with the reviewers' report(s), the Dean's and Program's responses, the IP, and the Resource Committee's summary, CIQE will prepare a Final Assessment Report (FAR). If confidential information is presented in any of the documentation used to prepare the FAR this information will be included only in an appendix. The appendix will be afforded the appropriate level of confidentiality within the Office of the Provost and the Faculty and will be withheld from distribution.

8.6.1.1. The FAR will synthesize the reports and recommendations resulting from the review and identify the strengths of the program as well as the opportunities for program improvement and enhancement.

8.6.1.2. The FAR will list all recommendations of the external reviewers and the associated separate internal responses and assessments from the Program and the Dean. The list of recommendations and/or responses may be paraphrased and combined under themes within the FAR to facilitate clear tracking and monitoring. Explanation for reviewer recommendations not selected for further action, as well as any additional recommendations that the Program, the Dean and/or the university may have identified as requiring action, will be included in the FAR.

8.6.1.3. The FAR will include an Executive Summary as to be suitable for publication.

8.6.2. The FAR (excluding the confidential appendix, if applicable) and IP, will be presented to the appropriate standing committee of Academic Council (USC or GSC) for approval.

8.6.3. In those cases where the program review cycle includes both undergraduate and graduate programs, separate reviews will be conducted, and FARs will be submitted to the USC and GSC concerning the reviews relevant to the mandate of each committee.

8.6.4. The Executive Summary to the FAR and the IP are then posted on the Ontario Tech corporate website.

8.6.5. A summary of all reviews including each FAR (excluding the confidential appendices) and IP will be distributed to Academic Council and the Board of Governors for information.

8.6.6. A summary report of all reviews completed during the year, with a link to the Executive Summaries and IPs, will be sent to the Quality Council as required under the [Quality Assurance Framework](#).

8.6.7. The approved FAR, including confidential information, and the final IP will be provided to the Faculty(ies), through the Dean(s), as primary owner. These will serve as the basis for the continuous improvement and monitoring of the program. The Faculty is responsible for subsequent reporting and monitoring of the IP, as outlined in Section 8.7.

8.7. Subsequent Reporting and Monitoring of the Implementation of Recommendations

8.7.1. Eighteen months following the completion of the review, the Office of the Provost will request from the Dean a brief follow-up report that outlines the progress that has been made in implementing the agreed upon plans for improvement. The report will be sent to the Resource Committee for review.

8.7.2. If outstanding items remain at the time of the follow-up report, the Resource Committee will review these outstanding items with the Dean. The Resource Committee may recommend further monitoring of these items on a case-by-case basis.

8.7.3. The follow-up report, excluding any confidential information, is then posted on the Ontario Tech corporate website.

8.7.4. A summary of the follow-up reports will be distributed to the appropriate standing committee of Academic Council (USC/GSC), to Academic Council, and to the Board of Governors, for information.

8.7.5. A summary of all follow-up reporting completed during the year, with a link to the reports, will be sent to the Quality Council as required under the Quality Assurance Framework.

8.8. Review of Joint or Collaborative Programs

8.8.1. Joint programs, and other programs offered in collaboration with other post-secondary institutions, will ensure that the required quality assurance requirements of both institutions are met.

8.8.2. When the program is held jointly with an institution that does not have an IQAP that has been ratified by the Quality Council, the Ontario Tech IQAP Policy and associated Procedures will apply with Ontario Tech as the leading institution.

8.8.3. In cases where the program is held jointly with an institution that does have an IQAP ratified by the Quality Council, the Office of the Provost, through CIQE, will collaborate with the partner institution to develop a process and associated templates that will address all requirements of each institution's IQAP. Specifically, the collaboration will address:

a) The selection of external reviewers

b) Templates to be used for a single self-study and required reports from the external reviewers, program team, and Dean(s)

c) The location(s) or the site visit(s), timing for program review, and subsequent reporting

d) The development of a joint committee to review the program

e) The process for monitoring and reporting on the implementation of recommendations after the review

f) The lead institution for the purposes of submission to the Quality Council

9. Quality Council Cyclical Audit

In accordance with the Quality Assurance Framework (QAF), the University is subject to a Cyclical Audit by the Quality Council, at least once every eight years. The Quality Council has established the schedule of institutional participation in the audit process within the eight-year cycle and publishes the agreed schedule on its website. The Cyclical Audit provides necessary accountability to post-secondary education's principal stakeholders by assessing the degree to which the University's internally-defined quality assurance processes, procedures, and practices align with and satisfy the agreed upon standards, as set out in the QAF.

Specifically, the Cyclical Audit will:

- Review institutional changes made in policy, process, and practice in response to the recommendations from the previous audit
- Confirm the University's practice is in compliance with its IQAP as ratified by the Quality Council and note any misalignment of its IQAP with the Quality Assurance Framework; and
- Review institutional quality enhancement practices that contribute to continuous improvement of programs, especially the processes for New Program Approvals and Cyclical Program Reviews

9.1. The Audit Team

Normally three auditors, selected from the Audit Committee's membership by the Quality Assurance Secretariat, conduct the Cyclical Audit. These auditors will be at arm's length from the University undergoing the audit. Members of the Quality Assurance Secretariat accompany the auditors on their site visit and constitute the remainder of the Audit Team.

9.2. Scope of the Audit

9.2.1. The Audit Team will independently select a sample of programs for audit that represent the development of new Degree programs under the New Program Procedures (normally two examples of new programs) and Section 8 of the Cyclical Review and Auditing Procedures (normally three or four examples of programs that have undergone a Cyclical Program Review). New Degree programs and Cyclical Program Reviews undertaken within the period since the previous Audit are eligible for selection.

9.2.2. Diploma Programs and Micro-credentials that have been developed under the New Program Procedures and changes made under the Curriculum Change Procedures or Program Closure Procedures will not normally be subject to audit.

9.2.3. A small sample of new programs still in development and/or cyclical program reviews that are still in progress may also be selected, in consultation with the University. If so, documentation associated with these in-progress processes will not be required for submission for audit. Instead, the auditors will ask to meet with the program representatives to gain a better understanding of current quality practices.

9.2.4. Specific areas of focus may also be added to the audit when an immediately previous audit has documented Causes for Concern, or when the Quality Council so requests. The University will be informed of the specific areas of focus in the letter from the Quality Assurance Secretariat that also details the programs selected for audit. The University itself may also request that specific programs and/or quality enhancement elements be audited.

9.3. Pre-Audit Orientation and Briefing

The Quality Assurance Secretariat will schedule an in-person, half-day briefing approximately one year prior to the University's scheduled Cyclical Audit. During this briefing, the Quality Assurance Secretariat and a member of the Audit Team will provide an orientation on what to expect from the Cyclical Audit to the University Key Contact, key CIQE staff members, and any other relevant stakeholder(s) as determined by the Provost or designate.

9.4. Self-Study

9.4.1. In consultation with the Provost, CIQE will prepare a self-study, which reflects on past and current policies and practices and the extent to which the University demonstrates a focus on continuous improvement in the development of new programs and the cyclical review of existing ones. The self-study will present and assess the quality enhancement processes, including challenges and opportunities, within its own institutional context and pay particular attention to issues, if any, flagged in the previous Audit.

9.4.2. CIQE will also prepare a package of all relevant documentation for each program selected for audit, including all items related to each step outlined in the Procedures. The self-study and document packages are submitted by CIQE to the Quality Assurance Secretariat in advance of the desk audit.

9.4.3. The documentation to be submitted for audit will include, but is not limited to:

- All templates, proposal briefs/self-studies, reports and responses, minutes of meetings, and any other relevant documents and other information related to the programs selected for audit, as requested by the Audit Team;
- A record of any revisions of the university's IQAP, as ratified by the Quality Council; and
- The annual report of any minor revisions of the university's IQAP that did not require Quality Council re-ratification.

9.5. Audit Team Review

9.5.1. **Desk Audit**

The auditors will first undertake a desk audit of the University's quality enhancement practices, which will determine whether the University's practice is in compliance with the IQAP and will also note any misalignment of the IQAP with the QAF. The desk audit serves to raise specific issues and questions to be pursued during the on-site visit and to facilitate an effective and efficient audit. The auditors will undertake to preserve the confidentiality required for all documentation and communications and to meet all applicable requirements of the Freedom of Information and Protection of Privacy Act (FIPPA).

9.5.2. **Site Visit**

After the desk audit, auditors will normally visit the University over two or three days. The principal purpose of the on-site visit is for the auditors to get a sufficiently complete and accurate understanding of the University's application of the IQAP in the pursuit of continuous improvement of programs. Further, the site visit will serve to answer questions and address information gaps that arose during the desk audit and assess the degree to which the institution's quality enhancement practices contribute to continuous improvement.

9.5.2.1. CIQE, in consultation with the Office of the Provost and the auditors, will establish the program and schedule for the site visit. In the course of the site visit, the auditors speak with the university's senior academic leadership including those who the IQAP identifies as having important roles in the governance process.

9.5.2.2. The auditors also meet with representatives from those programs selected for audit, students, and representatives of units that play an important role in ensuring program quality and success.

9.6. Audit Report

9.6.1. Following the conduct of an audit, the auditors will prepare a report that will be approved by the Quality Council. The report, which is to be suitable for publication, comments on the institution's commitment to the culture of engagement with quality assurance and continuous improvement and will meet the requirements as outlined in Section 6.2.7 of the QAF. The report shall not contain any confidential information.

9.6.2. A separate addendum will provide the University with detailed findings related to the audited programs. This addendum is not subject to publication. The report may include findings in the form of Suggestions, Recommendations, and/or Causes for Concern.

9.6.3. The Audit Report also includes recommendations for the Quality Council to take one or more steps, as appropriate, as outlined in Section 6.2.7 of the QAF. This may include participation in a Focused Audit, as described in Section 9.10 below.

9.6.4. The Quality Assurance Secretariat submits the Audit Report to the Audit Committee for consideration. Once the Audit Committee is satisfied with the Report, it makes a conditional recommendation to the Quality Council for approval of the Report, subject only to minor revisions resulting from the fact checking stage.

9.6.5. The Quality Assurance Secretariat provides a copy to the University, via the Provost, for fact checking. This consultation is intended to ensure that the report does not contain errors or omissions of fact but not to discuss the substance or findings of the report. CIQE will prepare a report, for submission by the Provost, on the factual accuracy of the draft report within 30 days. If needed, the Provost can request an extension of this deadline by contacting the Quality Assurance Secretariat and providing a rationale for the request. This response becomes part of the official record and the audit team may use it to revise their report. However, the fact checking response will not be published on the Quality Council's website. When substantive changes are required, the draft report will be taken back to the Audit Committee.

9.6.6. Upon approval by the Quality Council, the Quality Assurance Secretariat sends the approved report to the university with an indication of the timing for any required follow-up.

9.7. University Response to Report

9.7.1. When a Follow-up Response Report is required, the University, through CIQE, will submit the Report within the specified timeframe, detailing the steps it has taken to address the recommendations and/or Cause(s) for Concern.

9.7.2. If the Audit Team is satisfied with the University's Follow-up Response Report, it will draft a report on the sufficiency of the response. The auditors' report, suitable for publication, is then submitted to the Audit Committee for consideration.

9.7.3. If the Audit Team is not satisfied with the response, the Audit Team will consult with the University, through the Quality Assurance Secretariat, to ensure the follow-up response is modified to satisfy the requirements of the Audit Report. In so doing, the University will be asked to make any necessary changes to the follow-up response within a specified timeframe.

9.7.4. The Audit Committee will submit a recommendation to the Quality Council to accept the university's follow-up response and associated auditors' report.

9.8. Publication of the Results of the Audit

9.8.1. The Quality Assurance Secretariat will publish the approved report of the overall findings, absent the addendum that details the findings related to the audited programs, together with a record of the recommendations on the Quality Council's website.

9.8.2. The University will also publish the report (absent the previously specified addendum) on its website.

9.8.3. The Quality Assurance Secretariat publishes any Follow-up Response Report and the auditors' report on the scope and adequacy of the university's response on the Quality Council website and sends a copy to the University for publication on its website.

9.8.4. A report on all audit-related activity is provided to the Ontario Council of Academic Vice-Presidents (OCAV), the Council of Ontario Universities (COU), and the Ministry through the Quality Council's Annual Report.

9.9. Outcomes of the Cyclical Audit

The Audit Report describes the extent to which the University is compliant with the IQAP and approximates best practice. Based on the findings in its Report, the Audit Committee will make recommendations about future oversight by the Quality Council and/or one or more of its Committees.

9.9.1. When the Audit Report finds relatively high to very high degrees of compliance and good to best practices, the Audit Committee may recommend reduced Quality Council oversight in one or more areas of the University's quality enhancement practices. The recommendation may include, but is not limited to, the elimination of the requirement for a Follow-up Response Report to the Audit Report and possibly a reduced set of documentation required for a subsequent audit.

9.9.2. Alternatively, when the Audit Report identifies deficiencies in several areas of the University's practices and/or systemic challenges, the Audit Committee may recommend increased oversight by the Quality Council. The nature of this oversight will be determined by the Quality Council and may include one or more of the following outcomes, which are less formal than the Cyclical Audit and, thus, will not replace it:

- Increased reporting requirements;
- A focused audit (Section 9.10, below); and/or
- Any other action deemed appropriate by the Quality Council.

9.10. Focused Audit

9.10.1. When an Audit Report has identified at least one Cause for Concern, the Audit Committee will recommend to the Quality Council that the specific area(s) of concern may require closer scrutiny and further support through a Focused Audit.

9.10.2. A Focused Audit may also be triggered by the Quality Council when it has some concerns about the quality assurance processes at a particular university.

9.10.3. A Focused Audit may take the form of a desk audit and/or an additional site visit. The Audit Committee will also recommend to the Quality Council a proposed timeframe within which the Focused Audit should take place.

9.10.4. **The Focused Audit Report**

9.10.4.1. Following the conduct of a Focused Audit, the auditors will prepare a report that will be approved by the Quality Council. The report will be suitable for subsequent publication, and will meet the requirements as outlined in Section 6.3 of the QAF.

9.10.4.2. The Focused Audit Report may also include Suggestions, Recommendations, and/or Cause(s) for Concern.

9.10.4.3. The report will be published on both the Quality Council and University websites. Other standard elements associated with a Cyclical Audit, such as the requirement for a one-year response, will be determined on a case-by-case basis.

MONITORING AND REVIEW

10. These procedures will be reviewed as necessary and at least every three years. The Office of the Provost, through the Center for Institutional Quality Enhancement, coordinates the day to day management of the quality assurance process, and works in collaboration with Deans and units to implement the procedures for developing and accessing academic programs. The Provost or successor thereof, is responsible to monitor and review this Policy.

RELATED POLICIES, PROCEDURES & DOCUMENTS

Ontario Universities Council on Quality Assurance - Quality Assurance Framework
Institutional Quality Assurance Policy
Academic Resource Committee Terms of Reference
Program Nomenclature Directives
Protocols associated with consultation/development of Indigenous curriculum

Classification Number	ACD 1501.03
Parent Policy	Institutional Quality Assurance Process
Framework Category	Academic
Approving Authority	Academic Council
Policy Owner	Provost
Approval Date	
Review Date	
Supersedes	ACD 1501.03 (June 20120);

NEW PROGRAM PROCEDURES

PURPOSE

1. The purpose of these Procedures is to establish a consistent process for the planning and establishment for any new degree or diploma program at the University.

DEFINITIONS

2. For the purposes of these Procedures the definitions in the Policy apply.

SCOPE AND AUTHORITY

3. These procedures apply to new cost-recovery or government-funded undergraduate and graduate Degree or Diploma Programs and may apply to new Micro-credentials, whether offered in full, in part, or conjointly by any institutions federated or affiliated with the University. It also applies to new Programs offered in partnership, collaboration or other such arrangement with other post-secondary institutions including colleges, universities, or other institutes.

4. The Provost, or successor thereof, is the Policy Owner and is responsible for overseeing the implementation, administration and interpretation of these Procedures.

PROCEDURES

Procedures for new Degree Programs involve seven components which will be undertaken in order: a project initiation discussion and submission of a Notice of Intent to be approved by the Provost that demonstrates the program's fit with the Strategic Mandate Agreement, Integrated Academic and Research Plan (or equivalent) of the university, and the academic and strategic plans of the Faculty(ies) offering the program; development of a proposal brief by the initiating program; external evaluation to provide an assessment of program quality; internal response to assessment; internal approval of proposal; submission of proposal to the Quality Council and Ministry as appropriate; and subsequent review of the program as part of the university's program review process in accordance with the Institutional Quality Assurance Policy and the Cyclical Review and Auditing Procedures.

New Diploma Programs are normally not subject to external review. Procedures for new Diploma Programs involve five components which will be undertaken in order: a project initiation discussion and submission of a Notice of Intent to be approved by the Provost that demonstrates the program's fit with the Strategic Mandate Agreement, Integrated Academic and Research Plan (or equivalent) of the university, and the academic and strategic plans of the Faculty(ies) offering the program; development of a proposal brief by the initiating program; internal approval of proposal; submission of proposal to the Quality Council and Ministry as appropriate; and subsequent review of the program as part of the university's program review process in accordance with the Institutional Quality Assurance Policy and the Cyclical Review and Auditing Procedures.

Procedures for new Micro-credential programs are outlined in Section 8.

Individuals may use the templates provided at www.ontariotechu.ca/ciqe to assist in the planning and implementation of the components of New Program development.

5. New Degree Programs

5.1. Notice of Intent and Consultation

Faculties that wish to propose new Degree Programs will first contact the Centre for Institutional Quality Enhancement (CIQE) to conduct a project initiation meeting and for assistance with completing a Notice of Intent (NOI) form available through the CIQE website at www.ontariotechu.ca/ciqe. The Notice of Intent will facilitate the necessary consultation at the beginning of the planning stages, but will not replace ongoing communication and consultation throughout the process.

5.1.1. All NOIs must be approved by the Provost to ensure that any resource requirements are appropriately addressed before work on the proposal proceeds. Once an NOI has been approved, the new Program must be developed and approved at Academic Council within two years, or the approval will lapse and a new NOI must be submitted.

5.1.2. In the planning for any New Program, the Dean, in consultation with the Provost, must also determine the human, instructional and physical resources needed to implement the program and ensure its ongoing operation. The financial impact of the New Program on existing Programs must also be examined, and consideration must be given to possible collaborations with other units.

5.1.3. In addition, there must be broad consultation with members of the academic community, including faculty, staff and students who may be affected by the initiative, and with those who are key to its implementation, including the Provost, the Registrar, the Dean of Graduate and Postdoctoral Studies, and the Chief Librarian. Staff and faculty wishing to develop New Programs related to Indigenization and reconciliation, or that contain Indigenous content, must also consult in a Good Way, in accordance with the current procedures for Indigenous consultation.

5.2. Proposal Briefs

Detailed proposals for all new Degree Programs must be prepared by the proponents and feedback provided by the Faculty Council(s). The proposal brief must clearly set out the rationale for the Program, including the ways in which the program advances the university's mission and mandate, and addresses the need and demand for graduates of the Program. The proposal must also detail how the Program fits within Strategic Mandate Agreement and Integrated Academic and Research Plan (or equivalent) of the University and the academic and strategic plans of the Faculty(ies), the requirements of the Program, along with details of the human, physical and financial resources required. A template for the proposal will be provided through CIQE via the website at www.ontariotechu.ca/ciqe. Proposal briefs for new Degree Programs must fully and clearly address the Evaluation Criteria as outlined in Section 2.1.2 of the Quality Assurance Framework (QAF), and answer all questions provided on the template. In addition to the Evaluation Criteria, proposal briefs must minimally include:

a) The rationale for the Program, fit with the University's and Faculty's strategic direction, background on the Program's development, a Program abstract, unique curriculum or program innovations, creative components, or significant high impact practices, and evidence of student demand and societal need. It will also note any duplication with existing post-secondary programs at other institutions.

b) A fully developed section outlining the Program learning outcomes and alignment with the provincial degree level expectations and skills and competencies; any consideration of the principles of equity, diversity, inclusion, and decolonization; admission requirements; program structure; and program content including course outlines, descriptions, modes of delivery and teaching methods, and assessment with a linkage between the course learning outcomes and the program learning outcomes. The program and course learning outcomes must be developed and aligned to the provincial degree level expectations using resources provided by CIQE and the Teaching and Learning Centre (TLC). It is strongly recommended that the proponents participate in learning outcome development sessions hosted by CIQE and TLC; alternatively, the program and course learning outcomes must be reviewed and approved by CIQE and TLC prior to the scheduling of the External Review. Should the curriculum contain any Indigenous content, evidence of consultation and approval in accordance with the current procedures for Indigenous consultation will be provided.

c) A list of required faculty members, including current core faculty and required new faculty; additional academic and non-academic human resources that may be required to launch and maintain the Program; physical resource requirements, noting how current facilities will be used and what, if any, new resources may be required; and for graduate programs, any student support (funding) requirements. Curricula Vitae (CV) for all required faculty members will be provided for inclusion in the proposal package presented to external reviewers.

d) Summary statements of resources required to support the Program and a statement of current resource availability.

e) For Programs offered jointly by more than one Faculty, the protocol for review and approval of program and course changes after the launch of the Program. This established protocol may be revised by agreement of all parties.

5.3. External Review and Reports

5.3.1. Prior to external review, the Office of the Provost, through the Resource Committee, will review the draft proposal to ensure that all operational and financial issues and Evaluation Criteria (QAF Section 2.1.2) have been adequately considered and addressed.

5.3.2. External Reviewers

For new Degree Programs, the Dean, in consultation with the Faculty committee responsible for developing the Program, will recommend to the Provost, through CIQE, the names of at least 5 individuals who may serve as reviewers of the Program. Two reviewers will be engaged to review new Degree Programs. These reviewers must be external to the University, will normally be tenured (or equivalent) and will have suitable disciplinary expertise, qualifications and program management experience, including an appreciation of pedagogy and learning outcomes, and be at arm's length to the program under review. CIQE will provide guidance on meeting the arm's length requirement, which is defined in the Guidelines section of the Proposed External Reviewers Nomination Form and on the Quality Council's website. Recommendations for external reviewers must be accompanied by a rationale for the selection and a brief, comprehensive biographical statement for each candidate.

5.3.3. Site Visit

The Faculty, in consultation with CIQE, will organize a site visit to provide an opportunity for the reviewers to assess the standards and quality of the proposed Program. External review of new Programs will normally be conducted on-site, but, at the request of the Dean, the Provost (or delegate) may approve that the review be conducted by desk audit, virtual site visit, or an equivalent method if the external reviewers are satisfied that the off-site option is acceptable. The Dean will provide a clear justification for the decision to conduct the review without an on-site visit. At the beginning of the site visit, or prior to the desk audit, the Provost or their designate will meet with the reviewer(s) to outline the process for review and the roles and responsibilities of the reviewers.

5.3.4. External Reviewers' Report

5.3.4.1. The reviewer(s) will submit to the Dean, through CIQE, using a template provided, a report that appraises the standards and quality of the proposed program and addresses the Evaluation Criteria and other requirements (QAF Section 2.1.2 and QAF Section 2.2.2). Reviewers will be invited to acknowledge any clearly innovative aspects of the proposed program together with recommendations on any essential or otherwise desirable modifications to the program. Normally, the report will be prepared within 30 days of the site visit.

5.3.4.2. Upon submission of the reviewers' report, CIQE will review the report to ensure it meets the requirements stated in Article 5.3.4.1. If additional details or clarification are needed from the reviewers, CIQE will reach out to the reviewers to request this in a revised report.

5.3.5. Response to Report

5.3.5.1. Upon receipt of the reviewers' assessment, the Dean and the program proponents will consider the recommendations of the report.

5.3.5.2. The program proponents will respond and comment on the recommendations from the external reviewer(s)' report. This program response will also include a list of changes that can be made to the proposal based on the reviewer(s)' recommendations.

5.3.5.3. The Dean will respond and comment on the recommendations and the program's responses, considering overall Faculty and University plans.

5.3.5.4. The program proponents, working with the Dean, will amend the proposal and append to it a final list of changes made based on the recommendations and the program committee's and Dean's responses to the external report.

5.4. Internal Approval Process

5.4.1. The amended proposal brief, together with the reviewers' report and the Dean's and program committee's responses will be reviewed and approved by the Faculty Council(s). If there are additional resource implications resulting from the external review, the amended proposal brief will also be reviewed by the Resource Committee.

5.4.2. The proposal brief, together with the reviewers' report and the Dean's and program committee's response will then be presented to the appropriate standing committee of Academic Council (GSC or USC) who will prepare a recommendation to Academic Council. The proposal brief will then be sent to Academic Council for review and approval. Proposals are then submitted to the University Board of Governors for final approval.

5.5. Submission of New Degree Programs to the Quality Council and the Ministry

5.5.1. Once Academic Council approval for a new Degree Program has been obtained, the program proposal must be submitted to the Quality Council for review. The submission will include the final proposal document with the date of Academic Council approval, the external reviewers' report, and the internal responses, as well as a brief commentary on the two external reviewers with regard to their qualifications (expertise in content and program delivery, connections to industry where appropriate, expertise in teaching and learning). CVs for the reviewers will be required for submission to the Quality Council.

5.5.2. Following a new Degree Program's submission to the Quality Council, and with approval of the Provost, the University may announce its intent to offer the Program, provided that clear indication is given that approval by the Quality Council is pending and that no offers of admission will be made until approval is received and, where applicable, that approval by the Ministry is pending and students in the Program will not be eligible for OSAP until approval is received.

5.5.3. Once submitted to the Quality Council, the proposal will be subject to the Initial Appraisal Process and may require further development or revision prior to approval.

5.5.4. After a Degree Program is approved to commence by the Quality Council, the Program will begin within thirty-six months of that date of approval, otherwise the approval will lapse. The Quality Council may require further reporting or review, which will be noted in the new program tracking summary provided to the Resource Committee and monitored by CIQE.

5.5.5. If a review is required for funding purposes, the proposed Degree Program will also be submitted to the Ministry.

6. New Type 2 and 3 Graduate Diploma and Undergraduate Diploma Programs

6.1. Notice of Intent and Consultation

Faculties that wish to propose new Graduate Type 2 and 3 or Undergraduate Diploma Programs will first contact the Centre for Institutional Quality Enhancement (CIQE) to conduct a project initiation meeting and for assistance with completing a Notice of Intent (NOI) form available through the CIQE website at www.ontariotechu.ca/ciqe. The Notice of Intent will facilitate the necessary consultation at the beginning of the planning stages, but will not replace ongoing communication and consultation throughout the process.

6.1.1. All NOIs must be approved by the Provost to ensure that any resource requirements are appropriately addressed before work on the proposal proceeds.

6.1.2. In the planning for any New Program, the Dean, in consultation with the Provost, must also determine the human, instructional and physical resources needed to implement the program and ensure its ongoing operation. The financial impact of the New Program on existing Programs must also be examined, and consideration must be given to possible collaborations with other units.

6.1.3. In addition, there must be broad consultation with members of the academic community, including faculty, staff and students who may be affected by the initiative, and with those who are key to its implementation, including the Provost, the Registrar, the Dean of Graduate and Postdoctoral Studies, and the Chief Librarian. Staff and faculty wishing to develop New Programs related to Indigenization and reconciliation, or that contain Indigenous content, must also consult in a Good Way, in accordance with the current procedures for Indigenous consultation.

6.2. Proposal Briefs

Detailed proposals for all new Diploma Programs must be prepared by the proponents and feedback provided by Faculty Council(s). The proposal brief must clearly set out the rationale for the Program, including the ways in which the program advances the university's mission and mandate, and addresses the need and demand for graduates of the Program. The proposal must also detail how the Program fits within the strategic vision of the University and the Faculty(ies), the requirements of the Program, along with details of the human, physical and financial resources required. A template for the proposal will be provided through CIQE via the website at www.ontariotechu.ca/ciqe. Proposal briefs for new Diploma Programs must fully and clearly address the Evaluation Criteria as outlined in Section 2.1.2 of the Quality Assurance Framework (QAF), and answer all questions provided on the template. In addition to the Evaluation Criteria, proposal briefs must minimally include:

a) The rationale for the Program, fit with the University's and Faculty's strategic direction, background on the Program's development, a Program abstract, unique curriculum or program innovations, creative components, or significant high impact practices and evidence of student demand and societal need. It will also note any duplication with existing post-secondary programs at other institutions.

b) A fully developed section outlining the Program learning outcomes and alignment with the provincial degree level expectations and skills and competencies; consideration of the principles of equity, diversity, inclusion, and decolonization; admission requirements; program structure; and program content including course outlines, descriptions, modes of delivery and teaching methods, and assessment with a linkage between the course learning outcomes and the program learning outcomes. The program and course learning outcomes must be developed and aligned to the provincial degree level expectations using resources provided by CIQE and the Teaching and Learning Centre (TLC). It is strongly recommended that the proponents participate in learning outcome development sessions hosted by CIQE and TLC; alternatively, the program and course learning outcomes must be reviewed and approved by CIQE and TLC prior to the program proceeding through the Internal Approval Process. Should the curriculum contain any Indigenous content, evidence of consultation and approval in accordance with the current procedures for Indigenous consultation will be provided.

c) A list of required faculty members, including current core faculty and required new faculty; additional academic and non-academic human resources that may be required to launch and maintain the Program; physical resource requirements, noting how current facilities will be used and what, if any, new resources may be required; and for graduate programs, any student support (funding) requirements. Faculty CVs will be provided for inclusion in the package presented to the Quality Council.

d) Summary statements of resources required to support the Program and a statement of current resource availability.

6.3. Internal Approval Process

6.3.1. The proposal brief will be reviewed and approved by the Faculty Council(s).

6.3.2. The proposal will then be presented to the appropriate standing committee of Academic Council (GSC or USC) who will prepare a recommendation to Academic Council. The proposal will then be sent to Academic Council for review and approval. Proposals are then submitted to the University Board of Governors for final approval.

6.4. Submission of New Diploma Programs to the Quality Council and the Ministry

6.4.1. Once Academic Council approval for a new Type 2 or 3 Graduate Diploma Program has been obtained, the program proposal must be submitted to the Quality Council for review. The submission will include the final proposal document with the date of Academic Council approval, and the faculty CVs.

6.4.1.1. Type 2 and 3 Graduate Diploma Programs are subject to Expedited Review at the Quality Council. Only the applicable Evaluation Criteria will be applied to the proposal. Furthermore, the Council's appraisal and approval processes are reduced, as outlined in the Quality Assurance Framework Section 3.2 Protocol for Expedited Approvals.

6.4.1.2. Following a new Type 2 or 3 Graduate Diploma Program's submission to the Quality Council, and with approval of the Provost, the University may announce its intent to offer the Program, provided that clear indication is given that approval by the Quality Council is pending and that no offers of admission will be made until approval is received and, where applicable, that approval by the Ministry is pending and students in the Program will not be eligible for OSAP until approval is received.

6.4.1.3. Once submitted to the Quality Council, the proposal may require further development or revision prior to approval.

6.4.1.4. After a Type 2 or 3 Graduate Diploma Program is approved to commence by the Quality Council, the Program will begin within thirty-six months of that date of approval, otherwise the approval will lapse.

6.4.2. Undergraduate Diploma Programs are not subject to approval or audit by the Quality Council. The University may elect to submit a new Undergraduate Diploma proposal to the Quality Council for review, in which case the Program will be subject to Expedited Review. Only the applicable Evaluation Criteria will be applied to the proposal. Furthermore, the Council's appraisal and approval processes are reduced, as outlined in the Quality Assurance Framework Section 3.2. The submission will include the final proposal document with the date of Academic Council approval, the faculty CVs, and a brief cover letter providing the context and rationale for submitting the Program for Expedited Review.

6.4.3. If a review is required for funding purposes, the proposed Diploma Program will also be submitted to the Ministry.

7. New Type 1 Graduate Diploma Programs

7.1. Type 1 Graduate Diplomas require approval as Major Program Modifications following the procedures outlined in the **Curriculum Changes Procedures** document.

8. New Micro-credential Programs

8.1. The introduction of the option to complete a portion of a proposed new Degree or Diploma Program to receive an embedded for-academic-credit Micro-credential will be included with a New Program Proposal and follow the process outlined in Section 5 or 6 as appropriate.

8.2. The creation of a new for-academic-credit Micro-credential or the introduction of the option to complete a portion of an existing Degree or Diploma Program to receive an embedded for-academic-credit Micro-credential is a Minor Program Adjustment and will follow the procedures outlined in the **Curriculum Changes Procedures** document.

8.3. Those wishing to develop new, not-for-academic-credit, stand-alone Micro-credential Programs must proceed in accordance with the Policy on Micro-Credentials and Continuous Learning Offerings, or equivalent.

8.4. Submission of New Micro-credentials to the Quality Council and the Ministry

8.4.1. Micro-credentials are not subject to approval or audit by the Quality Council. Embedded Micro-credentials will be submitted with the New Program to which they are associated, when applicable.

8.4.2. Approved Micro-credentials will be submitted to the Ministry for designation as eligible for Ontario Student Assistance Program funding, if applicable.

9. Development of Joint or Collaborative Programs

9.1. Joint Programs, and other Programs offered in collaboration with other post-secondary institutions, will ensure that the required quality assurance requirements of both institutions are met.

9.2. When the program will be held jointly with an institution that does not have an IQAP that has been ratified by the Quality Council, the Ontario Tech IQAP Policy and associated Procedures will apply with Ontario Tech as the leading institution.

9.3. In cases where the program is held jointly with an institution that does have an IQAP ratified by the Quality Council, the Office of the Provost, through CIQE, will collaborate with the partner institution to develop a process and associated templates that will address all requirements of each institution's IQAP. Specifically, the collaboration will address:

- **a)** The selection of external reviewers
- **b)** Templates to be used for a single proposal brief and required reports from the external reviewers, program team, and Dean(s)
- **c)** The location(s) of the site-visit(s), timing for Program development, and approval pathway
- **d)** The development of a joint committee to develop the Program
- **e)** The process for monitoring and reviewing the Program after approval
- **f)** The lead institution for the purposes of submission to the Quality Council and the Ministry

10. Subsequent Monitoring and Review of Academic Programs

Degree and Diploma Programs will be reviewed and refined on an ongoing basis in accordance with the **Institutional Quality Assurance Policy** and the **Cyclical Review and Auditing Procedures**. At the time of first intake into the Program, the program will begin the monitoring process outlined in Section 7 of the **Cyclical Review and Auditing Procedures**. Approved Programs will also be entered into the schedule of cyclical program reviews and the first review will take place no more than eight years after the start of the Program, and every eight years hence, in accordance with Section 8 of the **Cyclical Review and Auditing Procedures**.

Degree and Diploma Programs which have been approved but never launched, have been closed, or for which admission has been suspended, and stand-alone Micro-credentials are not subject to review as described in the Cyclical Review and Auditing Procedures.

QUALITY COUNCIL CYCLICAL AUDIT

11. In accordance with the Quality Assurance Framework Audit Protocol, new Undergraduate and Graduate Degree programs that have been approved in accordance with Section 5 of this document, within the period since the conduct of the previous Audit, are eligible for selection for the University's next Cyclical Audit. As such, all documents related to each step of these procedures must be retained in a designated electronic filing system for retrieval and presentation as required. An audit cannot reverse the approval of a program to commence.

12. In accordance with the Quality Assurance Framework Audit Protocol, new Undergraduate and Graduate Diploma programs, and Micro-credentials, that have been approved in accordance with Sections 6 and 8 of this document, are not normally subject to the University's Cyclical Audit.

MONITORING AND REVIEW

13. These Procedures will be reviewed as necessary and at least every three years. The Office of the Provost, through CIQE, coordinates the day to day management of the quality assurance process, and works in collaboration with Deans and units to implement the procedures for developing and accessing academic programs. The Provost or successor thereof, is responsible to monitor and review this Policy.

RELATED POLICIES, PROCEDURES & DOCUMENTS

Ontario Universities Council on Quality Assurance - Quality Assurance Framework
Institutional Quality Assurance Policy
Academic Resource Committee Terms of Reference
Cyclical Review and Auditing Procedures
Program Nomenclature Directives
Protocols associated with consultation/development of Indigenous curriculum
Protocols associated with the development of Micro-credentials

Classification Number	ACD 1501.01
Parent Policy	Institutional Quality Assurance Process
Framework Category	Academic
Approving Authority	Academic Council
Policy Owner	Provost
Approval Date	TBA
Review Date	TBA
Supersedes	ACD 1501 (June 2010); Quality Assurance Handbook (June 2011); Curriculum Change Procedures (June 2020); Not-for-Academic Credit Digital Badges, Microcredentials, and Stackable Credentials Policy (July 2021)

CURRICULUM CHANGE PROCEDURES

PURPOSE

1. The purpose of these Procedures is to establish a consistent process for defining and documenting changes to courses and programs that will facilitate their review and approval under the provincial quality assurance framework.

DEFINITIONS

2. For the purposes of these P~~p~~rocedures the ~~following~~ definitions in the Policy apply.~~:~~

~~**Academic Council:** the most senior academic governance body of the institution~~

~~**Faculty Council:** established by Academic Council to approve new programs and courses, policies (including admissions), academic standards, curriculum and degree requirements, and long-range academic plans, at the Faculty level~~

~~**Field:** In graduate programs, an area of specialization or concentration that is related to the demonstrable and collective strengths of the program's faculty and to a new or existing program. Fields are not required at either the master's or doctoral level.~~

~~**Graduate Diploma:** A prescribed set of degree credit courses and/or other forms of study that can be undertaken as a stand-alone program or to complement a graduate degree program, and to provide specialization, sub-specialization or inter- or multi- disciplinary~~

Commented [KM1]: Policy is now the central place for all definitions, this avoids any potential contradiction and shortens the Procedures for ease of reading.

~~qualification. A graduate diploma is comprised of at least 12 credit hours of graduate level study. There are three types of Graduate Diplomas as set out by the Council of Ontario Universities:~~

~~a)~~ ~~**Type 1:** Awarded when a candidate admitted to a master's program leaves the program after completing a prescribed proportion of the requirements. Students are not admitted directly to these programs. When new, these programs require approval through the university's protocol for Major Modification prior to their adoption. Once approved, they will be incorporated into the institution's schedule for cyclical reviews as part of the parent program.~~

~~b)~~ ~~**Type 2: A concurrent graduate diploma** is offered in conjunction with a master's or doctoral degree, the admission to which requires that the candidate be already admitted to the master's or doctoral program. This represents an additional, usually interdisciplinary, qualification and requires advanced level, usually interdisciplinary, study, at least 50% of which is in addition to the general requirements for the degree. When new, these programs require submission to the Quality Council for an Expedited Approval (no external reviewers required) prior to their adoption. Once approved, they will be incorporated into the university's schedule for cyclical reviews as part of the parent program.~~

~~c)~~ ~~**Type 3: A direct-entry graduate diploma** is a stand-alone, direct-entry program, generally developed by a unit already offering a related master's (and sometimes doctoral) degree, and designed to meet the needs of a particular clientele or market. Ontario Tech type 3 graduate diplomas may include non-degree credit courses to a maximum of 30% of the total program credit hours. Where the program has been conceived and developed as a distinct and original entity, these programs require submission to the Quality Council for an Expedited Approval (no external reviewers required) prior to their adoption. Once approved, they will be included in the Schedule for Cyclical Reviews and will be subject to external review during the CPR process.~~

~~**Graduate Studies Committee (GSC):** a standing committee of Academic Council responsible for reviewing graduate curriculum proposals and documents~~

~~**Major Program Modifications:** those modifications that constitute a significant change to the design and delivery of an existing program. Further clarification is provided below in Section 7.~~

~~**Micro-credential:** A designation of achievement of a coherent set of skills and knowledge, specified by a statement of purpose, learning outcomes, and strong evidence of need by industry, employers, and/or the community. They have fewer requirements and are of shorter duration than a qualification and focus on learning outcomes that are distinct from diploma/degree programs.~~

~~**Minor Curricular Changes:** those changes to individual courses and curricular offerings that do not affect the overall program requirements. Further clarification is provided below in Section 5.~~

~~**Minor Program Adjustments:** changes to program requirements and/or learning outcomes that may require a plan for transitioning cohorts of students to meet different requirements over time. Further clarification is provided below in Section 6.~~

~~**Program:** A complete set and sequence of courses, combination of courses, and/or other units of study, research and practice; the successful completion of which qualifies the candidate for a formal credential (degree with or without major; diploma).~~

~~**Quality Council:** the Ontario Universities Council on Quality Assurance, established by the Council of Ontario Universities in July 2010, responsible for oversight of the Quality Assurance Framework processes for Ontario Universities. The Council operates at arm's length from both Ontario's publicly assisted universities and the Ontario government.~~

~~**Undergraduate Studies Committee (USC):** a standing committee of Academic Council responsible for reviewing undergraduate curriculum proposals and documents~~

SCOPE AND AUTHORITY

3. These procedures apply to the full range of for-academic-credit curricular and programmatic endeavours at both the graduate and undergraduate levels, including Micro-credentials, whether offered in full, in part, or conjointly by any institutions federated or affiliated with the University. It also applies to Programs offered in partnership, collaboration, or other such arrangement with other post-secondary institutions including colleges, universities, or other institutes.

4. The Provost, or successor thereof, is the Policy Owner and is responsible for overseeing the implementation, administration, and interpretation of these Procedures.

PROCEDURES

Modifications to existing Programs range from changes to individual courses and curricular offerings, through minor adjustments to programs and regulations, to major modifications, such as the introduction of new specializations and fields. The Centre for Institutional Quality Enhancement will provide access to an electronic workflow tracking system and repository for curricular changes. Individuals may use the templates provided at www.ontariotechu.ca/cique as a guide to assist in the planning of the changes prior to creating formal electronic proposals for approval in the electronic system.

5. Minor Curricular Changes

5.1. The following Minor Curricular Changes fall under the purview of the relevant Faculty(ies ~~Council(s~~)~~, normally through its curriculum committee or similar body,~~

Commented [KM2]: Will hyperlink to Micro-credentials and Continuous Learning Policy when posted on the website.

Commented [KM3]: Section 5 revised following feedback. Faculty Council structure and internal governance defined in Terms of Reference and mandates: https://secretariat.ontariotechu.ca/academic-council/faculty-councils.php. Combined original 5.1 and 5.2 into new 5.1 shown here, clarifying these items are reported to USC/GSC for information after approval at Faculty Council before being implemented and added to the Calendar.
Editorial revisions to Section 5, which refers to courses only, align the definition and examples with Quality Council guidelines.

~~and include~~ and~~:~~~~Minor Curricular Changes~~ will be approved at the Faculty Council (s). ~~Minor Curricular Changes~~Approved changes must be reported to the appropriate standing committee of Academic Council (USC or GSC) for information using the appropriate electronic proposal by the end of January each year for implementation in the upcoming Academic Calendar.

- The creation ~~of new elective courses~~ and ~~the~~closure ~~deletion of elective~~ of for-academic-credit courses
- Changes to for-academic-credit courses, including:
  - course titles, ~~and~~ course descriptions,
  - ~~Changes to~~ course numbers, credit hours~~weighting of elective courses~~, grade mode, total ~~and~~ contact hours, ~~Changes to~~ prerequisites, co-requisites, cross-listed courses, credit restrictions and/or credit exclusions,
- ~~Changes in the design, mode of delivery,~~ course learning outcomes, core competencies, and teaching and assessment methods ~~of an individual course~~
  - o
- The addition or deletion of a ~~in~~ lecture, lab, tutorial or other course component~~s~~
  - ~~Changes to prerequisites, co-requisites, cross-listed courses, credit restrictions and/or credit exclusions~~
  - ~~Changes in the design, mode of delivery, course learning outcomes, teaching and assessment methods of an individual course~~
- Changes to, or the addition of, experiential learning components, which are part of the course delivery
  - ~~Other minor changes to individual course offerings that do not affect the overall program requirements~~

5.2. ~~Minor Curricular Changes will be approved at the Faculty Council. Minor Curricular Changes must be reported to the appropriate standing committee of Academic Council (USC or GSC) using the appropriate electronic proposal by the end of January each year for implementation in the upcoming Academic Calendar.~~

5.3. Consultation with other Faculty Councils is required if the course being modified is core to another program. Consultation, in accordance with the current procedures for Indigenous consultation, is required if the new ~~elective~~ course or course being modified has or will contain Indigenous content.

5.4. Minor Curricular Changes not listed in Section 5.1 are the responsibility of the Faculty Council(s) ~~administrative in nature and relevant Deans, Associate Deans, Program Directors~~ in accordance with any relevant policies and procedures.

~~5.3.1.~~5.4.1. Changes or additions to the mode of delivery (in-person, online, hybrid) of a course must be submitted using the appropriate electronic proposal to update the official course record.

6. Minor Program Adjustments

6.1. Minor Program Adjustments will include a full electronic proposal brief and are submitted to the appropriate standing committee of Academic Council for approval. Minor Program Adjustments include:

- ~~The introduction of new required courses~~
- ~~The deletion of required courses~~
- Editorial changes to degree requirements, ~~or~~ program learning outcomes, or core competencies which may include those completed as a result of a cyclical review
- New academic requirements or changes to existing requirements, including the addition or deletion of required courses
- ~~Changing the delivery mode of some courses~~
- The introduction of the option to complete a portion or portions of an existing program to receive a for-academic-credit Micro-credential
- The creation of a new, stand-alone, for-academic-credit Micro-credential related to the Program
- The creation of a new Minor program where an existing Major already exists
- A change in the name of a Diploma, Major, or Program Component (e.g. Minor, Specialization, or Field) that does not result in a change to the degree designation or the Program Learning Outcomes

For clarity, changes to degree requirements will be defined as Minor Program Adjustments when ~~:~~

- ~~T~~the introduction, deletion, or modification of courses or requirements equals no more than one-third of the total course credit hours of the Program.

Commented [KM4]: Aligning/correcting definition and examples related to QC requirements and to provide clarity of language.

6.2. Minor Program Adjustments must be presented directly to the USC or GSC for consideration and approval following their recommendation by Faculty Council. Any changes must receive ~~this committee's~~USC or GSC approval prior to their implementation and inclusion in the academic calendars. The outcome is subsequently reported to Academic Council for information.

6.2.1. To be included in the academic calendars for the subsequent academic year, proposals must be received by ~~the Committees~~USC or GSC no later than the end of January.

6.2.2. Proposals that include the creation or introduction of a Micro-credential will also be reported to the appropriate micro-credential committee. Approved

Micro-credentials will be submitted to the Ministry for designation as eligible for Ontario Student Assistance Program funding, if applicable.

6.3. Minor Program Adjustment proposal briefs must minimally include the following information:

a) A summary of the proposed change, setting out the rationale and context for it, including any consideration of the principles of equity, diversity, inclusion, and decolonization.

b) A description of the ways in which the proposed change will enhance the academic opportunities for students, or the issues or challenges that the proposed change are intended to address.

c) An account of the process of consultation with other units and measures taken to minimize the impact of the change on students if the proposed change involves students/faculty from other programs or courses. An account of the process of consultation related to Indigenous content is required if the proposed change has or will contain Indigenous content.

d) A timeline for the implementation of the proposed change and transition plan for current students if applicable.

e) An analysis of the resource and enrolment implications, including support for any proposed online or hybrid delivery.

f) Calendar copy and program maps for the proposed change that clearly highlight the revisions to be made to the existing curriculum.

g) Completed proposals for all new courses and changes to existing courses that result from the change.

7. Major Program Modifications

7.1. The Quality Council defines Major Program Modifications as "~~to include~~ "significant changes" to existing academic programs where "the impact on the quality of the program and degree of significance can be measured qualitatively and/or quantitatively." These include: ~~the following Program changes:~~

Commented [KM5]: Changes to Section 7 align the definition and examples with QC requirements and simplify language to avoid ongoing confusion. In the majority of cases, items have been moved or wording condensed. Items that are considered Minor Program Adjustments have been removed from this section and are in the section above to align with QC requirements.

- Requirements that differ significantly from those existing at the time of the previous cyclical program review or at the time the program was first approved
- Significant changes to the learning outcomes ~~that do not, however, meet the threshold of a new program~~
- Significant changes to the faculty engaged in delivering the program~~'s delivery, including to the program's faculty~~ and/or to the essential physical resources as

may occur, for example, where there have been changes to the existing mode(s) of delivery (e.g., different campus, online delivery, inter-institutional collaboration) ~~and/or online/hybrid delivery)~~

- ~~Change in program name and/or degree nomenclature, when this results in a change in learning outcomes~~
- ~~Addition of a single new field to an existing graduate program. Note that universities are not required to declare fields for either master's or doctoral programs. Note also that the creation of more than one field at one point in time or over subsequent years may need to go through the New Program Expedited Protocol~~

Examples from the Quality Council are provided in the Quality Assurance Guide.

For greater clarity, in the Ontario Tech context, the following examples illustrate changes that normally constitute a significant change and would therefore be considered a Major Program Modification:

- Significant ~~C~~changes to the academic requirements and program content, including the introduction, deletion, or permanent modification of courses or requirements~~, including changing the mode of delivery, comprising a significant~~ that equals more than ~~(i.e.,~~ one-third of the total credit hours of the Program, but that do not meet the threshold for a new ~~or more) proportion of the~~ Program
- ~~Other~~Significant changes to one or more of the program ~~content that affect the~~ learning outcomes that alter the meaning of the learning outcome(s) that do not, however, ~~, but do not~~ meet the threshold of a 'new Program'; changes to the course configuration that impact the learning outcomes (e.g. a course that meets a learning outcome is moved to the list of electives)
- ~~Substantive changes to the Program learning outcomes, which may include those completed as a result of a cyclical review~~
- The merger of two related ~~or more~~ Programs in the absence of any other significant changes (e.g., no changes to the degree designation, learning outcomes, etc. that may meet the threshold for a New Program)
- New ~~bridging~~ formal pathways options, i.e. bridging or advanced entry, to or from another ~~for~~ college or university ~~diploma graduates~~
- Significant change in the laboratory time of an undergraduate Program
- The introduction or deletion of an undergraduate thesis or capstone project
- The introduction or deletion of a Program-level work experience, cooperative education, internship, ~~or~~ practicum, or portfolio
- At the master's level, the introduction or deletion of a research project, research essay or thesis option, course-only option, co-operative education, internship, or practicum option
- The creation or~~,~~ deletion~~, or re-naming~~ of a Type 1 Graduate Diploma

- ~~The creation, deletion, or re-naming of a field in a graduate Program~~The ~~A~~addition of a single new field to an existing graduate program. Note that universities are not required to declare fields for either master's or doctoral programs. Note also that the creation of more than one field at one point in time or over subsequent years may need to go through the New Program Expedited Protocol
- The creation~~,~~ or deletion~~, or re-naming of a specialization~~ of a ~~or~~ minor where no corresponding Major exists
- Any ~~C~~change~~s~~ to or the addition or deletion of ~~the~~ requirements for graduate program candidacy examinations, field studies, ~~or~~ residency requirements, and/or comprehensive examinations
- ~~Changes to courses, including changing the mode of delivery, comprising a significant (i.e., one-third or more) proportion of the Program~~
- ~~Other changes to program content that affect the learning outcomes, but do not meet the threshold of a 'new Program'~~
- ~~Substantive changes to the Program learning outcomes, which may include those completed as a result of a cyclical review~~
- Significant changes to the Program's delivery, including:
    - Changes to the Faculty delivering the Program that alter the areas of research and teaching interests (e.g. a large proportion of the faculty retires; new hires)
    - A change in the language of Program delivery
    - The introduction of inter-institutional collaboration or the establishment of an existing Program at another institution or location, including new dual Degree options
    - To the mode of delivery of the Program (e.g. ~~he~~ offering ~~of~~ an existing Program substantially online where it had previously been offered in face-to-face mode, or vice versa; the creation of multi-modal options) that meaningfully affects the student experience
    - Change to, or add, full- or part-time program options~~, or vice versa~~ where one did not previously exist
    - Changes to the essential resources, where these changes impair the delivery of the ~~approved~~ Program
- Change in the degree designation; change in the ~~program~~ name of a Major or Program Component (e.g. Specialization, Minor, or Field) ~~and/or degree nomenclature~~, when this results in a change in learning outcomes

~~Program m~~Modifications that will result in a more substantial change to ~~its~~ the Program's nature and content will require review and approval in accordance with the New Program Procedure. The final determination of whether a Program modification constitutes a significant change or a new Program will rest with the Provost. The Quality Council has final authority to decide if a Major Program Modification constitutes a new program and, therefore, must follow the New Program Procedures.

7.2. Major Program Modifications will include full electronic proposals and must include evidence that appropriate consultation has taken place. Once proposals are approved by Faculty Council, they will be subject to review by the appropriate standing committee of Academic Council (USC or GSC). The standing committee will submit its recommendation for approval to ~~the Executive Committee of Academic Council, and subsequently to~~ the Academic Council for final review and approval. Major Program Modifications are reported annually to the Quality Council.

Commented [KM6]: Should have been removed in previous version, EC no longer exists. Steering Committee Terms of Reference does not include program approvals. TOR changes approved by Board on recommendation of AC.

7.2.1. To be included in the academic calendars for the subsequent academic year, Major Program Modifications must be received by USC/GSC no later than the last working day in December.

7.3. Major Program Modification electronic proposals must minimally include the following:

a) A brief background on the existing program and rationale for the modification, including any consideration of the principles of equity, diversity, inclusion, and decolonization.

b) Overview of the modification, indicating the opportunities for graduates and evidence of fit with the mission, mandate and strategic plans of the University and the Faculty Description of how the new program component fits into the broader array of Program offerings, particularly areas of teaching and research strengths and complementary areas of study.

c) A fully developed section outlining: any new or modified program learning outcomes; the alignment of the change with the program learning outcomes and the provincial degree level expectations and universal competencies; new or modified admission requirements; program structure Calendar copy and program maps, where relevant, for the new program component showing courses and/or research components offered each semester and indicating courses currently offered, new courses, and required courses provided by other units; the impact the modification/new component has on students and how it will improve the student experience; any experiential or other applied learning opportunities that are part of the new program component; and program content including course outlines, descriptions, modes of delivery and teaching methods, and assessment with a linkage between the course learning outcomes and the program learning outcomes.

d) A list of required faculty members, including current core faculty and required new faculty; additional academic and non-academic human resources that may be required to launch and maintain the modifications; physical resource requirements, with how current facilities will be used and what, if any, new resources may be required; and for graduate Programs, any student support (funding) requirements.

e) An outline of areas consulted, which must include an account of mandatory feedback from students and recent graduates, and the process of consultation regarding Indigenous content, where appropriate.

f) A summary statement of funding required to support the Program and a statement of current resource availability.

g) When changing the mode of delivery to online/hybrid for all or a significant portion of a P~~p~~rogram, the following must also be addressed:

- Describe the adequacy of the technological platform to be used for online delivery
- Describe how the quality of education will be maintained
- Describe how the program objectives will be met
- Describe how the program learning outcomes will be met
- Describe the support services and training for teaching staff that will be made available
- Describe the sufficiency and type of supports that will be available to students

8. Admissions Changes

8.1. Changes made exclusively to admission requirements in the absence of other program changes will proceed through the governance structure to various levels of approval based on the nature and impact of the change.

Commented [KM7]: Adding items in Section 8 for clarity only.

8.1.1. Changes to admission requirements at the University level require final approval by Academic Council following recommendation by the USC/GSC. Changes of this nature are normally completed as a change to the relevant policy instrument.

8.1.2. Changes to admission requirements at the Faculty level require approval by the USC/GSC and are reported for information to Academic Council; this update is generally completed as a Minor Program Adjustment.

8.1.3. Changes to admission requirements at the individual program level are reported to the USC/GSC for information following approval by Faculty Council(s).

All decisions concerning admissions made within the scope of existing requirements are considered administrative decisions and can be approved by the Registrar or designate in consultation with the Dean.

QUALITY COUNCIL CYCLICAL AUDIT

9. In accordance with the Quality Assurance Framework, curricular changes as outlined in these Procedures are not normally subject to the University's Cyclical Audit.

MONITORING AND REVIEW

10. This procedure will be reviewed as necessary and at least every three years. The Provost's Office, through the Center for Institutional Quality Enhancement coordinates the day to day management of the quality assurance process, and works in collaboration with Deans and units to implement the procedures for developing and accessing academic programs. The Provost or successor thereof, is responsible to monitor and review this Policy.

RELATED POLICIES, PROCEDURES & DOCUMENTS

Ontario Universities Council on Quality Assurance - Quality Assurance Framework
Institutional Quality Assurance Policy
Program Nomenclature Directives
Protocols associated with consultation/development of Indigenous curriculum
Protocols associated with the development of Micro-credentials

Classification Number	ACD 1501.02
Parent Policy	Institutional Quality Assurance Process
Framework Category	Academic
Approving Authority	Academic Council
Policy Owner	Provost
Approval Date	June 2020
Review Date	June 2023
Supersedes	ACD 1501 (June 2010); Quality Assurance Handbook (June 2011) Cyclical Program Review Procedures (June 2020); Not-for-Academic Credit Digital Badges, Microcredentials, and Stackable Credentials Policy (July 2021)

CYCLICAL REVIEW AND AUDITING PROCEDURES

PURPOSE

1. The purpose of these Procedures is to set out the process for conducting the monitoring of new ~~degree~~ Degree and ~~diploma~~ Diploma ~~programs~~ Programs and the cyclical review of existing ~~degree~~ Degree and ~~diploma~~ Diploma ~~programs~~ Programs to ensure that they continue to meet provincial quality assurance requirements and to support their ongoing rigour and coherence. Further, these procedures set out the process for the cyclical audit conducted by the Quality Council, which reviews the University's institutional quality enhancement Polices, Procedures and processes. New ~~programs~~ Programs are monitored at the time of first intake and at least one year after the launch of the ~~program~~Program. Cyclical reviews of established ~~programs~~ Programs and the University audit occur at least once every 8 years.

DEFINITIONS

2. For the purposes of these Procedures the definitions in the Policy ~~following definitions~~ apply.~~:~~

~~**Academic Council:** the most senior academic governance body of the institution~~

~~**Degree:** An academic credential awarded upon successful completion of a prescribed set and sequence of requirements as specified by a program and that meet a standard of performance consistent with University and provincial degree level expectations~~

Commented [KM1]: Policy is now the central place for all definitions, this avoids any potential contradiction and shortens the Procedures for ease of reading.

~~**Diploma:** An academic credential awarded upon the successful completion of a prescribed set of degree credit courses as specified by a program. Diplomas are classified as concurrent and/or direct-entry~~

~~**Faculty Council:** established by Academic Council to approve new programs and courses, policies (including admissions), academic standards, curriculum and degree requirements, and long-range academic plans, at the Faculty level~~

~~**Graduate Studies Committee (GSC):** A standing committee of Academic Council responsible for reviewing graduate curriculum proposals and documents.~~

~~**Ministry:** the Ontario Ministry governing the affairs of Colleges and Universities.~~

~~**New Program:** any degree, degree program, or major, currently approved by Academic Council and the Board of Governors, which has not been previously approved by the Quality Council, its predecessors, or any intra-institutional approval processes that previously applied. A change of name, only, does not constitute a new program; nor does the inclusion of a new program of specialization where another with the same designation already exists (e.g., a new honours program where a major with the same designation already exists). To clarify, for the purposes of these Procedures, a "new program" is brand new: that is to say, the program has substantially different program requirements and substantially different learning outcomes from those of any existing approved programs offered by Ontario Tech University. The final determination of whether a proposed offering constitutes a new program will rest with the Provost.~~

~~**Program:** A complete set and sequence of courses, combination of courses, and/or other units of study, research and practice; the successful completion of which qualifies the candidate for a formal credential (degree with or without major; diploma)~~

~~**Quality Council:** the Ontario Universities Council on Quality Assurance, established by the Council of Ontario Universities in July 2010, responsible for oversight of the Quality Assurance Framework processes for Ontario Universities. The Council operates at arm's length from both Ontario's publicly assisted universities and the Ontario government.~~

~~**Resource Committee:** the university Academic Resource Committee or equivalent university body~~

~~**Undergraduate Studies Committee (USC):** A standing committee of Academic Council responsible for reviewing undergraduate curriculum proposals and documents.~~

SCOPE AND AUTHORITY

3. These Procedures apply to undergraduate and graduate ~~degree~~ Degree and D~~d~~iploma P~~p~~rograms and the associated governance processes, whether the P~~p~~rograms are offered in full, in part, or conjointly by any institutions federated or affiliated with the university. It also applies to D~~d~~egree and D~~d~~iploma programs offered in partnership, collaboration or other such arrangement with other post-secondary institutions including colleges, universities or other institutes.

4. For those ~~P~~programs that are offered in more than one mode, at different locations, or having complementary components (e.g., bridging options, experiential education options, etc.), the distinct versions of the program will be identified and reviewed during new program monitoring and cyclical program review. The self-study brief will encompass all modes, locations, and components in one report.

5. Degree and Diploma Programs which have been approved but never launched, have been closed, or for which admission has been suspended, are not subject to these Procedures. Stand-alone Micro-credentials are also not subject to these Procedures.

6. The Provost, or successor thereof, is the Policy Owner and is responsible for overseeing the implementation, administration and interpretation of these Procedures.

PROCEDURES

7. Monitoring of New Academic Programs

7.1. At the time of first intake into the Program, CIQE, working with the Office of Institutional Research and Analysis, will prepare an initial report that will review admissions and enrolment data and report on any changes made to the program since it was approved. This report will be reviewed by the Office of the Provost, through the Resource Committee, to assess any issues that may arise and determine if alternate plans are required to ensure the overall success of the Program.

7.2. One year after the launch of the Program, CIQE, working with the Academic Unit, will prepare a report that will review: enrolment and admissions data; success in realizing the program objectives, requirements, and learning outcomes; any changes made to the program since approval; and other key metrics to assess New Program effectiveness. This report will be reviewed by the ~~Office of the~~ Provost, through the Resource Committee, to assess any issues and determine if alternate plans are required to ensure the overall success of the Program.

7.3. Should any recommendations arise from the one-year report, additional monitoring and review may be required at the request of the ~~Office of the~~ Provost or the Resource Committee. An additional monitoring report, if required, will analyze key curricular and student data (e.g. student evaluations, GPA, retention data, etc.) as well as address the recommendations from the initial report. Pending review, further documentation may be required for ongoing monitoring.

7.4. Should the Quality Council require any follow-up reports, as indicated at the time of approval, these shall be completed in accordance with the requirements outlined in the approval letter from the Quality Council.

7.5. ~~New~~ Programs will then be reviewed and refined on an ongoing basis in accordance with the Institutional Quality Assurance Policy. Specifically, approved Programs will be entered into the schedule of academic program reviews and the first review will take place no more than eight years after the start of the Program, and every eight years hence, in accordance with Section 8 of these Procedures. The first cyclical review will take into consideration the outcomes of the intake, one-year, and any additional reports, as well as any aspects highlighted by the Quality Council as required during the program review.

8. Cyclical Review of Degree and Diploma Programs

Procedures for program reviews involve six components: the review and enhancement of program learning outcomes and assessment of core competencies; the development of a self-study brief by the program under review; external evaluation to provide recommendations on program quality improvement; internal response to ~~review~~ the external evaluation and recommendations; preparation and approval of a final assessment report and implementation plan; and subsequent reporting on the implementation of recommendations. Individuals may use the templates provided at www.ontariotechu.ca/ciqe as a guide to assist in the planning and implementation of the components of the cyclical review. It is expected that, unless otherwise specified below, all information, documents, and reports are not publicly accessible and will be afforded an appropriate level of confidentiality.

8.1. Appointment of Internal Assessment Team

8.1.1. Upon notification that a program is up for review, the Faculty Dean will appoint an Internal Assessment Team (IAT), comprised of faculty, staff and students (current or recent graduate of the program). The Dean will also appoint a faculty member from the IAT to act as Chair. A faculty co-chair may be appointed, if necessary.

8.1.2. The proposed IAT will be submitted to CIQE~~,~~ and will be approved by the Provost.

8.2. Review and Enhancement of Program Learning Outcomes

The IAT chair, in consultation with the IAT, will review and enhance the program learning outcomes, and map them to the degree level expectations (either undergraduate or graduate) set out by the Ministry.

8.2.1. The IAT will engage in a program learning outcome enhancement process where they will review and revise their program learning outcomes. These revisions will lay the groundwork for the program for the upcoming seven years. The program and course learning outcomes must be reviewed and revised using resources provided by CIQE and the Teaching and Learning Centre (TLC). It is strongly recommended that the IAT and other program faculty participate in learning outcome sessions hosted by CIQE and TLC; alternatively, the revised program learning outcomes must be reviewed and approved by CIQE and TLC prior to the scheduling of the External Review. The IAT will then map the revised program learning outcomes to the appropriate degree level expectations (DLEs) with related skills and competencies using resources provided by CIQE and the Teaching and Learning Centre (TLC).

8.2.2. After the map to the degree level expectations is complete, the IAT will map their current course offerings to the revised program learning outcomes and analyze the results.

8.2.3. The revised program learning outcomes and DLE map, once ~~approved~~ finalized by the IAT, will be an appendix to the self-study document.

8.3. Self-Study Briefs

The self-study brief will form the basis of the program review and must clearly set out the indicators of program quality, as outlined in the Evaluation Criteria, against which the program is to be assessed. The brief may also identify specific aspects of the program on which feedback is sought. A template for the proposal will be provided through the Centre for Institutional Quality Enhancement via the website at www.ontariotechu.ca/ciqe.

8.3.1. Self-study briefs for each program under review must be prepared and reviewed by a Program Review Internal Assessment Team (IAT).

8.3.2. The IAT will work in collaboration with the Centre for Institutional Quality Enhancement (CIQE) to pull together key institutional data and other indicators of program quality that will inform the self-study.

8.3.3. The brief should be broad-based, reflective and forward-looking and should demonstrate how the program advances the University's mission.

8.3.4. The brief must also present evidence to support an assessment of the program requirements, program learning outcomes and degree level expectations with related skills and competencies, along with the human and physical resources involved.

8.3.5. The brief should address any concerns and recommendations raised in previous reviews.

8.3.6. The brief will include a short description of the process by which the self-study was prepared, including faculty, staff, and student input and involvement.

8.3.7. The brief will also identify specific aspects of the program on which feedback is sought, including any consideration of the principles of equity, diversity, inclusion, and decolonization; areas requiring improvement and those that hold promise for enhancement; any unique curriculum or program innovations, creative components, or significant high impact practices; as well as academic services that directly contribute to the academic quality of the program. The brief will incorporate feedback sought from representatives from industry, the professions or employers, where appropriate.

8.3.8. Upon its completion, the Faculty~~,~~ and the Dean~~,~~ will review the self-study brief to ensure that it presents the full range of evidence to support an assessment of program quality. The Dean may also highlight any areas of opportunity or institutional constraints that may need to be taken into account as part of the review.

8.4. External Review and Reporting

8.4.1. The Dean, in consultation with the IAT, will recommend to the Provost, at least 5 individuals to serve as external reviewers of the Program.

8.4.1.1. Reviewers must be external to the University, will normally be tenured (or equivalent) and will have suitable disciplinary expertise, qualifications and program management experience at another university, including an appreciation of pedagogy and learning outcomes, ~~tenured or equivalent, have program management experience at another university,~~ and be at arm's length to the program under review, as outlined in the Proposed External Reviewer's form and on the Quality Council's website.

8.4.1.2. For undergraduate programs, two reviewers are required, with both being external to the university. At least one of the reviewers must currently be at a Canadian post-secondary institution.

8.4.1.3. For graduate programs, at least two reviewers external to the university are required. At least one of the reviewers must currently be at a Canadian post-secondary institution. A third internal reviewer, external to the program, may additionally be included.

8.4.1.4. For each External reviewer candidate, the recommendation must be accompanied by a rationale for the selection and a detailed biographical statement, prepared by the IAT, that outlines their academic expertise, administrative experience, accomplishments, and research.

Commented [KM2]: Codifying the current practice.

8.4.1.5. External reviewer forms are sent to CIQE to be reviewed and subsequently approved by the Provost. ~~CIQE~~ The Office of Planning and Analysis will contact approved proposed reviewers to maintain arms-length process and ensure that the required number of reviewers are engaged to review the Program.

8.4.2. CIQE, in consultation with the Faculty, will organize a site visit to provide an opportunity for the reviewers to assess the standards and quality of the program and to prepare a report that addresses the University's program quality review Evaluation Criteria.

8.4.2.1. External review of doctoral program must incorporate an on-site visit except in exceptional circumstances as determined by the Provost. External review of undergraduate ~~programs, and certain~~, Master's, ~~programs (e.g. professional Master's programs, fully online)~~ and Graduate Diploma programs ~~-~~will normally be conducted on-site, but at the request of the Dean, the Provost (or delegate) may ~~propose~~ approve that the review be conducted by desk audit, virtual site visit, or an equivalent method if the external reviewers are satisfied that the off-site option is acceptable. The ~~Provost~~ Dean~~(or delegate)~~ will ~~also~~ provide a clear justification for the ~~decision~~ request to ~~use these alternatives~~conduct the review without an on-site visit. ~~An on-site visit is required for all other proposed master's programs.~~

Commented [KM3]: Aligning with updated QC guidelines and requirements and to provide clarity on process where discretion is possible.

8.4.2.2. In advance of the site visit, or prior to the desk audit, CIQE will send to the reviewers the ~~unit's~~ Program's self-study brief~~, a cover letter by the Dean, along with~~and any additional material or information that may be needed to inform the assessment.

8.4.2.3. ~~On the first morning~~At the beginning of the site visit, or prior to the desk audit, the Provost or their designate will meet with the reviewer(s) to outline the process for review and the roles and responsibilities of the reviewers.

8.4.2.4. During the site visit, reviewers will have an opportunity to meet with the IAT, and with other faculty, students, staff, senior academic administrators, and any others who can most appropriately provide informed comment, such as representatives from industry, the professions or employers, to discuss aspects of the self-study in the context of the program quality review criteria.

8.4.2.5. Reviewers will be required to respect the confidentiality of all aspects of the process and recognize the institution's autonomy to determine priorities for funding, space, and faculty allocation. Commentary or recommendations on issues such as faculty complement and/or space requirements, that are within the purview of the university's budgetary decision-making processes, must be tied directly to issues of program quality or sustainability.

8.4.3. Reviewers will submit a report to the Dean, through CIQE, which addresses the substance of the self-study and the program quality review Evaluation Criteria. A template for the report will be provided by CIQE.

8.4.3.1. Normally, the report will be prepared jointly by the reviewers and will contain at least three recommendations.

8.4.3.2. Reviewers will be invited to acknowledge and provide evidence of any clearly innovative aspects of the program, including in the content and/or delivery of the program relative to other such programs, together with recommendations on specific steps to be taken to improve the program, distinguishing between those the program can itself take, and those that require external action.

8.4.3.3. Reviewers will also be asked to identify and commend notably strong and creative attributes of the program; describe the program's strengths, areas for improvement, and opportunities for enhancement; and identify distinctive attributes of each discrete program/mode of delivery/site, where applicable.

8.4.3.4. Normally, the report will be completed within 30 days of the site visit.

8.4.3.5. Upon submission, CIQE will review the external reviewers' report to ensure it meets the requirements stated in Article 8.4.3. If additional details or clarification are needed from the reviewers, CIQE will reach out to the reviewers to request this in a revised report.

8.5. Response to Report

8.5.1. Upon receipt of the reviewers' report(s), the Dean and the IAT will consider its recommendations, including consideration of any financial or other resource implications.

8.5.1.1. The IAT Chair will solicit feedback from ~~p~~Program faculty and, in consultation with the IAT, will prepare and send to ~~the Dean~~CIQE the Program's response to the reviewers' report that will include a summary of the program strengths, opportunities for improvement and a response to the recommendations put forward by the reviewers. A template for the ~~p~~Program's response report will be provided through CIQE.

Commented [KM4]: Clarifying process and showing alignment with QC in Section 8.5, no changes to existing requirements.

8.5.1.2. Using the Program's response report as a guideline, the Dean, using a template provided by CIQE and working in consultation with the Office of the Provost, will prepare a separate decanal response to the reviewers' report. The response will include the Dean's assessment and prioritization of the recommendations and an Implementation Plan (IP) including resource requirements, a timeline for acting on and monitoring the implementation of the recommendations, and persons/area responsible for acting on the recommendations. A template for the decanal response and ~~Implementation Plan~~IP will be provided through CIQE. The Dean ~~will~~ must solicit ~~Faculty~~ feedback on the Implementation Plan through Faculty Council.

8.5.1.3. The ~~Implementation Plan~~IP will be reviewed by the Provost, through the Resource Committee, to examine resource implications and allocations. The Resource Committee will create a brief summary ~~report~~ of its review.

8.6. Approval Process

8.6.1. Using the self-study brief, together with the reviewers' report(s), the Dean's and Program's responses, the ~~Implementation Plan~~IP, and the Resource Committee's summary ~~report~~, CIQE will prepare a Final Assessment Report (FAR). If confidential information is presented in any of the documentation used to prepare the FAR this information will be included only in an appendix. The appendix will be afforded the appropriate level of confidentiality within the Office of the Provost and the Faculty and will be withheld from distribution.

Commented [KM5]: Adjustment of unclear language in Sections 8.6 and 8.7 to provide more clarity in document titling and content and to avoid confusing approval paths; ensures proper alignment with QC wording.

8.6.1.1. The FAR will synthesize the reports and recommendations resulting from the review and~~,~~ identify the strengths of the program as well as the opportunities for program improvement and enhancement.

8.6.1.2. The FAR will list all recommendations of the external reviewers and the associated separate internal responses and assessments from the Program and the Dean. The list of recommendations and/or responses may be paraphrased and combined under themes within the FAR to facilitate clear tracking and monitoring. Explanation for reviewer recommendations not selected for further action ~~in the Implementation Plan~~, as well as any additional recommendations that the Program, the Dean and/or the university may have identified as requiring action ~~as a result of the program's review~~, will be included in the FAR.

8.6.1.3. ~~CIQE~~ The FAR will include an ~~will also prepare an~~ Executive Summary ~~to the FAR~~ as to be suitable for publication.

8.6.2. The FAR (excluding the confidential appendix, if applicable)~~, Executive Summary,~~ and ~~Implementation Plan~~IP, will be presented to the appropriate standing committee of Academic Council (USC or GSC) for approval.

8.6.3. In those cases where the program review cycle includes both undergraduate and graduate programs, separate reviews will be conducted, and ~~reports~~ FARs will be submitted to the USC and GSC concerning the reviews relevant to the mandate of each committee.

~~8.6.3.~~8.6.4. The Executive Summary to the FAR and the IP are then posted on the Ontario Tech corporate website.

~~8.6.4. It is expected that the reports and recommendations will be afforded an appropriate level of confidentiality.~~

8.6.5. ~~The Executive S~~A summary of all reviews including each FAR (excluding the confidential appendices) and IP ~~and Implementation Plan is provided~~ will be distributed to Academic Council and the Board of Governors for information.

~~8.6.5.~~8.6.6. ~~The FAR, Executive Summary, and Implementation Plan~~A summary report of all reviews completed during the year, with a link to the Executive Summaries and IPs, will be sent to the Quality Council as required under the Quality Assurance Framework.

~~8.6.6.~~8.6.7. The approved FAR, including confidential information, and the final IP ~~Implementation Plan~~ will be provided to the Faculty(ies), through the Dean(s), as primary owner. These will serve as the basis for the continuous improvement and monitoring of the program. The Faculty is responsible for subsequent reporting and monitoring of the ~~Implementation Plan~~ IP, as outlined in Section 8.7.

8.7. Subsequent Reporting and Monitoring of the Implementation of Recommendations

8.7.1. Eighteen months following the completion of the review, the Office of the Provost will request from the Dean ~~of the Faculty~~ a brief follow-~~-~~up report that outlines the progress that has been made in implementing the agreed upon plans for improvement. The report will be sent to the Resource Committee for review.

8.7.2. If outstanding items remain ~~from the Implementation Plan~~ at the time of the ~~eighteen-month~~follow-up report, the Resource Committee will review these outstanding items with the Dean ~~of the Faculty~~. The Resource Committee may recommend further monitoring of these items on a case-by-case basis.

~~8.7.2.~~8.7.3. The follow-up report, excluding any confidential information, is then posted on the Ontario Tech corporate website.

~~8.7.3.~~8.7.4. A summary of the ~~progress~~ follow-up reports will be distributed to the appropriate standing committee of Academic Council (USC/GSC), to Academic Council, and to the Board of Governors, for information. ~~approved by the appropriate standing committee of Academic Council (USC or GSC).~~

~~8.7.4.~~8.7.5. ~~A summary of the progress report will be included in the reporting to Academic Council on program reviews.~~

~~8.7.5.~~8.7.6. ~~The summary report is then posted on the Ontario Tech corporate website.~~ A summary of all follow-up reporting completed during the year, with a link to the reports, will be sent to the Quality Council as required under the Quality Assurance Framework.

Commented [KM6]: The only substantive change to the procedures. There is no requirement for the follow-up report to be approved by USC/GSC under the QC requirements, nor is there an ability to change a progress report at the committee level. This is often confusing to committee. It is important that updates from the action plan be provided for information.

8.8. Review of Joint or Collaborative Programs

8.8.1. Joint programs, and other programs offered in collaboration with other post-secondary institutions, will ensure that the required quality assurance requirements of both institutions are met.

8.8.2. When the program is held jointly with an institution that does not have an IQAP that has been ratified by the Quality Council, the Ontario Tech IQAP Policy and associated Procedures will apply with Ontario Tech as the leading institution.

8.8.3. In cases where the program is held jointly with an institution that does have an IQAP ratified by the Quality Council, the Office of the Provost, through CIQE, will collaborate with the partner institution to develop a process and associated templates that will address all requirements of each institution's IQAP. Specifically, the collaboration will address:

a) The selection of external reviewers

b) Templates to be used for a single self-study and required reports from the external reviewers, program team, and Dean(s)

c) The location(s) or the site visit(s), timing for program review, and subsequent reporting

d) The development of a joint committee to review the program

e) The process for monitoring and reporting on the implementation of recommendations after the review

f) The lead institution for the purposes of submission to the Quality Council

9. Quality Council Cyclical Audit

In accordance with the Quality Assurance Framework (QAF), the University is subject to a Cyclical Audit by the Quality Council, at least once every eight years. The Quality Council has established the schedule of institutional participation in the audit process within the eight-year cycle and publishes the agreed schedule on its website. The Cyclical Audit provides necessary accountability to post-secondary education's principal stakeholders by assessing the degree to which the University's internally-defined quality assurance processes, procedures, and practices align with and satisfy the agreed upon standards, as set out in the QAF.

Specifically, the Cyclical Audit will:

- Review institutional changes made in policy, process, and practice in response to the recommendations from the previous audit
- Confirm the University's practice is in compliance with its IQAP as ratified by the Quality Council and note any misalignment of its IQAP with the Quality Assurance Framework; and
- Review institutional quality enhancement practices that contribute to continuous improvement of programs, especially the processes for New Program Approvals and Cyclical Program Reviews

9.1. The Audit Team

Normally three auditors, selected from the Audit Committee's membership by the Quality Assurance Secretariat, conduct the Cyclical Audit. These auditors will be at arm's length from the University undergoing the audit. Members of the Quality Assurance Secretariat accompany the auditors on their site visit and constitute the remainder of the Audit Team.

9.2. Scope of the Audit

9.2.1. The Audit Team will independently select a sample of programs for audit that represent the development of new Degree programs under the New Program Procedures (normally two examples of new programs) and Section 8 of the Cyclical Review and Auditing Procedures (normally three or four examples of programs that have undergone a Cyclical Program Review). New Degree programs and Cyclical Program Reviews undertaken within the period since the previous Audit are eligible for selection.

9.2.2. Diploma Programs and Micro-credentials that have been developed under the New Program Procedures and changes made under the Curriculum Change Procedures or Program Closure Procedures will not normally be subject to audit.

9.2.3. A small sample of new programs still in development and/or cyclical program reviews that are still in progress may also be selected, in consultation with the University. If so, documentation associated with these in-progress processes will not be required for submission for audit. Instead, the auditors will ask to meet with the program representatives to gain a better understanding of current quality practices.

9.2.4. Specific areas of focus may also be added to the audit when an immediately previous audit has documented Causes for Concern, or when the Quality Council so requests. The University will be informed of the specific areas of focus in the letter from the Quality Assurance Secretariat that also details the programs selected for audit. The University itself may also request that specific programs and/or quality enhancement elements be audited.

9.3. Pre-Audit Orientation and Briefing

The Quality Assurance Secretariat will schedule an in-person, half-day briefing approximately one year prior to the University's scheduled Cyclical Audit. During this briefing, the Quality Assurance Secretariat and a member of the Audit Team will provide an orientation on what to expect from the Cyclical Audit to the University Key Contact, key CIQE staff members, and any other relevant stakeholder(s) as determined by the Provost or designate.

9.4. Self-Study

9.4.1. In consultation with the Provost, CIQE will prepare a self-study, which reflects on past and current policies and practices and the extent to which the University demonstrates a focus on continuous improvement in the development of new programs and the cyclical review of existing ones. The self-study will present and assess the quality enhancement processes, including challenges and opportunities, within its own institutional context and pay particular attention to issues, if any, flagged in the previous Audit.

9.4.2. CIQE will also prepare a package of all relevant documentation for each program selected for audit, including all items related to each step outlined in the Procedures. The self-study and document packages are submitted by CIQE to the Quality Assurance Secretariat in advance of the desk audit.

9.4.3. The documentation to be submitted for audit will include, but is not limited to:

- All templates, proposal briefs/self-studies, reports and responses, minutes of meetings, and any other relevant documents and other information related to the programs selected for audit, as requested by the Audit Team;
- A record of any revisions of the university's IQAP, as ratified by the Quality Council; and
- The annual report of any minor revisions of the university's IQAP that did not require Quality Council re-ratification.

9.5. Audit Team Review

9.5.1. **Desk Audit**

The auditors will first undertake a desk audit of the University's quality enhancement practices, which will determine whether the University's practice is in compliance with the IQAP and will also note any misalignment of the IQAP with the QAF. The desk audit serves to raise specific issues and questions to be pursued during the on-site visit and to facilitate an effective and efficient audit. The auditors will undertake to preserve the confidentiality required for all documentation and communications and to meet all applicable requirements of the Freedom of Information and Protection of Privacy Act (FIPPA).

9.5.2. **Site Visit**

After the desk audit, auditors will normally visit the University over two or three days. The principal purpose of the on-site visit is for the auditors to get a sufficiently complete and accurate understanding of the University's application of the IQAP in the pursuit of continuous improvement of programs. Further, the site visit will serve to answer questions and address information gaps that arose during the desk audit and assess the degree to which the institution's quality enhancement practices contribute to continuous improvement.

9.5.2.1. CIQE, in consultation with the Office of the Provost and the auditors, will establish the program and schedule for the site visit. In the course of the site visit, the auditors speak with the university's senior academic leadership including those who the IQAP identifies as having important roles in the governance process.

9.5.2.2. The auditors also meet with representatives from those programs selected for audit, students, and representatives of units that play an important role in ensuring program quality and success.

9.6. Audit Report

9.6.1. Following the conduct of an audit, the auditors will prepare a report that will be approved by the Quality Council. The report, which is to be suitable for publication, comments on the institution's commitment to the culture of engagement with quality assurance and continuous improvement and will meet the requirements as outlined in Section 6.2.7 of the QAF. The report shall not contain any confidential information.

9.6.2. A separate addendum will provide the University with detailed findings related to the audited programs. This addendum is not subject to publication. The report may include findings in the form of Suggestions, Recommendations, and/or Causes for Concern.

9.6.3. The Audit Report also includes recommendations for the Quality Council to take one or more steps, as appropriate, as outlined in Section 6.2.7 of the QAF. This may include participation in a Focused Audit, as described in Section 9.10 below.

9.6.4. The Quality Assurance Secretariat submits the Audit Report to the Audit Committee for consideration. Once the Audit Committee is satisfied with the Report, it makes a conditional recommendation to the Quality Council for approval of the Report, subject only to minor revisions resulting from the fact checking stage.

9.6.5. The Quality Assurance Secretariat provides a copy to the University, via the Provost, for fact checking. This consultation is intended to ensure that the report does not contain errors or omissions of fact but not to discuss the substance or findings of the report. CIQE will prepare a report, for submission by the Provost, on the factual accuracy of the draft report within 30 days. If needed, the Provost can request an extension of this deadline by contacting the Quality Assurance Secretariat and providing a rationale for the request. This response becomes part of the official record and the audit team may use it to revise their report. However, the fact checking response will not be published on the Quality Council's website. When substantive changes are required, the draft report will be taken back to the Audit Committee.

9.6.6. Upon approval by the Quality Council, the Quality Assurance Secretariat sends the approved report to the university with an indication of the timing for any required follow-up.

9.7. University Response to Report

9.7.1. When a Follow-up Response Report is required, the University, through CIQE, will submit the Report within the specified timeframe, detailing the steps it has taken to address the recommendations and/or Cause(s) for Concern.

9.7.2. If the Audit Team is satisfied with the University's Follow-up Response Report, it will draft a report on the sufficiency of the response. The auditors' report, suitable for publication, is then submitted to the Audit Committee for consideration.

9.7.3. If the Audit Team is not satisfied with the response, the Audit Team will consult with the University, through the Quality Assurance Secretariat, to ensure the follow-up response is modified to satisfy the requirements of the Audit Report. In so doing, the University will be asked to make any necessary changes to the follow-up response within a specified timeframe.

9.7.4. The Audit Committee will submit a recommendation to the Quality Council to accept the university's follow-up response and associated auditors' report.

9.8. Publication of the Results of the Audit

9.8.1. The Quality Assurance Secretariat will publish the approved report of the overall findings, absent the addendum that details the findings related to the audited programs, together with a record of the recommendations on the Quality Council's website.

9.8.2. The University will also publish the report (absent the previously specified addendum) on its website.

9.8.3. The Quality Assurance Secretariat publishes any Follow-up Response Report and the auditors' report on the scope and adequacy of the university's response on the Quality Council website and sends a copy to the University for publication on its website.

9.8.4. A report on all audit-related activity is provided to the Ontario Council of Academic Vice-Presidents (OCAV), the Council of Ontario Universities (COU), and the Ministry through the Quality Council's Annual Report.

9.9. Outcomes of the Cyclical Audit

The Audit Report describes the extent to which the University is compliant with the IQAP and approximates best practice. Based on the findings in its Report, the Audit Committee will make recommendations about future oversight by the Quality Council and/or one or more of its Committees.

9.9.1. When the Audit Report finds relatively high to very high degrees of compliance and good to best practices, the Audit Committee may recommend reduced Quality Council oversight in one or more areas of the University's quality enhancement practices. The recommendation may include, but is not limited to, the elimination of the requirement for a Follow-up Response Report to the Audit Report and possibly a reduced set of documentation required for a subsequent audit.

9.9.2. Alternatively, when the Audit Report identifies deficiencies in several areas of the University's practices and/or systemic challenges, the Audit Committee may recommend increased oversight by the Quality Council. The nature of this oversight will be determined by the Quality Council and may include one or more of the following outcomes, which are less formal than the Cyclical Audit and, thus, will not replace it:

- Increased reporting requirements;
- A focused audit (Section 9.10, below); and/or
- Any other action deemed appropriate by the Quality Council.

9.10. Focused Audit

9.10.1. When an Audit Report has identified at least one Cause for Concern, the Audit Committee will recommend to the Quality Council that the specific area(s) of concern may require closer scrutiny and further support through a Focused Audit.

9.10.2. A Focused Audit may also be triggered by the Quality Council when it has some concerns about the quality assurance processes at a particular university.

9.10.3. A Focused Audit may take the form of a desk audit and/or an additional site visit. The Audit Committee will also recommend to the Quality Council a proposed timeframe within which the Focused Audit should take place.

9.10.4. **The Focused Audit Report**

9.10.4.1. Following the conduct of a Focused Audit, the auditors will prepare a report that will be approved by the Quality Council. The report will be suitable for subsequent publication, and will meet the requirements as outlined in Section 6.3 of the QAF.

9.10.4.2. The Focused Audit Report may also include Suggestions, Recommendations, and/or Cause(s) for Concern.

9.10.4.3. The report will be published on both the Quality Council and University websites. Other standard elements associated with a Cyclical Audit, such as the requirement for a one-year response, will be determined on a case-by-case basis.

MONITORING AND REVIEW

10. These procedures will be reviewed as necessary and at least every three years. The Office of the Provost, through the Center for Institutional Quality Enhancement, coordinates the day to day management of the quality assurance process, and works in collaboration with Deans and units to implement the procedures for developing and accessing academic programs. The Provost or successor thereof, is responsible to monitor and review this Policy.

RELATED POLICIES, PROCEDURES & DOCUMENTS

Ontario Universities Council on Quality Assurance - Quality Assurance Framework
Institutional Quality Assurance Policy
Academic Resource Committee Terms of Reference
Program Nomenclature Directives
Protocols associated with consultation/development of Indigenous curriculum

Classification Number	ACD 1501.03
Parent Policy	Institutional Quality Assurance Process
Framework Category	Academic
Approving Authority	Academic Council
Policy Owner	Provost
Approval Date	~~June 2020~~
Review Date	~~June 2023~~
Supersedes	ACD 1501.03 -(June 201200); ~~Quality Assurance Handbook (June 2011); New Program Procedures (June 2020); Not-for-Academic Credit Digital Badges, Microcredentials, and Stackable Credentials Policy (July 2021)~~

NEW PROGRAM PROCEDURES

PURPOSE

1. The purpose of these Procedures is to establish a consistent process for the planning and establishment for any new degree or diploma program at the University.

DEFINITIONS

2. For the purposes of these Pprocedures the ~~following~~ definitions in the Policy apply.:

Commented [KM1]: Policy is now the central place for all definitions, this avoids any potential contradiction and shortens the Procedures for ease of reading.

~~**Academic Council:** the most senior academic governance body of the institution~~

~~**Academic Unit:** a Faculty or combination of Faculties offering a Program~~

~~**Cyclical Program Review (CPR):** to critically examine the components of a program with the assistance of outside reviewers with the goal of improving the quality of the program for students. A program review's purpose is not solely to demonstrate the positive aspects of the program, but also to outline the challenges and concerns that will lead to improvements for the future~~

~~**Degree Program:** a complete set and sequence of courses, combination of courses and/or other units of study, research and practice prescribed by the university to fulfill the requirements for a particular degree~~

~~**Diploma Program:** a complete set and sequence of courses, combination of courses and/or other units of study and practice prescribed by the university to fulfill the requirements for a particular diploma~~

~~**Faculty Council:** established by Academic Council to approve new programs and courses, policies (including admissions), academic standards, curriculum and degree requirements, and long-range academic plans, at the Faculty level~~

~~**Graduate Diploma:** A prescribed set of degree credit courses and/or other forms of study that can be undertaken as a stand-alone program or to complement a graduate degree program, and to provide specialization, sub-specialization or inter- or multi- disciplinary qualification. A graduate diploma is comprised of at least 12 credit hours of graduate-level study. There are three types of Graduate Diplomas as set out by the Council of Ontario Universities:~~

~~**a) Type 1:** Awarded when a candidate admitted to a master's program leaves the program after completing a prescribed proportion of the requirements. Students are not admitted directly to these programs. When new, these programs require approval through the university's protocol for Major Modification prior to their adoption. Once approved, they will be incorporated into the institution's schedule for cyclical reviews as part of the parent program.~~

~~**b) Type 2: A concurrent graduate diploma** is offered in conjunction with a master's or doctoral degree, the admission to which requires that the candidate be already admitted to the master's or doctoral program. This represents an additional, usually interdisciplinary, qualification and requires advanced level, usually interdisciplinary, study, at least 50% of which is in addition to the general requirements for the degree. When new, these programs require submission to the Quality Council for an Expedited Approval (no external reviewers required) prior to their adoption. Once approved, they will be incorporated into the university's schedule for cyclical reviews as part of the parent program.~~

~~**c) Type 3: A direct-entry graduate diploma** is a stand-alone, direct-entry program, generally developed by a unit already offering a related master's (and sometimes doctoral) degree, and designed to meet the needs of a particular clientele or market. Ontario Tech type 3 graduate diplomas may include non-degree credit courses to a maximum of 30% of the total program credit hours. Where the program has been conceived and developed as a distinct and original entity, these programs require submission to the Quality Council for an Expedited Approval (no external reviewers required) prior to their adoption. Once approved, they will be included in the Schedule for~~

~~Cyclical Reviews and will be subject to external review during the CPR process.~~

~~**Graduate Studies Committee (GSC):** a standing committee of Academic Council responsible for reviewing graduate curriculum proposals and documents~~

~~**Micro-credential:** A designation of achievement of a coherent set of skills and knowledge, specified by a statement of purpose, learning outcomes, and strong evidence of need by industry, employers, and/or the community. They have fewer requirements and are of shorter duration than a qualification and focus on learning outcomes that are distinct from diploma/degree programs.~~

~~**Ministry:** the Ontario Ministry governing the affairs of Colleges and Universities~~

~~**New Program:** any degree, degree program, or major, currently approved by Academic Council and the Board of Governors, which has not been previously approved by the Quality Council, its predecessors, or any intra-institutional approval processes that previously applied. A change of name, only, does not constitute a new program; nor does the inclusion of a new program of specialization where another with the same designation already exists (e.g., a new honours program where a major with the same designation already exists). To clarify, for the purposes of these Procedures, a "new program" is brand new: that is to say, the program has substantially different program requirements and substantially different learning outcomes from those of any existing approved programs offered by Ontario Tech University. The final determination of whether a proposed offering constitutes a new program will rest with the Provost.~~

~~**Program:** A complete set and sequence of courses, combination of courses, and/or other units of study, research and practice; the successful completion of which qualifies the candidate for a formal credential (degree with or without major; diploma)~~

~~**Quality Council:** the Ontario Universities Council on Quality Assurance, established by the Council of Ontario Universities in July 2010, responsible for oversight of the Quality Assurance Framework processes for Ontario Universities. The Council operates at arm's length from both Ontario's publicly assisted universities and the Ontario government~~

~~**Resource Committee:** the university Academic Resource Committee or equivalent university body~~

~~**Undergraduate Diploma:** A prescribed set of degree credit courses and/or other forms of study that can be undertaken as a stand-alone program or to complement an undergraduate degree program. An undergraduate diploma is comprised of 18-30 credit hours of undergraduate-level study~~

~~**a)** A **concurrent undergraduate diploma** is offered in conjunction with an undergraduate degree, which requires that the candidate be already admitted to an undergraduate degree~~

~~b) A **direct-entry undergraduate diploma** is a stand-alone, direct-entry program, developed by a unit already offering a related undergraduate or graduate program~~

~~**Undergraduate Studies Committee (USC):** a standing committee of Academic Council responsible for reviewing undergraduate curriculum proposals and documents~~

SCOPE AND AUTHORITY

3. These procedures apply to new cost-recovery or government-funded undergraduate and graduate Degree or Diploma Programs~~,~~ and may apply to new Micro-credentials ~~(which may be for-academic- credit or not for-academic credit)~~, whether offered in full, in part, or conjointly by any institutions federated or affiliated with the University. It also applies to new Programs offered in partnership, collaboration or other such arrangement with other post-secondary institutions including colleges, universities, or other institutes.

4. The Provost, or successor thereof, is the Policy Owner and is responsible for overseeing the implementation, administration and interpretation of these Procedures.

PROCEDURES

Procedures for new Degree Programs involve seven components which will be undertaken in order: a project initiation discussion and submission of a Notice of Intent to be approved by the Provost that demonstrates the program's fit with the Strategic Mandate Agreement, Integrated Academic and Research Plan (or equivalent) of the university, and the ~~Academic~~ academic and strategic plans~~Plan~~ of the Faculty(ies) offering the program; development of a proposal brief by the initiating program; external evaluation to provide an assessment of program quality; internal response to assessment; internal approval of proposal; submission of proposal to the Quality Council and Ministry as appropriate; and subsequent review of the program as part of the university's program review process in accordance with the Institutional Quality Assurance Policy and the Cyclical Review and Auditing Procedures.

New Diploma Programs are normally not subject to external review. Procedures for new Diploma Programs involve five components which will be undertaken in order: a project initiation discussion and submission of a Notice of Intent to be approved by the Provost that demonstrates the program's fit with the Strategic Mandate Agreement, Integrated Academic and Research Plan (or equivalent) of the university, and the a ~~A~~cademic and ~~Plan~~strategic plans of the Faculty(ies) offering the program; development of a proposal brief by the initiating program; internal approval of proposal; submission of proposal to the Quality Council and Ministry as appropriate; and subsequent review of the program as part of the university's program review process in accordance with the Institutional Quality Assurance Policy and the Cyclical Review and Auditing Procedures.

Procedures for new Micro-credential programs are outlined in Section 8.

Individuals may use the templates provided at www.ontariotechu.ca/ciqe to assist in the planning and implementation of the components of New Program development.

Commented [KM2]: Removing redundant language; M-Cs are defined in the relevant policy instruments.

Commented [KM3]: Adding initiation, which has been done in practice to assist with development of the NOI and in guiding direction of proposals to ensure institutional memory.

Adding the name of the IARP, which outlines University priorities, for specificity and ensuring the planning process at the Faculty level is clear.

5. New Degree Programs

5.1. Notice of Intent and Consultation

Faculties that wish to propose new Degree Programs will first contact the Centre for Institutional Quality Enhancement (CIQE) to conduct a project initiation meeting and for assistance with completing ~~complete~~ a Notice of Intent (NOI) form available through the ~~Centre for Institutional Quality Enhancement (~~CIQE~~)~~ website at www.ontariotechu.ca/cige. The Notice of Intent will facilitate the necessary consultation at the beginning of the planning stages, but will not replace ongoing communication and consultation throughout the process.

Commented [KM4]: Updates throughout Sections 5 and 6 for added clarity/accuracy with established practice.

5.1.1. All ~~New Program developments~~NOIs must be approved by the Provost ~~through the NOI~~ to ensure that any resource requirements are appropriately addressed before work on the proposal proceeds. Once an NOI has been approved, the new Program must be developed and approved at Academic Council within two years, or the approval will lapse and a new NOI must be submitted.

5.1.2. In the planning for any New Program, the Dean, in consultation with the Provost, must also determine the human, instructional and physical resources needed to implement the program and ensure its ongoing operation. The financial impact of the New Program on existing Programs must also be examined, and consideration must be given to possible collaborations with other units.

5.1.3. In addition, there must be broad consultation with members of the academic community, including faculty, staff and students who may be affected by the initiative, and with those who are key to its implementation, including the Provost, the Registrar, ~~or~~ the Dean of Graduate and Postdoctoral Studies, and the Chief Librarian. Staff and faculty wishing to develop New Programs related to Indigenization and reconciliation, or that contain Indigenous content, must also consult in a Good Way, in accordance with the current procedures for Indigenous consultation.

5.2. Proposal Briefs

Detailed proposals for all new Degree Programs must be prepared by the proponents and feedback provided by the Faculty Council(s). The proposal brief must clearly set out the rationale for the Program, including the ways in which the program advances the university's mission and mandate, and addresses the need and demand for graduates of the Program. The proposal must also detail how the Program fits within Strategic Mandate Agreement and Integrated Academic and Research Plan (or equivalent) ~~the strategic vision~~ of the University and the academic and strategic plans of the Faculty(ies), the requirements of the Program, along with details of the human, physical and financial resources required. A template for the proposal will be provided through CIQE via the website at www.ontariotechu.ca/cige. Proposal briefs for new Degree Programs must fully and clearly address the Evaluation Criteria as outlined in Section 2.1.2 of the Quality Assurance Framework (QAF), and answer all questions provided on the template. In addition to the Evaluation Criteria, proposal briefs must minimally include:

a) The rationale for the Program, fit with the University's and Faculty's strategic direction, background on the Program's development, a Program abstract, unique curriculum or program innovations, creative components, or significant high impact practices, and evidence of student demand and societal need. It will also note any duplication with existing post-secondary programs at other institutions.

b) A fully developed section outlining the Program learning outcomes and alignment with the provincial degree level expectations and skills and competencies; any consideration of the principles of equity, diversity, inclusion, and decolonization; admission requirements; program structure; and program content including course outlines, descriptions, modes of delivery and teaching methods, and assessment with a linkage between the course learning outcomes and the program learning outcomes. The program and course learning outcomes must be developed and aligned to the provincial degree level expectations using resources provided by CIQE and the Teaching and Learning Centre (TLC). It is strongly recommended that the proponents participate in learning outcome development sessions hosted by CIQE and TLC; alternatively, the program and course learning outcomes must be reviewed and approved by CIQE and TLC prior to the scheduling of the External Review. Should the curriculum contain any Indigenous content, evidence of consultation and approval in accordance with the current procedures for Indigenous consultation will be provided.

c) A list ~~will be provided~~ of required faculty members, including current core faculty and required new faculty; additional academic and non-academic human resources that may be required to launch and maintain the Program; physical resource requirements, ~~with~~ noting how current facilities will be used and what, if any, new resources may be required; and for graduate programs, any student support (funding) requirements. ~~Faculty~~ Curricula Vitae (CV) ~~CVs~~ for all required faculty members will be provided for inclusion in the proposal package presented to external reviewers.

d) Summary statements of resources required to support the Program and a statement of current resource availability ~~will be included~~.

~~d)~~e) For Programs offered jointly by more than one Faculty, the protocol for review and approval of program and course changes after the launch of the Program. This established protocol may be revised by agreement of all parties.

Commented [KM5]: Adding what is done in practice for transparency.

5.3. External Review and Reports

5.3.1. Prior to external review, the Office of the Provost, through the Resource Committee, will review the draft proposal to ensure that all operational and financial issues and Evaluation Criteria (QAF Section 2.1.2) have been adequately considered and addressed.

5.3.2. External Reviewers

For new Degree Programs, the Dean, in consultation with the Faculty ~~curriculum~~ committee responsible for developing the Program, will recommend to the Provost, through CIQE, the names of at least 5 individuals who may serve as reviewers of the Program. Two reviewers will be engaged to review new D~~d~~egree P~~p~~rograms. ~~All~~ These reviewers must be external to the University, will normally be tenured (or equivalent) and will have suitable disciplinary expertise, qualifications and program management experience, including an appreciation of pedagogy and learning outcomes, and be at arm's length to the program under review. CIQE will provide guidance on meeting the arm's length requirement, which is defined in the Guidelines section of the Proposed External Reviewers Nomination Form and on the Quality Council's website. Recommendations for external reviewers must be accompanied by a rationale for the selection and a brief, comprehensive biographical statement ~~and/or *curriculum vitae*~~ for each candidate.

Commented [KM6]: If maintaining arms-length in the process, the Faculty will not normally have access to the CVs.

5.3.3. Site Visit

~~The Office of the Provost, through the~~ The Faculty, in consultation with CIQE, will organize a ~~two-day~~ site visit to provide an opportunity for the reviewers to assess the standards and quality of the proposed Program. ~~External review of a new doctoral program must incorporate an on-site visit.~~ External review of new ~~undergraduate~~ ~~p~~Programs~~, and certain new Master's programs (e.g. professional Master's programs, fully online)~~ will normally be conducted on-site, but, at the request of the Dean, the Provost (or delegate) may ~~propose~~ approve that the review be conducted by desk audit, virtual site visit, or an equivalent method if the external reviewers are satisfied that the off-site option is acceptable. The ~~Provost~~ Dean~~(or delegate)~~ will ~~also~~ provide a clear justification for the decision to ~~use these alternatives~~conduct the review without an on-site visit. ~~An on-site visit is required for all other proposed master's programs.~~ At the beginning of the site visit, or prior to the desk audit, the Provost or their designate will meet with the reviewer(s) to outline the process for review and the roles and responsibilities of the reviewers.

Commented [KM7]: Updated to align with Quality Council guidelines and requirements and to provide clarity on process where discretion is possible.

5.3.4. External Reviewers' Report

5.3.4.1. The reviewer(s) will submit to the Dean, through CIQE, using a template provided, a report that appraises the standards and quality of the proposed program and addresses the Evaluation Criteria and other requirements (QAF Section 2.1.2 and QAF Section 2.2.2). Reviewers will be invited to acknowledge any clearly innovative aspects of the proposed program together with recommendations on any essential or otherwise desirable modifications to the program. ~~-~~Normally, the report will be prepared within 30 days of the site visit.

5.3.4.2. ~~-~~Upon submission of the reviewers' report, CIQE will review the report to ensure it meets the requirements stated in Article 5.3.4.1. If additional details or clarification are needed from the reviewers, CIQE will reach out to the reviewers to request this in a revised report.

5.3.5. Response to Report

5.3.5.1. Upon receipt of the reviewers' assessment, the Dean and the program proponents will consider the recommendations of the report.

5.3.5.2. The program proponents will respond and comment on the recommendations from the external reviewer(s)' report. This program response will also include a list of changes that can be made to the proposal based on the reviewer(s)' recommendations.

5.3.5.3. The Dean will respond and comment on the recommendations and the program's responses, considering overall Faculty and University plans.

5.3.5.4. The program proponents, working with the Dean, will amend the proposal and append to it a final list of changes made based on the recommendations and the program committee's and Dean's responses to the external report.

5.4. Internal Approval Process

5.4.1. The amended proposal brief, together with the reviewers' report and the Dean's and program committee's responses will be reviewed and approved by the Faculty Council(s). If there are additional resource implications resulting from the external review, the amended proposal brief will also be reviewed by the Resource Committee.

Commented [KM8]: When new resource expectations are added after the external review, the Committee will have another look at the proposal. This has been the practice, adding here for clarity.

5.4.2. The proposal brief, together with the reviewers' report and the Dean's and program committee's response will then be presented to the appropriate standing committee of Academic Council (GSC or USC) who will prepare a recommendation to Academic Council. The proposal brief will then be sent to Academic Council for review and approval. Proposals are then submitted to the University Board of Governors for final approval.

5.5. Submission of New Degree Programs to the Quality Council and the Ministry

5.5.1. Once ~~internal~~ Academic Council approval~~s~~ for a new Degree Program~~s~~ ~~have~~ has been obtained, the program proposal must be submitted to the Quality Council for review. The submission will include the final proposal document with the date of Academic Council approval, the external reviewers' report, and the internal responses, as well as a brief commentary on the two external reviewers with regard to their qualifications (expertise in content and program delivery, connections to industry where appropriate, expertise in teaching and learning). CVs for the reviewers will be required for submission to the Quality Council.

5.5.2. Following a new Degree Program's submission to the Quality Council, and with approval of the Provost, the University may announce its intent to offer the Program, provided that clear indication is given that approval by the Quality Council is pending and that no offers of admission will be made until approval is received and, where applicable, that approval by the Ministry is pending and students in the Program will not be eligible for OSAP until approval is received.

Commented [KM9]: Has always been required, adding for clarity.

5.5.3. Once submitted to the Quality Council, the proposal will be subject to the Initial Appraisal Process and may require further development or revision prior to approval.

5.5.4. After a Degree Program is approved to commence by the Quality Council, the Program will begin within thirty-six months of that date of approval, otherwise the approval will lapse. The Quality Council may require further reporting or review, which will be noted in the new program tracking summary provided to the Resource Committee and monitored by CIQE.

5.5.5. If a review is required for funding purposes, the proposed Degree Program will also be submitted to the Ministry.

6. New Type 2 and 3 Graduate Diploma and Undergraduate Diploma Programs

6.1. Notice of Intent and Consultation

Faculties that wish to propose new Graduate Type 2 and 3 or Undergraduate Diploma Programs will first contact the Centre for Institutional Quality Enhancement (CIQE) to conduct a project initiation meeting and for assistance with completing ~~complete~~ a Notice of Intent (NOI) form available through the ~~Centre for Institutional Quality Enhancement (~~CIQE~~)~~ website at www.ontariotechu.ca/ciqe. The Notice of Intent will facilitate the necessary consultation at the beginning of the planning stages, but will not replace ongoing communication and consultation throughout the process.

6.1.1. All ~~New Programs development~~NOIs must be approved by the Provost ~~through the NOI~~ to ensure that any resource requirements are appropriately addressed before work on the proposal proceeds.

6.1.2. In the planning for any New Program, the Dean, in consultation with the Provost, must also determine the human, instructional and physical resources needed to implement the program and ensure its ongoing operation. The financial impact of the New Program on existing Programs must also be examined, and consideration must be given to possible collaborations with other units.

6.1.3. In addition, there must be broad consultation with members of the academic community, including faculty, staff and students who may be affected by the initiative, and with those who are key to its implementation, including the Provost, the Registrar, ~~or~~ the Dean of Graduate and Postdoctoral Studies, and the Chief Librarian. Staff and faculty wishing to develop New Programs related to Indigenization and reconciliation, or that contain Indigenous content, must also consult in a Good Way, in accordance with the current procedures for Indigenous consultation.

6.2. Proposal Briefs

Detailed proposals for all new Diploma Programs must be prepared by the proponents and feedback provided by Faculty Council(s). The proposal brief must clearly set out the rationale for the Program, including the ways in which the program advances the university's mission and mandate, and addresses the need and demand for graduates of the Program. The proposal must also detail how the Program fits within the strategic vision of the University and the Faculty(ies), the requirements of the Program, along with details of the human, physical and financial resources required. A template for the proposal will be provided through CIQE via the website at www.ontariotechu.ca/ciqe. Proposal briefs for new ~~Degree~~ Diploma Programs must fully and clearly address the Evaluation Criteria as outlined in Section 2.1.2 of the Quality Assurance Framework (QAF), and answer all questions provided on the template. In addition to the Evaluation Criteria, proposal briefs must minimally include:

a) The rationale for the Program, fit with the University's and Faculty's strategic direction, background on the Program's development, a Program abstract, unique curriculum or program innovations, creative components, or significant high impact practices and evidence of student demand and societal need. It will also note any duplication with existing post-secondary programs at other institutions.

b) A fully developed section outlining the Program learning outcomes and alignment with the provincial degree level expectations and skills and competencies; consideration of the principles of equity, diversity, inclusion, and decolonization; admission requirements; program structure; and program content including course outlines, descriptions, modes of delivery and teaching methods, and assessment with a linkage between the course learning outcomes and the program learning outcomes. The program and course learning outcomes must be developed and aligned to the provincial degree level expectations using resources provided by CIQE and the Teaching and Learning Centre (TLC). It is strongly recommended that the proponents participate in learning outcome development sessions hosted by CIQE and TLC; alternatively, the program and course learning outcomes must be reviewed and approved by CIQE and TLC prior to the program proceeding through the Internal Approval Process. Should the curriculum contain any Indigenous content, evidence of consultation and approval in accordance with the current procedures for Indigenous consultation will be provided.

c) A list ~~will be provided~~ of required faculty members, including current core faculty and required new faculty; additional academic and non-academic human resources that may be required to launch and maintain the Program; physical resource requirements, ~~with~~ noting how current facilities will be used and what, if any, new resources may be required; and for graduate programs, any student support (funding) requirements. Faculty CVs will be provided for inclusion in the package presented to the Quality Council.

d) Summary statements of resources required to support the Program and a statement of current resource availability ~~will be included~~.

6.3. Internal Approval Process

6.3.1. The proposal brief will be reviewed and approved by the Faculty Council(s).

6.3.2. The proposal will then be presented to the appropriate standing committee of Academic Council (GSC or USC) who will prepare a recommendation to Academic Council. The proposal will then be sent to Academic Council for review and approval. Proposals are then submitted to the University Board of Governors for final approval.

6.4. Submission of New Diploma Programs to the Quality Council and the Ministry

6.4.1. Once ~~internal~~ Academic Council approval~~s~~ for a new Type 2 ~~and~~ or 3 Graduate Diploma Program~~s~~ has~~have~~ been obtained, the program proposal must be submitted to the Quality Council for review. The submission will include the final proposal document with the date of Academic Council approval, and the faculty CVs.

6.4.1.1. Type 2 and 3 Graduate Diploma Programs are subject to Expedited Review at the Quality Council. Only the applicable Evaluation Criteria will be applied to the proposal. Furthermore, the Council's appraisal and approval processes are reduced, as outlined in the Quality Assurance Framework Section 3.2 Protocol for Expedited Approvals.

6.4.1.2. Following a new Type 2 or 3 Graduate Diploma Program's submission to the Quality Council, and with approval of the Provost, the University may announce its intent to offer the Program, provided that clear indication is given that approval by the Quality Council is pending and that no offers of admission will be made until approval is received and, where applicable, that approval by the Ministry is pending and students in the Program will not be eligible for OSAP until approval is received.

6.4.1.3. Once submitted to the Quality Council, the proposal may require further development or revision prior to approval.

6.4.1.4. After a Type 2 or 3 Graduate Diploma Program is approved to commence by the Quality Council, the Program will begin within thirty-six months of that date of approval, otherwise the approval will lapse.

6.4.2. Undergraduate Diploma Programs are not subject to approval or audit by the Quality Council. The University may elect to submit ~~the~~ a new Undergraduate Diploma proposal to the Quality Council for review, in which case the Program will be subject to Expedited Review. Only the applicable Evaluation Criteria will be applied to the proposal. Furthermore, the Council's appraisal and approval processes are reduced, as outlined in the Quality Assurance Framework Section 3.2. The submission will include the final proposal document with the date of Academic Council approval, the faculty CVs, and a brief cover letter providing the context and rationale for submitting the Program for Expedited Review.

6.4.3. If a review is required for funding purposes, the proposed Diploma Program will also be submitted to the Ministry.

7. New Type 1 Graduate Diploma Programs

7.1. Type 1 Graduate Diplomas require approval as Major Program Modifications following the procedures outlined in the **Curriculum Changes Procedures** document.

8. New Micro-credential Programs

8.1. The introduction of the option to complete a portion of a proposed new Degree or Diploma Program to receive an embedded for-academic-credit Micro-credential will be included with a New Program Proposal and follow the process outlined in Section 5 or 6 as appropriate.

Commented [KM10]: Aligns with definition in M-C policy.

8.2. The creation of a new for-academic-credit Micro-credential or the introduction of the option to complete a portion of an existing Degree or Diploma Program to receive an embedded for-academic-credit Micro-credential is a Minor Program Adjustment and will follow the procedures outlined in the **Curriculum Changes Procedures** document.

8.3. Those wishing to develop new, not-for-academic-credit, stand-alone Micro-credential Programs must proceed in accordance with the Policy on Micro-Credentials and Continuous Learning Offerings, or equivalent.

8.4. Submission of New Micro-credentials to the Quality Council and the Ministry

8.4.1. Micro-credentials are not subject to approval or audit by the Quality Council. Embedded Micro-credentials will be submitted with the New Program to which they are associated, when applicable.

8.4.2. Approved Micro-credentials will be submitted to the Ministry for designation as eligible for Ontario Student Assistance Program funding, if applicable.

9. Development of Joint or Collaborative Programs

9.1. Joint Programs, and other Programs offered in collaboration with other post-secondary institutions, will ensure that the required quality assurance requirements of both institutions are met.

9.2. When the program will be held jointly with an institution that does not have an IQAP that has been ratified by the Quality Council, the Ontario Tech IQAP Policy and associated Procedures will apply with Ontario Tech as the leading institution.

9.3. In cases where the program is held jointly with an institution that does have an IQAP ratified by the Quality Council, the Office of the Provost, through CIQE, will collaborate with the partner institution to develop a process and associated templates that will address all requirements of each institution's IQAP. Specifically, the collaboration will address:

a) The selection of external reviewers

b) Templates to be used for a single proposal brief and required reports from the external reviewers, program team, and Dean(s)

c) The location(s) of the site-visit(s), timing for Program development, and approval pathway

d) The development of a joint committee to develop the Program

e) The process for monitoring and reviewing the Program after approval

f) The lead institution for the purposes of submission to the Quality Council and the Ministry

10. Subsequent Monitoring and Review of Academic Programs

Degree and Diploma Programs will be reviewed and refined on an ongoing basis in accordance with the **Institutional Quality Assurance Policy** and the **Cyclical Review and Auditing Procedures**. At the time of first intake into the Program, the program will begin the monitoring process outlined in Section 7 of the **Cyclical Review and Auditing Procedures**. Approved Programs will also be entered into the schedule of cyclical program reviews and the first review will take place no more than eight years after the start of the Program, and every eight years hence, in accordance with Section 8 of the **Cyclical Review and Auditing Procedures**.

Degree and Diploma Programs which have been approved but never launched, have been closed, or for which admission has been suspended, and stand-alone Micro-credentials are not subject to review as described in the Cyclical Review and Auditing Procedures.

QUALITY COUNCIL CYCLICAL AUDIT

11. In accordance with the Quality Assurance Framework Audit Protocol, new Undergraduate and Graduate Degree programs that have been approved in accordance with Section 5 of this document, within the period since the conduct of the previous Audit, are eligible for selection for the University's next Cyclical Audit. As such, all documents related to each step of these procedures must be retained in a designated electronic filing system for retrieval and presentation as required. An audit cannot reverse the approval of a program to commence.

12. In accordance with the Quality Assurance Framework Audit Protocol, new Undergraduate and Graduate Diploma programs, and Micro-credentials, that have been approved in accordance with Sections 6 and 8 of this document, are not normally subject to the University's Cyclical Audit.

MONITORING AND REVIEW

13. These Procedures will be reviewed as necessary and at least every three years. The Office of the Provost, through CIQE, coordinates the day to day management of the quality assurance process, and works in collaboration with Deans and units to implement the procedures for developing and accessing academic programs. The Provost or successor thereof, is responsible to monitor and review this Policy.

RELATED POLICIES, PROCEDURES & DOCUMENTS

Ontario Universities Council on Quality Assurance - Quality Assurance Framework
Institutional Quality Assurance Policy
Academic Resource Committee Terms of Reference
Cyclical Review and Auditing Procedures
Program Nomenclature Directives
Protocols associated with consultation/development of Indigenous curriculum
Protocols associated with the development of Micro-credentials

Classification Number	ACD 1501
Framework Category	Academic
Approving Authority	Academic Council
Policy Owner	Provost
Approval Date	
Review Date	
Supersedes	ACD 1501) Institutional Quality Assurance Process Policy (June 2023)

INSTITUTIONAL QUALITY ASSURANCE PROCESS

PURPOSE

1. The purpose of this policy is to inform and guide undergraduate and graduate program development and continuous improvement at the University with regard to the approval of new programs, program modifications, program closures, and the cyclical review of existing programs.

2. The statements in this policy as approved by Academic Council, define the University's commitment to the different aspects of quality assurance and the broad level responsibilities for carrying out this commitment.

DEFINITIONS

3. For the purposes of this policy the following definitions apply:

   Academic Council: the most senior academic governance body of the institution

   Accreditation Review: to evaluate and measure a program against a set of principles and standards set by an external professional accreditation body

   Cyclical Program Review: to critically examine the components of a program with the assistance of outside reviewers with the goal of continuous improvement. A program review's purpose is not solely to demonstrate the positive aspects of the program, but also to outline opportunities that will lead to improvements for the future.

   Degree: An academic credential awarded upon successful completion of a prescribed set and sequence of courses, combination of courses, and/or other units of study, research, and practice as specified by a Program and that meet a standard of performance consistent with University and provincial degree level expectations.

Diploma: An academic credential awarded upon the successful completion of a prescribed set and sequence of courses, combination of courses, and/or other units of study and practice as specified by a Program. Diplomas are classified as concurrent and/or direct-entry.

Faculty Council: established by Academic Council to approve new programs and courses, policies (including admissions), academic standards, curriculum and degree requirements, and long-range academic plans, at the Faculty level.

Field: In graduate programs, an area of specialization or concentration that is related to the demonstrable and collective strengths of the program's faculty and to a new or existing program. Fields are not required at either the master's or doctoral level.

Graduate Diploma: A prescribed set of degree credit courses and/or other forms of study that can be undertaken as a stand-alone program or to complement a graduate degree program, and to provide specialization, sub-specialization or inter- or multi- disciplinary qualification. A graduate diploma is comprised of at least 12 credit hours of graduate level study. There are three types of Graduate Diplomas as set out by the Council of Ontario Universities:

a) **Type 1:** Awarded when a candidate admitted to a master's program leaves the program after completing a prescribed proportion of the requirements. Students are not admitted directly to these programs. When new, these programs require approval through the university's protocol for Major Modification prior to their adoption. Once approved, they will be incorporated into the institution's schedule for cyclical reviews as part of the parent program.

b) **Type 2: A concurrent graduate diploma** is offered in conjunction with a master's or doctoral degree, the admission to which requires that the candidate be already admitted to the master's or doctoral program. This represents an additional, usually interdisciplinary, qualification and requires advanced level, usually interdisciplinary, study, at least 50% of which is in addition to the general requirements for the degree. When new, these programs require submission to the Quality Council for an Expedited Approval (no external reviewers required) prior to their adoption. Once approved, they will be incorporated into the university's schedule for cyclical reviews as part of the parent program.

c) **Type 3: A direct-entry graduate diploma** is a stand-alone, direct-entry program, generally developed by a unit already offering a related master's (and sometimes doctoral) degree and designed to meet the needs of a particular clientele or market. Ontario Tech type 3 graduate diplomas may include non-degree credit courses to a maximum of 30% of the total program credit hours. Where the program has been conceived and developed as a distinct and original entity, these programs require submission to the Quality Council for an Expedited Approval (no external reviewers required) prior to their adoption. Once approved, they will be included in the Schedule for Cyclical Reviews and will be subject to external review during the CPR process.

Graduate Studies Committee (GSC): a standing committee of Academic Council responsible for reviewing graduate curriculum proposals.

Major Program Modifications: modifications that constitute a significant change to the design and delivery of an existing program. The Quality Council defines major modifications to include the following program changes:

a) Requirements that differ significantly from those existing at the time of the previous cyclical program review or at the time the program was first approved;

b) Significant changes to the learning outcomes that do not, however, meet the threshold of a New Program;

c) Significant changes to the faculty engaged in delivering the program and/or to the essential resources as may occur, for example, where there have been changes to the existing mode(s) of delivery (e.g., different campus, online and/or hybrid delivery, inter-institutional collaboration);

For greater clarity, the Quality Council has provided examples to illustrate changes that normally constitute a significant change. These examples are provided in their Guide to Quality Assurance Processes and their application in the Ontario Tech context is outlined in Section 7 of the **Curriculum Change Procedures**.

Micro-credential: A designation of achievement of a coherent set of skills and knowledge, specified by a statement of purpose, learning outcomes, and strong evidence of need by industry, employers, and/or the community. They have fewer requirements and are of shorter duration than a qualification and focus on learning outcomes that are distinct from diploma/degree programs.

Ministry: the Ontario Ministry governing the affairs of Colleges and Universities.

Minor Curricular Changes: generally, those changes to individual courses and curricular offerings that do not affect the overall program requirements. Further clarification and examples are provided in Section 5 of the **Curriculum Change Procedures**.

Minor Program Adjustments: changes to degree requirements and/or learning outcomes that may require a plan for transitioning cohorts of students to meet different requirements over time, but that do not constitute a significant change to the design and delivery of an existing program reaching the threshold of a Major Program Modification. Further clarification and examples are provided in Section 6 of the **Curriculum Change Procedures**.

New Program: any degree or diploma program, or major, approved by Academic Council and the Board of Governors, which has not been previously approved by the Quality Council, its predecessors, or any intra-institutional approval processes that previously applied. A change of name, only, does not constitute a new program. To clarify, for the purposes of this Policy, a “new program” is brand new: that is to say, the program has substantially different program objective, program requirements, and program learning outcomes from those of any existing approved programs offered by Ontario Tech University. The final determination of whether a proposed offering constitutes a new program will rest with the Provost.

Program: A complete set and sequence of courses, combination of courses, and/or other units of study, research and practice, that achieve a unique set of learning outcomes and competencies required for the full or partial fulfillment of a degree or diploma.

Program Component: A set and sequence of courses, combination of courses, and/or other units of study, research and practice, that may or may not achieve a unique set of learning outcomes. Program Components do not stand-alone for the full or partial fulfillment of a degree or diploma. Examples include specializations, minors, fields, or other items as determined by the University’s established nomenclature.

Quality Council: the Ontario Universities Council on Quality Assurance, established by the Council of Ontario Universities in July 2010, responsible for oversight of the Quality Assurance Framework processes for Ontario Universities. The Council operates at arm’s length from both Ontario’s publicly assisted universities and the Ontario government.

Resource Committee: the university Academic Resource Committee or equivalent university body.

Undergraduate Diploma: A prescribed set of degree credit courses and/or other forms of study that can be undertaken as a stand-alone program or to complement an undergraduate degree program. An undergraduate diploma is comprised of 18-30 credit hours of undergraduate-level study

- **a)** A **concurrent undergraduate diploma** is offered in conjunction with an undergraduate degree, which requires that the candidate be already admitted to an undergraduate degree
- **b)** A **direct-entry undergraduate diploma** is a stand-alone, direct-entry program, developed by a unit already offering a related undergraduate or graduate

Undergraduate Studies Committee (USC): a standing committee of Academic Council responsible for reviewing undergraduate curriculum proposals.

SCOPE AND AUTHORITY

4. This policy applies to the full range of for credit curricular and programmatic endeavours at both the graduate and undergraduate levels, including Micro-credentials. It extends to new and continuing undergraduate and graduate degree programs whether offered in full, in part, or conjointly by any institutions federated or affiliated with the university. It also applies to programs offered in partnership, collaboration or other such arrangement with other post-secondary institutions including colleges, universities, or other institutes.

5. The Provost, or successor thereof, is the Policy Owner and is responsible for overseeing the implementation, administration, and interpretation of this Policy and its associated Procedures, as well as ensuring that Quality Assurance policies and procedures be established and are carried out. The Provost will be the authoritative contact between the University and the Quality Council.

6. Deans ensure that established policies and procedures are carried out at the Faculty level. Under the leadership of the Dean, Programs and Faculties are responsible for initiating and maintaining Program development, planning for the compilation and analysis of information, improvement and review of Programs, designing curricular changes, and readying them for consideration through the various levels of collegial review.

7. The Provost or designate, through the Center for Institutional Quality Enhancement (CIQE), coordinates the day-to-day management of the quality assurance process, and works in collaboration with Deans and units to implement the procedures for developing and assessing Programs, including coordinating internal and external appraisals and pulling together key institutional data and other indicators of program quality. The Provost or designate will also maintain all documentation associated with curricular changes, program modifications, new program proposals, accreditation reports, and program reviews, for a period of ten years. The documentation will then be entered into the university archives, per the Records Retention Policy, exclusive of any personal or confidential information.

8. Academic Council holds delegated authority from the Board to establish and regulate the curricular policies and procedures of the University, and the contents and curricula of all courses of study. Curriculum proposals are considered by the appropriate governing body for approval or information in accordance with Sections 13 - 15 of this Policy. The establishment and oversight of both the policy and procedural aspects relating to the approval of new programs, program revisions, and program review are the responsibility of the Academic Council.

9. The Board of Governors is responsible for planning, determining policies for and providing for the overall development of the university, including approving strategic plans, budgets and expenditure plans. In this context, all proposals that lead to the establishment or termination of degree programs, the establishment or de-establishment of Faculties, institutes and chairs and councils within those Faculties, and university strategic plans are subject to approval by the Board.

10. The Quality Council ratifies the Institutional Quality Assurance Process Policy and associated Procedures, and any substantive change to these procedures, and undertakes regular audits of these processes for compliance with the Provincial Framework on an eight year cycle. In addition, the Quality Council reviews and approves all proposals for new degree and diploma programs, as applicable, and reviews Final Assessment Reports of Program Reviews. It also receives an annual report of major modifications to existing programs. The Quality Council has final authority to decide if a Major Program Modification constitutes a new program and, therefore, must follow the **New Program Procedures**.

11. The Ministry reviews new programs and provides external funding approval following approval by the Quality Council.

12. The Office of the Registrar is responsible for the implementation of records relating to new programs and curricular changes once approved or reported to Academic Council, ensuring that students meet the admission requirements, and that requirements for the degree or diploma have been fulfilled upon graduation. This responsibility is shared with the School of Graduate and Postdoctoral Studies for graduate programs.

POLICY

The University is dedicated to ensuring the highest quality learning experience for students while maintaining the highest integrity of its academic programs. As such, the University is committed to the Quality Assurance Principles for Ontario Universities and the Quality Council (the Principles).

In meeting the Principles, the University will ensure that all academic programs:

- Align with University's mission, values and strategic plans
- Remain coherent, rigorous and relevant
- Make the best use of resources available to them
- Are subject to continuous quality improvement based on empirical evidence and collegial judgment
- Draw upon and enhance existing strengths at the university

The University will ensure ongoing academic integrity in its curricula while remaining rigorous and consistent in the expansion and refinement of program offerings.

The University will promote quality assurance in the ongoing review and improvement of curriculum and courses, the periodic review of program offerings, and the development of new programs.

In the planning for the ongoing review and improvement of curriculum, proposers must take into consideration the impact the changes may have on the human, instructional, physical and financial resources of the University and provide a plan to address them.

In addition, there must be broad consultation with members of the academic community, including faculty, staff and students who may be affected by the initiative, and with those who are key to its implementation. Consultation is particularly critical in cases where the changes involve offerings that are shared among programs and/or which may affect different groups of students (e.g. changes to courses that are core courses in other programs, cross-listed courses, changes to pre-requisites, co-requisites, and degree credit exclusions). Staff and faculty wishing to develop projects and initiatives related to Indigenization and reconciliation must consult in a Good Way, in accordance with the current procedures for Indigenous consultation.

Where there are possibilities for efficiencies to be achieved in the design and delivery of programs by collaboration among units, it is expected that these opportunities will be fully explored prior to their review by Faculty Council and that all possible avenues of cooperation will be fully considered in the initial stages. The nature and outcomes of these discussions will be included within program proposals.

The University will develop and continue to improve quality assurance policies, procedures and processes that incorporate provincial degree level expectations, and that are consistent with the Ontario Quality Assurance Framework and with the institution's own mission and mandate. CIQE will provide access to an electronic workflow tracking system for curriculum changes, and a repository for curriculum changes, program development, and cyclical program review. Individuals may use the templates and information provided at www.ontariotechu.ca/ciqe as a guide to the implementation of the quality assurance policies and procedures.

13. Curriculum Changes

13.1. Deans and Faculties must plan for the ongoing refinement and improvement of new and continuing programs and for making major and minor modifications to them when it is considered appropriate to do so. These changes may be prompted by, but not limited to, the following: feedback from students, faculty and staff participating in the program; matters arising through the course of its delivery; evolution of the discipline and/or new developments in a particular field; improvements in teaching and learning strategies; changing needs of students, society, industry, etc.; improvements in technology; or as a result of a full examination of the curriculum through accreditation or the cyclical program review process.

13.2. All modifications to existing Programs, including the introduction of the option to complete a portion of the program to receive a Micro-credential, will be subject to approval in accordance with the **Curriculum Changes Procedures.** Major modifications to programs will be subject to review by the provincial Quality Council.

13.3. Program review and improvement takes place on an ongoing basis and can result in curricular changes at three different levels: Minor Curricular Changes, Minor Program Adjustments and Major Modifications.

Minor Curricular Changes normally fall under the purview of the Faculty Changes to courses that are core in Programs from other Faculties must be reviewed by each Faculty Council responsible for the affected Programs. New courses and course changes must receive approval and be reported in accordance with the **Curriculum Change Procedures** prior to their implementation and inclusion in the academic calendars. The protocol for approval of new courses and changes to courses offered jointly by more than one area will be determined during New Program or course development and revised by agreement of all parties.

Minor Program Adjustments are reported for information to Academic Council through its appropriate standing committee (USC/GSC). These changes must be presented to the standing committee for quality review and approval following their approval by the appropriate Faculty Council. The committee will conduct a quality review of the program proposal in accordance with this Policy and its associated Procedures as well as the committee's terms of reference. Changes must receive the standing committee's approval prior to their implementation and inclusion in the academic calendars.

Major modifications to existing programs are subject to review and approval by Academic Council upon the recommendation of USC/GSC and following approval by the appropriate Faculty Council. Changes must receive Academic Council approval prior to their implementation and inclusion in the academic calendars. These changes are also reported annually to the Quality Council under the provincial Quality Assurance Framework.

Reporting of curricular changes must follow the procedures outlined in the **Curriculum Changes Procedures** document.

13.4. Program modifications that will result in a more substantial change to its nature and content will require review and approval in accordance with this policy and the **New Program Procedures**. The final institutional determination of whether a program modification constitutes a significant change or a new program will rest with the Provost. The Quality Council has final authority to decide if a Major Program Modification constitutes a new program and, therefore, must follow the **New Program Procedures**.

14. Review of Degree and Diploma Programs

14.1. All existing Undergraduate Degree Programs, Graduate Degree Programs, and Diploma Programs will be subject to periodic cyclical review conducted at a minimum once every eight years that is consistent with the requirements set by the Quality Council. Deans and Faculties must plan for the review of their academic Programs, including the preparation of a self-study, and will follow the processes outlined in the **Cyclical Review and Auditing Procedures**.

14.2. The Provost, or designate, in consultation with the Deans, will maintain a university-wide schedule to ensure that each academic Program is subject to review once every eight years. For each eight-year review cycle, CIQE will identify the specific program or programs that will be reviewed and, where there is more than one mode or site involved in the delivery of a specific program, the distinct versions of each program to be reviewed. Accreditation Reviews will be completed separately and involve separate processes and reviewers to ensure that all criteria are met. Elements of an accreditation review will not replace parallel requirements of the cyclical review.

14.3. In the planning for the review, the process must provide for input from members of the academic community associated with the program, including faculty, staff, students, and graduates. Where appropriate, comment from the broader community, such as representatives from industry, the professions, or employers may also be sought.

14.4. Where a Program involves more than one Faculty, the Deans involved must confirm to the Provost the Faculty that will hold the locus of responsibility for the review. In addition, for those Programs that are offered in more than one mode, at different locations, or having complementary components (e.g., bridging options, experiential learning options, etc.), the distinct versions of the Program will be identified and reviewed.

14.5. Joint Programs, and other programs offered in collaboration with other post-secondary institutions will ensure that both the quality assurance requirements set out in this policy are met, as well as that of partner institutions.

14.6. Program reviews are subject to quality review by reviewers external and at arm's length to the program under review, in accordance with prescribed procedures and documentation requirements set in the **Cyclical Review and Auditing Procedures**.

14.7. Final Assessment Reports (FAR), which summarize the review, are prepared by CIQE and presented for review and approval in accordance with the **Cyclical Review and Auditing Procedures**. .

15. New Diploma and Degree Programs

15.1. Deans and Faculties must plan for ongoing development of new program initiatives, including the design and delivery of the curriculum, the refinement of program requirements, the determination of learning outcomes consistent with the provincial degree level expectations, and the assessment of student achievement of the learning outcomes.

15.2. In the planning for any new program, the Dean, in consultation with the Provost in the initial stages, must also determine the human, instructional and physical resources needed to implement the program and ensure its ongoing operation. The financial impact of the new program on existing programs must also be examined, and consideration must be given to possible collaborations with other units and the possibility of obtaining additional funds from internal or external sources. Proposals must also address the alignment with the University and Faculty strategic plans.

15.3. Joint programs, and other programs offered in collaboration with other post-secondary institutions will ensure that both the quality assurance requirements set out in this policy are met, as well as that of partner institutions, as outlined in the **New Program Procedures**.

15.4. A Notice of Intent (NOI) must be submitted for all potential new diploma and degree programs as described in the **New Program Procedures**. NOIs will be reviewed and posted for comment from the university community. Once approved, the Faculty can proceed to develop the full proposal.

15.5. New Degree Program proposals are subject to quality review by external appraisers under the provincial quality assurance framework, and in accordance with prescribed procedures and documentation requirements set out in the **New Program Procedures**. Upon the completion of the external appraisal, the proposal will be approved by the relevant Faculty Council(s). These proposals are subsequently reviewed by the appropriate Academic Council standing committee

(USC or GSC) and must be approved by Academic Council upon the recommendation of USC/GSC. Proposals must also be approved by the Board of Governors (BOG) of the University. In addition, new Degree Programs are subject to review and approval by the provincial Quality Council under the Quality Assurance Framework. Programs seeking provincial funding are also subject to review by the Ministry.

15.6. New Diploma Program proposals are subject to quality review in accordance with prescribed procedures and documentation requirements set out in the **New Program Procedures**. Proposals are subject to presentation and approval by the relevant Faculty Council(s). These proposals are then subject to approval by Academic Council upon the full review and recommendation of USC/GSC. Proposals must also be approved by the BOG. In addition, new Graduate Diploma Program proposals are also appraised by the Quality Council under the provincial quality assurance framework through the Expedited Approval Process as described in the **New Program Procedures**. New Undergraduate Diploma Programs may also be submitted for Expedited Approval. New Undergraduate and Graduate Diploma Programs may also require review by the Ministry for funding purposes.

15.7. In accordance with the University's **Cyclical Review and Auditing Procedures,** all new Programs will be subject to periodic reviews subsequent to their implementation. An initial assessment will occur at first intake into the program, with an additional assessment one year after the launch of the Program. Additional monitoring may be required. At the time of program launch, the program will be entered into the schedule of academic program reviews and the first full review will take place no more than eight years after the start Program.

15.8. Normally, new Diploma programs will be scheduled for review to align with the appropriate parent program to maintain a reasonable use of Faculty resources. As such, Diploma programs may be scheduled for first review earlier than eight years from program launch, or first review may be delayed should the parent program be scheduled for review before a reasonable amount of data is available.

16. New Micro-credential Programs

16.1. Deans, Faculties, and non-academic units must plan for ongoing development of new Micro-credential program initiatives, including the design and delivery of the curriculum, the refinement of program requirements, the determination of any learning outcomes, and any assessment of student achievement of the learning outcomes.

16.2. In the planning for any new Micro-credential, the human, instructional and physical resources needed to implement the program and ensure its ongoing operation must be considered. The financial impact of the new program on existing programs must also be examined, and consideration must be given to possible collaborations and the possibility of obtaining additional funds from internal or external sources.

16.3. Development of new Micro-credentials will be in accordance with the protocol described in the **New Program Procedures** or **Curriculum Change Procedures** and are subject to internal quality review. Proposals are not appraised by the Quality Council under the provincial quality assurance framework.

17. Closure of a Program

17.1. Program Closures can be initiated by the Dean of a Faculty.

17.2. Program closures can also be initiated by the Provost due to issues related to substandard academic quality as determined through a number of different assessments such as Cyclical Program Review, Key Performance Indicators, self-examination, financial exigency, admission pause for over two years, and/or a Program has not been reviewed in accordance with the Institutional Quality Assurance Policy.

17.2.1. The Provost will consult with the Faculty Dean(s) of the affected program(s) to outline the reasons for closure.

17.3. In the case of Graduate Programs, the Dean of Graduate and Postdoctoral Studies will also be consulted.

17.4. In this case of Programs that contain Indigenous content, consultation in accordance with the current procedures for Indigenous consultation, is required.

17.5. After all required consultation is completed, a proposal to close the Program will then proceed in accordance with the **Program Closure Procedures**.

17.6. Students in a Closed Program

17.6.1. Program closure proposals must include a detailed plan for students who are enrolled in, or who may have reasonably expected to enroll in, the closed Program, as outlined in the **Program Closure Procedures**.

17.6.2. Students in a closed program will be informed of the program closure according to the requirements outlined in the **Program Closure Procedures**.

17.6.3. Closure should not result in students being unable to complete, if they so wish, the program they are registered in within the standard time to completion for that program.

17.6.4. In the specific case of students enrolled in Graduate Programs, the closure must not prevent them from completing their courses, examinations, training, and research necessary to graduate, or interfere with their commitments of financial support.

17.6.5. Not-withstanding-the-above, students wishing to graduate from a closed program must apply to do so within four years of the program closure.

17.7. Faculty in a Closed Program

17.7.1. Procedures for Tenured, Tenure Track, and Teaching Faculty who are part of a bargaining unit will be in accordance with the relevant Articles of the Collective Agreement in force at the time of Program closure.

17.7.2. Procedures for Associate Deans or Teaching Staff Governors who are temporarily outside of the bargaining unit will be in accordance with the relevant Articles of the Collective Agreement in force at the time of Program closure.

17.7.3. Procedures for sessional instructors and other contract faculty who are part of a bargaining unit will be in accordance with the relevant Articles of the Collective Agreement in force at the time of Program closure. Should no relevant Article exist, sessional instructors and other contract faculty will be entitled to severance in accordance with Provincial or Federal legislation or may apply for other positions in the University for which they are qualified.

17.7.4. Teaching staff not part of a bargaining unit will be entitled to severance in accordance with Provincial or Federal legislation or may apply for other positions in the University for which they are qualified.

17.8. Staff in a Closed Program

17.8.1. Procedures for staff who are part of a bargaining unit will be in accordance with the relevant Articles of the Collective Agreement in force at the time of Program closure.

17.8.2. Staff who are not part of a bargaining unit will be entitled to severance in accordance with Provincial or Federal legislation or may apply for other positions in the University for which they are qualified.

18. Quality Council Cyclical Audit

Quality enhancement is a function of and balance between internal and external processes and procedures. As part of the University's dedication to ensuring the highest quality learning experience for students and maintaining the highest integrity of its academic programs, Ontario Tech manages the development and continuous improvement of curricula though a rigourous governance process. External quality assurance involves the processes and procedures defined by the Quality Assurance Framework (QAF). In accordance with this Framework, the University is subject to a Cyclical Audit by the Quality Council, at least once every eight years. The Quality Council has established the schedule of institutional participation in the audit process within the eight-year cycle and publishes the agreed schedule on its website. The Cyclical Audit provides necessary accountability to post-secondary education's principal stakeholders by assessing the degree to which the University's internally defined quality assurance processes, procedures, and practices align with and satisfy the agreed upon standards, as set out in the QAF. The Audit will be conducted in accordance with the protocol as outlined in the **Cyclical Review and Auditing Procedures**.

MONITORING AND REVIEW

19. This policy will be reviewed as necessary and at least every three years. The Provost or successor thereof, is responsible to monitor and review this Policy.

RELATED POLICIES, PROCEDURES & DOCUMENTS

Ontario Universities Council on Quality Assurance - Quality Assurance Framework
Curriculum Change Procedures
Cyclical Review and Auditing Procedures
New Program Procedures
Program Closure Procedures
Program Nomenclature Directives
Faculty and Staff Collective Agreements
Protocols associated with consultation/development of Indigenous curriculum
Protocols associated with Micro-credential development

Classification Number	ACD 1501.04
Parent Policy	Institutional Quality Assurance Process
Framework Category	Academic
Approving Authority	Academic Council
Policy Owner	Provost
Approval Date	June 2020
Review Date	June 2020
Supersedes	ACD 1501 (June 2010); LCG 1127 Section 1 (August 2005); Quality Assurance Handbook (June 2011) Program Closure Procedures (June 2020); Not-for-Academic Credit Digital Badges, Microcredentials, and Stackable Credentials Policy (July 2021)

OntarioTech UNIVERSITY

PROGRAM CLOSURE PROCEDURES

PURPOSE

1. The purpose of these Procedures is to establish a consistent process for defining and documenting the closure of a Program as outlined in the Institutional Quality Assurance Process (IQAP).

DEFINITIONS

2. For the purposes of these Procedures the definitions in the Policy apply.

SCOPE AND AUTHORITY

3. These procedures apply to undergraduate and graduate Degree and Diploma Programs whether offered in full, in part, or conjointly by any institutions federated or affiliated with the University. It also applies to Degree or Diploma Programs offered in partnership, collaboration or other such arrangement with other post-secondary institutions including colleges, universities, or other institutes.

4. These procedures do not apply to the closure of a Program Component, Type 1 Graduate Diploma, which fall under the **Curriculum Change Procedures**, nor do they apply to Micro-credentials whether stand-alone or embedded within a Program.

5. The Provost, or successor thereof, is the Policy Owner and is responsible for overseeing the implementation, administration and interpretation of these Procedures.

PROCEDURES

The Centre for Institutional Quality Enhancement (CIQE) will provide access to an electronic workflow tracking system and electronic repository of required proposals. Individuals may use the templates provided at www.ontariotechu.ca/ciqe as a guide to assist in the planning of the changes prior to implementing proposals in the electronic system.

6. Program Closure

6.1. When, in accordance with the Institutional Quality Assurance Policy, it has been determined that a Program should be closed, the Dean or Provost will consult with and receive feedback from the applicable Faculty Council(s).

6.2. Once the Dean or Provost has received feedback, a Major Program Modification – Program Closure electronic proposal is required to be completed in its entirety by the Dean or designate.

6.3. The Major Program Modification – Program Closure will include evidence that appropriate consultation has taken place, and electronic proposals must minimally include the following:

a) A brief summary of rationale for the program removal.

b) A brief description of the program being removed and the current Calendar copy.

c) A brief background on the existing program and detailed rationale for its removal; the proposed implementation date and detailed internal transition plan including impact on faculty members, other academic and non-academic human resources, or external agencies; and planned administrative steps and communication.

d) Detailed transition plan for current and potential students; planned communication; maximum number of semesters for current students to complete the program; alternative programs and process for student transfer.

e) A complete list of any courses being closed and the transition plan for each; a list of courses which will undergo required changes but are not being removed, a transition plan for each, and attached Course Change proposals.

f) An outline of areas consulted, including an account of the process of consultation related to Indigenous content, where appropriate.

6.4. Completed proposals must be presented to the Faculty Council(s) for information and then submitted to CIQE. CIQE will prepare a detailed report of the impacts of the Program closure for presentation to the appropriate standing committee of Academic Council (USC or GSC) for discussion as part of the consultation process.

6.5. CIQE will record any concerns raised by the standing committee and prepare a report of impacts and concerns for the Provost. The Provost will also receive a copy of the Major Program Modification – Program Closure proposal.

6.6. The Provost will then submit their recommendation for Program closure, detailing the process and transition recommendations to the Academic Council for final review and approval.

6.7. When the Program closure has been approved by the Academic Council, the President will then inform the Board of Governors of the decision and the reasons for it. Major Program Modifications – Program Closure are reported annually to the Quality Council and the Ministry.

7. If Academic Council Does not Approve the Program Closure

7.1. When, in accordance with the Institutional Quality Assurance Policy, Academic Council does not approve the program closure, Academic Council will strike a three-person Committee of its members to be chaired by the President or designate.

7.2. The Committee will seek the views of the Faculty Council(s), the Dean of the Faculty or School, the Dean(s) of any related Faculty or School, the Dean of the School of Graduate and Postdoctoral Studies, if applicable, the Provost, the Registrar, and at least one assessor internal to the University but external to the Faculty(ies). The Committee will also invite all faculty members who teach in the program to comment if they wish to do so.

7.3. The Committee will, within 60 days, issue a report to the Board of Governors that presents the results of the investigation and makes one or more recommendations.

7.3.1 The Committee will discuss its conclusions with the Provost and the appropriate Dean(s) before forwarding its report to the Board of Governors.

7.4. The Board will review the Committee’s report and reach a decision. The decision of the Board on the closure of the program is final.

8. Procedures for the Phase-Out of Closed Programs

8.1. In consultation with the Dean of the Faculty in which the program resides, the Registrar, or designate, will prepare an official list of all students currently enrolled in the program.

8.2. The Dean will prepare correspondence to notify all enrolled students of the closure and provide information on the following:

a) The date by which the program must be completed in order to receive the specified degree from the University;

b) A brief description of the program being removed and the current Calendar copy. The last semester and year in which each course required for the program will be offered;

c) The availability of closely related programs offered by the University to which the student may transfer;

d) The extent to which transfer credits, substitutions, etc., may be considered in meeting the requirements of the program.

8.3. Once the decision to close the program has been made, the program will no longer accept applicants and it will be removed from the website and academic calendar.

MONITORING AND REVIEW

9. This procedure will be reviewed as necessary and at least every three years. The Provost's Office, through the Center for Institutional Quality Enhancement, coordinates the day-to-day management of the quality assurance process, and works in collaboration with Deans and units to implement the procedures for developing and accessing academic programs. The Provost, or successor thereof, is responsible to monitor and review this Policy.

RELATED POLICIES, PROCEDURES & DOCUMENTS

Ontario Universities Council on Quality Assurance - Quality Assurance Framework
Institutional Quality Assurance Policy
Program Nomenclature Directives
Faculty and Staff Collective Agreements
Protocols associated with consultation/development of Indigenous curriculum

Classification Number	ACD 1501
Framework Category	Academic
Approving Authority	Academic Council
Policy Owner	Provost
Approval Date	June 2023~~0~~
Review Date	~~June 2023~~
Supersedes	ACD 1501 ~~(June 2010~~); ~~LCG 1127 Section 1 (August 2005); Quality Assurance Handbook (June 2011)~~ Institutional Quality Assurance Process Policy (June 2023~~0);~~) ~~Not-for-Academic Credit Digital Badges, Microcredentials, and Stackable Credentials Policy (July 2021)~~

Institutional Quality Assurance Process

PURPOSE

1. The purpose of this policy is to inform and guide undergraduate and graduate program development and continuous improvement at the University with regard to the ~~review and~~ approval of new programs, program modifications, program closures, and the cyclical review of existing programs.

2. The statements in this policy as approved by Academic Council, define the University's commitment to the different aspects of quality assurance and the broad level responsibilities for carrying out this commitment.

DEFINITIONS

3. For the purposes of this policy the following definitions apply:

Academic Council: the most senior academic governance body of the institution

Accreditation Review: to evaluate and measure a program against a set of principles and standards set by an external professional accreditation body

Cyclical Program Review: to critically examine the components of a program with the assistance of outside reviewers with the goal of continuous improvement. A program review's purpose is not solely to demonstrate the positive aspects of the program, but also to outline opportunities that will lead to improvements for the future.

Degree: An academic credential awarded upon successful completion of a prescribed set and sequence of courses, combination of courses, and/or other units of study, research, and practice as specified by a ~~Degree~~ Program and that meet a standard of performance consistent with University and provincial degree level expectations.

Diploma: An academic credential awarded upon the successful completion of a prescribed set and sequence of courses, combination of courses, and/or other units of study and practice as specified by a ~~Diploma~~ Program. Diplomas are classified as concurrent and/or direct-entry.

Faculty Council: established by Academic Council to approve new programs and courses, policies (including admissions), academic standards, curriculum and degree requirements, and long-range academic plans, at the Faculty level.

Field: In graduate programs, an area of specialization or concentration that is related to the demonstrable and collective strengths of the program's faculty and to a new or existing program. Fields are not required at either the master's or doctoral level.

Commented [KM1]: Moved from Procedures. All definitions housed in Policy.

Graduate Diploma: A prescribed set of degree credit courses and/or other forms of study that can be undertaken as a stand-alone program or to complement a graduate degree program, and to provide specialization, sub-specialization or inter- or multi- disciplinary qualification. A graduate diploma is comprised of at least 12 credit hours of graduate level study. There are three types of Graduate Diplomas as set out by the Council of Ontario Universities:

a) **Type 1:** Awarded when a candidate admitted to a master's program leaves the program after completing a prescribed proportion of the requirements. Students are not admitted directly to these programs. When new, these programs require approval through the university's protocol for Major Modification prior to their adoption. Once approved, they will be incorporated into the institution's schedule for cyclical reviews as part of the parent program.

b) **Type 2: A concurrent graduate diploma** is offered in conjunction with a master's or doctoral degree, the admission to which requires that the candidate be already admitted to the master's or doctoral program. This represents an additional, usually interdisciplinary, qualification and requires advanced level, usually interdisciplinary, study, at least 50% of which is in addition to the general requirements for the degree. When new, these programs require submission to the Quality Council for an Expedited Approval (no external reviewers required) prior to their adoption. Once approved, they will be incorporated into the university's schedule for cyclical reviews as part of the parent program.

c) **Type 3: A direct-entry graduate diploma** is a stand-alone, direct-entry program, generally developed by a unit already offering a related master's (and sometimes doctoral) degree~~,~~ and designed to meet the needs of a particular clientele or market. Ontario Tech type 3 graduate diplomas may include non-degree credit courses to a maximum of 30% of the total program credit hours. Where the program has been conceived and developed as a distinct and original entity, these programs require submission to the Quality Council for an Expedited Approval (no external reviewers required) prior to their adoption. Once approved, they will be included in the Schedule for Cyclical Reviews and will be subject to external review during the CPR process.

Graduate Studies Committee (GSC): a standing committee of Academic Council responsible for reviewing graduate curriculum proposals.

Major Program Modifications: modifications that constitute a significant change to the design and delivery of an existing program. The Quality Council defines major modifications to include the following program changes:

a) Requirements that differ significantly from those existing at the time of the previous cyclical program review or at the time the program was first approved;

b) Significant changes to the learning outcomes that do not, however, meet the threshold of a New Program;

c) Significant changes to the faculty engaged in delivering the program and/or to the essential ~~physical~~ resources as may occur, for example, where there have been changes to the existing mode(s) of delivery (e.g., different campus, online and/or hybrid delivery, inter-institutional collaboration);

~~c)~~

~~d)~~ ~~The addition of a new field to an existing graduate program. Note that institutions are not required to declare fields for either master's or doctoral programs.~~

For greater clarity, the Quality Council has provided examples to illustrate changes that normally constitute a significant change. These examples are provided in their Guide to Quality Assurance Processes and their application in the Ontario Tech context is outlined in Section 7 of the **Curriculum Change Procedures** ~~document~~.

Micro-credential: A designation of achievement of a coherent set of skills and knowledge, specified by a statement of purpose, learning outcomes, and strong evidence of need by industry, employers, and/or the community. They have fewer requirements and are of shorter duration than a qualification and focus on learning outcomes that are distinct from diploma/degree programs.

Ministry: the Ontario Ministry governing the affairs of Colleges and Universities.

Minor Curricular Changes: generally, those changes to individual courses and curricular offerings that do not affect the overall program requirements. Further clarification and e~~E~~xamples are provided in Section 5 of the~~outlined in the~~ **Curriculum Change Procedures** ~~document~~.

Minor Program Adjustments: changes to degree requirements and/or learning outcomes that may require a plan for transitioning cohorts of students to meet different requirements over time, but that do not constitute a significant change to the design and delivery of an existing program reaching the threshold of a Major Program Modification. Further clarification and ~~E~~examples are provided in Section 6 of the ~~outlined in the~~ **Curriculum Change Procedures** ~~document~~.

New Program: any ~~degree,~~ degree or diploma program, or major, ~~currently~~ approved by Academic Council and the Board of Governors, which has not been previously approved by the Quality Council, its predecessors, or any intra-institutional approval processes that previously applied. A change of name, only, does not constitute a new program~~; nor does the inclusion of a new program of specialization where another with the same designation already exists (e.g., a new honours program where a major with the same designation already exists)~~. To clarify, for the purposes of this Policy, a "new program" is brand new: that is to say, the program has substantially different program objective, program requirements, and program ~~and substantially different~~ learning outcomes from those of any existing approved programs offered by Ontario Tech University. The final determination of whether a proposed offering constitutes a new program will rest with the Provost.

Program: A complete set and sequence of courses, combination of courses, and/or other units of study, research and practice, that achieve a unique set of learning outcomes and competencies~~; the successful completion of which qualifies the candidate for a formal credential (degree with or without major; diploma).~~ required for the full or partial fulfillment of a degree or diploma.

Program Component: A set and sequence of courses, combination of courses, and/or other units of study, research and practice, that may or may not achieve a unique set of learning outcomes. Program Components do not stand-alone for the full or partial fulfillment of a degree or diploma. Examples include specializations, minors, fields, or other items as determined by the University's established nomenclature.

Quality Council: the Ontario Universities Council on Quality Assurance, established by the Council of Ontario Universities in July 2010, responsible for oversight of the Quality Assurance Framework processes for Ontario Universities. The Council operates at arm's length from both Ontario's publicly assisted universities and the Ontario government.

Resource Committee: the university Academic Resource Committee or equivalent university body.

Undergraduate Diploma: A prescribed set of degree credit courses and/or other forms of study that can be undertaken as a stand-alone program or to complement an undergraduate degree program. An undergraduate diploma is comprised of 18-30 credit hours of undergraduate~~-~~-level study

a) A **concurrent undergraduate diploma** is offered in conjunction with an undergraduate degree, which requires that the candidate be already admitted to an undergraduate degree

b) A **direct-entry undergraduate diploma** is a stand-alone, direct-entry program, developed by a unit already offering a related undergraduate or graduate

Undergraduate Studies Committee (USC): a standing committee of Academic Council responsible for reviewing undergraduate curriculum proposals.

SCOPE AND AUTHORITY

4. This policy applies to the full range of for credit curricular and programmatic endeavours at both the graduate and undergraduate levels, including Micro-credentials~~ (which may be for-credit or not-for-credit)~~. It extends to new and continuing undergraduate and graduate degree programs whether offered in full, in part, or conjointly by any institutions federated or affiliated with the university. It also applies to programs offered in partnership, collaboration or other such arrangement with other post-secondary institutions including colleges, universities, or other institutes.

5. The Provost, or successor thereof, is the Policy Owner and is responsible for overseeing the implementation, administration, and interpretation of this Policy and its associated Procedures, as well as ensuring that Quality Assurance policies and procedures be established and are carried out. The Provost will be the authoritative contact between the University and the Quality Council.

6. ~~Faculty~~ Deans ensure that established policies and procedures are carried out at the Faculty level. Under the leadership of the Dean, ~~p~~Programs and Faculties are responsible for initiating and maintaining P~~p~~rogram development, planning for the compilation and analysis of information, improvement and review of P~~p~~rograms, designing curricular changes, and readying them for consideration through the various levels of collegial review.

7. The Provost or designate, through the Center for Institutional Quality Enhancement (CIQE), coordinates the ~~day to day~~day-to-day management of the quality assurance process, and works in collaboration with Deans and units to implement the procedures for developing and assessing ~~academic~~ P~~p~~rograms, including coordinating internal and external appraisals and pulling together key institutional data and other indicators of program quality. The Provost~~,~~ or designate will also maintain all documentation associated with curricular changes, program modifications, new program proposals, accreditation reports, and program reviews, for a period of ten years. The documentation will then be entered into the university archives, per the Records Retention Policy, exclusive of any personal or confidential information.

8. Academic Council holds delegated authority from the Board to establish and regulate the curricular policies and procedures of the University, and the contents and curricula of all courses of study. ~~All~~ Curriculum proposals ~~put forward by Faculty Councils~~ are considered by the appropriate ~~standing committee of Academic Council, such as the GSC or the USC, which in~~

~~turn presents them to Academic Council~~governing body for approval or ~~for~~ information in accordance with Sections 13 - 15 of this Policy ~~as appropriate~~. The establishment and oversight of both the policy and procedural aspects relating to the approval of new programs, program revisions, and program review are the responsibility of the Academic Council.

9. The Board of Governors is responsible for planning, determining policies for and providing for the overall development of the university, including approving strategic plans, budgets and expenditure plans. In this context, all proposals that lead to the establishment or termination of degree programs, the establishment or de-establishment of Faculties, institutes and chairs and councils within those Faculties, and university strategic plans are subject to approval by the Board.

10. The Quality Council ratifies the Institutional Quality Assurance Process Policy and associated Procedures, and any substantive change to these procedures, and undertakes regular audits of these processes for compliance with the Provincial Framework on an eight year cycle. In addition, the Quality Council reviews and approves all proposals for new degree and diploma programs, as applicable, and reviews Final Assessment Reports of Program Reviews. It also receives an annual report of major modifications to existing programs. The Quality Council has final authority to decide if a Major Program Modification constitutes a new program and, therefore, must follow the **New Program Procedures**.

11. The Ministry reviews new programs and provides external funding approval following approval by the Quality Council.

12. The Office of the Registrar is responsible for the implementation of records relating to new programs and curricular changes once approved or reported to Academic Council, ensuring that students meet the admission requirements, and that requirements for the degree or diploma have been fulfilled upon graduation. This responsibility is shared with the School of Graduate and Postdoctoral Studies for graduate programs.

POLICY

The University is dedicated to ensuring the highest quality learning experience for students while maintaining the highest integrity of its academic programs. As such, the University is committed to the Quality Assurance Principles for Ontario Universities and the Quality Council (the Principles).

In meeting the Principles, the University will ensure that all academic programs:

Align with University's mission, values and strategic plans
Remain coherent, rigorous and relevant
Make the best use of resources available to them
Are subject to continuous quality improvement based on empirical evidence and collegial judgment
Draw upon and enhance existing strengths at the university

The University will ensure ongoing academic integrity in its curricula while remaining rigorous and consistent in the expansion and refinement of program offerings.

The University will promote quality assurance in the ongoing review and improvement of curriculum and courses, the periodic review of program offerings, and the development of new programs.

In the planning for the ongoing review and improvement of curriculum, proposers must take into consideration the impact the changes may have on the human, instructional, physical and financial resources of the University and provide a plan to address them.

In addition, there must be broad consultation with members of the academic community, including faculty, staff and students who may be affected by the initiative, and with those who are key to its implementation. Consultation is particularly critical in cases where the changes involve offerings that are shared among programs and/or which may affect different groups of students (e.g. changes to courses that are core courses in other programs, cross-listed courses, changes to pre-requisites, co-requisites, and degree credit exclusions). Staff and faculty wishing to develop projects and initiatives related to Indigenization and reconciliation must consult in a Good Way, in accordance with the current procedures for Indigenous consultation.

Where there are possibilities for efficiencies to be achieved in the design and delivery of programs by collaboration among units, it is expected that these opportunities will be fully explored prior to their review by Faculty Council and that all possible avenues of cooperation will be fully considered in the initial stages. The nature and outcomes of these discussions will be included within program proposals.

The University will develop and continue to improve quality assurance policies, procedures and processes that incorporate provincial degree level expectations, and that are consistent with the Ontario Quality Assurance Framework and with the institution's own mission and mandate. CIQE will provide access to an electronic workflow tracking system for curriculum changes, and a repository for curriculum changes, program development, and cyclical program review. Individuals may use the templates and information provided at www.ontariotechu.ca/ciqe as a guide to the implementation of the quality assurance policies and procedures.

13. Curriculum Changes

13.1. Deans and Faculties must plan for the ongoing refinement and improvement of new and continuing programs and for making major and minor modifications to them when it is considered appropriate to do so. These changes may be prompted by, but not limited to, the following: feedback from students, faculty and staff participating in the program; matters arising through the course of its delivery; evolution of the discipline and/or new developments in a particular field; improvements in teaching and learning strategies; changing needs of students, society, industry, etc.; improvements in technology; or as a result of a full examination of the curriculum through accreditation or the cyclical program review process.

13.2. All modifications to existing ~~degree p~~Programs, including the introduction of the option to complete a portion of the program to receive a Micro-credential, will be subject to approval~~ by the unit's Faculty Council(s) and subsequent review and approval by the appropriate Academic Council standing committee (USC or GSC) or approval by Academic Council where appropriate,~~ in accordance with the **Curriculum Changes Procedures.**~~prescribed procedures. In addition, m~~ Major modifications to programs will ~~also~~ be subject to review by the provincial Quality Council.

13.3. Program review and improvement takes place on an ongoing basis and can result in curricular changes at three different levels: Minor Curricular Changes, Minor Program Adjustments and Major Modifications.

Minor Curricular Changes normally fall under the purview of the Faculty ~~Council purview, normally through its curriculum committee, and must be reported to USC or GSC for information.~~ Changes to courses that are core in ~~other P~~programs from other Faculties must be reviewed by each Faculty~~-~~ Council responsible for the affected ~~p~~Programs. New courses and course changes must receive approval and be reported in accordance with the **Curriculum Change Procedures** prior to their implementation and inclusion in the academic calendars. The protocol for approval of new courses and changes to courses offered jointly by more than one area will be determined during New Program or course development and revised by agreement of all parties.

Minor Program Adjustments are reported for information to Academic Council through its appropriate standing committee (USC/GSC). These changes must be presented to the standing committee~~s~~ for quality review and approval following their approval by the appropriate Faculty Council. ~~-~~The committee will conduct a quality review of the program proposal ~~using the University's Program Quality Review Criteria~~in accordance with this Policy and its associated Procedures as well as the committee's terms of reference. Changes must receive ~~this~~ the standing committee's approval prior to their implementation and inclusion in the academic calendars.

Major modifications to existing programs are subject to ~~full~~ review and approval by Academic Council upon the recommendation of USC/GSC and following approval by the appropriate Faculty Council. Changes must receive Academic Council approval prior to their implementation and inclusion in the academic calendars. These changes are also reported annually to the Quality Council under the provincial Q~~q~~uality A~~a~~ssurance F~~f~~ramework.

Reporting of curricular changes must follow the procedures outlined in the **Curriculum Changes Procedures** document.

13.4. Program modifications that will result in a more substantial change to its nature and content will require review and approval in accordance with this policy and the **New Program~~s~~ Procedures**. The final institutional determination of whether a program modification constitutes a significant change or a new program will rest with the Provost. The Quality Council has final authority to decide if a Major Program

Modification constitutes a new program and, therefore, must follow the **New Program Procedures**.

14. Review of Degree and Diploma Programs

14.1. All existing U~~u~~ndergraduate D~~d~~egree P~~p~~rograms, G~~g~~raduate D~~d~~egree P~~p~~rograms, and ~~for-credit d~~Diploma P~~p~~rograms will be subject to periodic cyclical review conducted at a minimum once every eight years that is consistent with the requirements set by the Quality Council. Deans and Faculties must plan for the review of their academic ~~p~~Programs, including the preparation of a self-study, and will follow the processes outlined in the **Cyclical ~~–~~Review and Auditing Procedures**.

14.2. The Provost, or designate, in consultation with the Deans, will maintain a university-wide schedule to ensure that each academic P~~p~~rogram is subject to review once every eight years. For each eight-year review cycle, CIQE will identify the specific program or programs that will be reviewed and, where there is more than one mode or site involved in the delivery of a specific program, the distinct versions of each program to be reviewed. Accreditation Reviews will be completed separately and involve separate processes and reviewers to ensure that all criteria are met. Elements of an accreditation review will not replace parallel requirements of the cyclical review.

14.3. In the planning for the review, the process must provide for input from members of the academic community associated with the program, including faculty, staff, students, and graduates. Where appropriate, comment from the broader community, such as representatives from industry, the professions, or employers may also be sought.

14.4. Where a P~~p~~rogram involves ~~faculty and courses from~~ more than one Faculty ~~unit~~, the D~~d~~eans involved must confirm to the Provost the Faculty ~~unit~~ that will hold the locus of responsibility for the review. ~~-~~In addition, for those P~~p~~rograms that are offered in more than one mode, at different locations, or having complementary components (e.g., bridging options, experiential ~~education~~ learning options, etc.), the distinct versions of the P~~p~~rogram will be identified and reviewed.

14.5. Joint P~~p~~rograms, and other programs offered in collaboration with other post-secondary institutions will ensure that both the quality assurance requirements set out in this policy are met, as well as that of partner institutions.

14.6. Program reviews are subject to quality review by reviewers external and at arm's length to the program under review, in accordance with prescribed procedures and documentation requirements set in the **Cyclical Review and Auditing Procedures**.

14.7. Final Assessment Reports (FAR), which summarize the review, are prepared by CIQE~~,~~ ~~using the self-study brief, the reviewers' report, the Program and Decanal response documents, and Implementation Plan~~ and presented for review and approval in accordance with the **Cyclical Review and Auditing Procedures**. ~~Following a review~~

~~of resource implications by the Resource Committee, the FAR and associated Implementation Plan, are sent to the appropriate standing committee of Academic Council (USC/GSC) for approval. Once approved, the report~~~~an Executive Summary and the Implementation Plan are~~ ~~is sent to Academic Council and the Board of Governors for information. The Quality Council then receives the Final Assessment Report, Executive Summary, and associated Implementation Plan. Summary~~ ~~Executive Summaries~~~~reports are posted on the University website~~.

15. New Diploma and Degree Programs

15.1. Deans and Faculties must plan for ongoing development of new program initiatives, including the design and delivery of the curriculum, the refinement of program requirements, the determination of learning outcomes consistent with the provincial degree level expectations, and the assessment of student achievement of the learning outcomes.

15.2. In the planning for any new program, the Dean, in consultation with the Provost in the initial stages, must also determine the human, instructional and physical resources needed to implement the program and ensure its ongoing operation. The financial impact of the new program on existing programs must also be examined, and consideration must be given to possible collaborations with other units and the possibility of obtaining additional funds from internal or external sources. Proposals must also address the alignment with the University and Faculty strategic plans.

15.3. Joint programs, and other programs offered in collaboration with other post-secondary institutions will ensure that both the quality assurance requirements set out in this policy are met, as well as that of partner institutions, as outlined in the **New Program Procedures**.

15.4. A Notice of Intent (NOI) must be submitted for all potential new diploma and degree programs as described in the **New Program Procedures**. NOIs will be reviewed and posted for comment from the university community. Once approved, the Faculty can proceed to develop the full proposal.

15.5. New D~~d~~egree ~~p~~Program proposals are subject to quality review by external appraisers under the provincial quality assurance framework, and in accordance with prescribed procedures and documentation requirements set out in the **New Program Procedures**. Upon the completion of the external appraisal, the proposal will be approved by the relevant Faculty Council(s) ~~of the sponsoring unit~~. These proposals are subsequently reviewed by the appropriate Academic Council standing committee (USC or GSC)~~,~~ and must be approved by Academic Council upon the recommendation of USC/GSC. Proposals ~~leading to the establishment of new degree programs~~ must also be approved by the Board of Governors (BOG) of the University. In addition, new ~~d~~Degree ~~p~~Programs are subject to review and approval by the provincial Quality Council under the ~~q~~Quality ~~a~~Assurance ~~f~~Framework. Programs seeking provincial funding are also subject to review by the Ministry.

15.6. New ~~for credit d~~Diploma P~~p~~rogram proposals are subject to quality review in accordance with prescribed procedures and documentation requirements set out in the **New Program Procedures**. Proposals are subject to presentation and approval by the relevant Faculty Council(s). These proposals are then subject to approval by Academic Council upon the full review and recommendation of USC/GSC. Proposals must also be approved by the BOG. In addition, new ~~graduate~~ Graduate ~~diploma~~ Diploma ~~p~~Program proposals are also appraised by the Quality Council under the provincial quality assurance framework through the Expedited Approval Process as described in the **New Program Procedures**. New Undergraduate Diploma Programs may also be submitted for Expedited Approval. New ~~undergraduate~~ Undergraduate and ~~graduate~~ Graduate ~~diploma~~ Diploma ~~p~~Programs may also require review by the Ministry for funding purposes.

15.7. In accordance with the University's **Cyclical Review and Auditing Procedures,** all new ~~academic~~ P~~p~~rograms will be subject to periodic reviews subsequent to their implementation. An initial assessment will occur at first intake into the program, with an additional assessment one year after the launch of the Program. Additional monitoring may be required. At the time of program launch, the program will be entered into the schedule of academic program reviews and the first full review will take place no more than eight years after the start Program.

~~**15.7.**~~**15.8.** Normally, new Diploma programs will be scheduled for review to align with the appropriate parent program to maintain a reasonable use of Faculty resources. As such, Diploma programs may be scheduled for first review earlier than eight years from program launch, or first review may be delayed should the parent program be scheduled for review before a reasonable amount of data is available.

16. New Micro-credential Programs

16.1. Deans, Faculties, and non-academic units must plan for ongoing development of new Micro-credential program initiatives, including the design and delivery of the curriculum, the refinement of program requirements, the determination of any learning outcomes, and any assessment of student achievement of the learning outcomes.

16.2. In the planning for any new Micro-credential, the human, instructional and physical resources needed to implement the program and ensure its ongoing operation must be considered. The financial impact of the new program on existing programs must also be examined, and consideration must be given to possible collaborations and the possibility of obtaining additional funds from internal or external sources.

16.3. Development of new Micro-credentials will be in accordance with the protocol described in the **New Program Procedures** or **Curriculum Change Procedures** and are subject to internal quality review. Proposals are not appraised by the Quality Council under the provincial quality assurance framework.

17. Closure of a Program

17.1. Program Closures can be initiated by the Dean of a Faculty.

17.2. Program closures can also be initiated by the Provost due to issues related to substandard academic quality as determined through a number of different assessments such as Cyclical Program Review, Key Performance Indicators, self-examination, financial exigency, admission pause for over two years, and/or a Program has not been reviewed in accordance with the Institutional Quality Assurance Policy.

17.2.1. The Provost will consult with the Faculty Dean(s) of the affected program(s) to outline the reasons for closure.

17.3. In the case of Graduate Programs, the Dean of Graduate and Postdoctoral Studies will also be consulted.

17.4. In this case of ~~p~~Programs that contain Indigenous content, consultation in accordance with the current procedures for Indigenous consultation, is required.

17.5. After all required consultation is completed, a proposal to close the Program will then proceed in accordance with the **Program Closure Procedures** ~~document~~.

17.6. Students in a Closed Program

17.6.1. Program closure proposals must include a detailed plan for students who are enrolled in, or who may have reasonably expected to enroll in, the closed Program, as outlined in the **Program Closure Procedures** ~~document~~.

17.6.2. Students in a closed program will be informed of the program closure according to the requirements outlined in the **Program Closure Procedures**.

17.6.3. Closure should not result in students being unable to complete, if they so wish, the program they are registered in within the standard time to completion for that program.

17.6.4. In the specific case of students enrolled in Graduate Programs, the closure must not prevent them from completing their courses, examinations, training, and research necessary to graduate, or interfere with their commitments of financial support.

17.6.5. Not-withstanding-the-above, ~~Students~~ students wishing to graduate from a closed program must apply to do so within four years of the program closure.

17.7. Faculty in a Closed Program

17.7.1. Procedures for Tenured, Tenure Track, and Teaching Faculty who are part of a bargaining unit will be in accordance with the relevant Articles of the Collective Agreement in force at the time of Program closure.

17.7.2. Procedures for Associate Deans or Teaching Staff Governors who are temporarily outside of the bargaining unit will be in accordance with the relevant Articles of the Collective Agreement in force at the time of Program closure.

17.7.3. Procedures for sessional instructors and other contract faculty who are part of a bargaining unit will be in accordance with the relevant Articles of the Collective Agreement in force at the time of Program closure. Should no relevant Article exist, sessional instructors and other contract faculty will be entitled to severance in accordance with Provincial or Federal legislation or may apply for other positions in the University for which they are qualified.

17.7.4. Teaching staff not part of a bargaining unit will be entitled to severance in accordance with Provincial or Federal legislation or may apply for other positions in the University for which they are qualified.

17.8. Staff in a Closed Program

17.8.1. Procedures for staff who are part of a bargaining unit will be in accordance with the relevant Articles of the Collective Agreement in force at the time of Program closure.

17.8.2. Staff who are not part of a bargaining unit will be entitled to severance in accordance with Provincial or Federal legislation or may apply for other positions in the University for which they are qualified.

18. Quality Council Cyclical Audit

Quality enhancement is a function of and balance between internal and external processes and procedures. As part of the University's dedication to ensuring the highest quality learning experience for students and maintaining the highest integrity of its academic programs, Ontario Tech manages the development and continuous improvement of curricula though a rigourous governance process. External quality assurance involves the processes and procedures defined by the Quality Assurance Framework (QAF). In accordance with this Framework, the University is subject to a Cyclical Audit by the Quality Council, at least once every eight years. The Quality Council has established the schedule of institutional participation in the audit process within the eight-year cycle and publishes the agreed schedule on its website. The Cyclical Audit provides necessary accountability to post-secondary education's principal stakeholders by assessing the degree to which the University's internally defined quality assurance processes, procedures, and practices align with and satisfy the agreed upon standards, as set out in the QAF. The Audit will be conducted in accordance with the protocol as outlined in the **Cyclical Review and Auditing Procedures**.

MONITORING AND REVIEW

19. This policy will be reviewed as necessary and at least every three years. The Provost or successor thereof, is responsible to monitor and review this Policy.

RELATED POLICIES, PROCEDURES & DOCUMENTS

Ontario Universities Council on Quality Assurance - Quality Assurance Framework
Curriculum Change Procedures
Cyclical Review and Auditing Procedures
New Program Procedures
Program Closure Procedures
Program Nomenclature Directives
Faculty and Staff Collective Agreements
Protocols associated with consultation/development of Indigenous curriculum
Protocols associated with Micro-credential development

Classification Number	ACD 1501.04
Parent Policy	Institutional Quality Assurance Process
Framework Category	Academic
Approving Authority	Academic Council
Policy Owner	Provost
Approval Date	June 2020
Review Date	June 2020
Supersedes	ACD 1501 (June 2010); LCG 1127 Section 1 (August 2005); Quality Assurance Handbook (June 2011) Program Closure Procedures (June 2020); Not-for-Academic Credit Digital Badges, Microcredentials, and Stackable Credentials Policy (July 2021)

PROGRAM CLOSURE PROCEDURES

PURPOSE

1. The purpose of these Procedures is to establish a consistent process for defining and documenting the closure of a Program as outlined in the Institutional Quality Assurance Process (IQAP).

DEFINITIONS

2. For the purposes of these ~~p~~Procedures the ~~following~~ definitions in the Policy apply~~:~~

Commented [KM1]: Policy is now the central place for all definitions, this avoids any potential contradiction and shortens the Procedures for ease of reading.

~~**Faculty Council:** established by Academic Council to approve new programs and courses, policies (including admissions), academic standards, curriculum and degree requirements, and long-range academic plans, at the Faculty level~~

~~**Graduate Studies Committee (GSC):** a standing committee of Academic Council responsible for reviewing graduate curriculum proposals and documents.~~

~~**Program**: A complete set and sequence of courses, combination of courses, and/or other units of study, research and practice; the successful completion of which qualifies the candidate for a formal credential (degree with or without major; diploma).~~

~~**Major Program Modifications:** those modifications that constitute a significant change to the design and delivery of an existing program.~~

~~**Ministry:** the Ontario Ministry governing the affairs of Colleges and Universities.~~

~~**Quality Council:** the Ontario Universities Council on Quality Assurance, established by the Council of Ontario Universities in July 2010, responsible for oversight of the Quality Assurance Framework processes for Ontario Universities. The Council operates at arm's length from both Ontario's publicly assisted universities and the Ontario government.~~

~~**Undergraduate Studies Committee (USC):** a standing committee of Academic Council responsible for reviewing undergraduate curriculum proposals and documents.~~

SCOPE AND AUTHORITY

3. These procedures apply to undergraduate and graduate D~~d~~egree and D~~d~~iploma P~~p~~rograms whether offered in full, in part, or conjointly by any institutions federated or affiliated with the University. It also applies to D~~d~~egree or D~~d~~iploma P~~p~~rograms offered in partnership, collaboration or other such arrangement with other post-secondary institutions including colleges, universities, or other institutes.

4. These procedures do not apply to the closure of a Program Component~~specialization, minor,~~, Type 1 Graduate Diploma, ~~or Micro-credential,~~ which fall under the **Curriculum Change Procedures**, nor do they apply to Micro-credentials whether stand-alone or embedded within a Program.

Commented [KM2]: Using definition for clarity.

Commented [KM3]: Curriculum Change Procedures do not discuss removal of M-Cs, these are handled through M-C policy. Adding clarification here based on the separately approved policy.

5. The Provost, or successor thereof, is the Policy Owner and is responsible for overseeing the implementation, administration and interpretation of these Procedures.

PROCEDURES

The Centre for Institutional Quality Enhancement (CIQE) will provide access to an electronic workflow tracking system and electronic repository of required proposals. Individuals may use the templates provided at www.ontariotechu.ca/ciqe as a guide to assist in the planning of the changes prior to implementing proposals in the electronic system.

6. Program Closure

6.1. When, in accordance with the Institutional Quality Assurance Policy, it has been determined that a Program should be closed, the Dean or Provost will consult with and receive feedback from the applicable Faculty Council(s).

Commented [KM4]: Per the IQAP Policy, the Provost may also initiate the decision.

6.2. Once the Dean or Provost has received feedback ~~from Faculty Council~~, a Major Program Modification – Program Closure electronic proposal is required to be completed in its entirety by the Dean or designate ~~within the Faculty~~.

6.3. The Major Program Modification – Program Closure will include evidence that appropriate consultation has taken place, and electronic proposals must minimally include the following:

a) A brief summary of rationale for the program removal.

b) A brief description of the program being removed and the current Calendar copy.

c) A brief background on the existing program and detailed rationale for its removal; the proposed implementation date and detailed internal transition plan including impact on faculty members, other academic and non-academic human resources, or external agencies; and planned administrative steps and communication.

d) Detailed transition plan for current and potential students; planned communication; maximum number of semesters for current students to complete the program; alternative programs and process for student transfer.

e) A complete list of any courses being closed and the transition plan for each; a list of courses which will undergo required changes but are not being removed, a transition plan for each, and attached Course Change proposals.

f) An outline of areas consulted, including an account of the process of consultation related to Indigenous content, where appropriate.

~~**6.3.1.** To be removed from the academic calendars for the subsequent academic year, the Major Program Modification – Program Closure must be received by the Centre for Institutional Quality Enhancement (CIQE) no later than the end of November.~~

Commented [KM5]: There is no deadline for this, 6.3.1 was included in error.

6.4. Completed proposals must be presented to the Faculty Council(s) for information and then submitted to CIQE. CIQE will prepare a detailed report of the impacts of the Program closure for presentation to the appropriate standing committee of Academic Council (USC or GSC) for discussion as part of the consultation process.

6.5. CIQE will record any concerns raised by the standing committee and prepare a report of impacts and concerns for the Provost. The Provost will also receive a copy of the Major Program Modification – Program Closure proposal.

6.6. The Provost will then submit their recommendation for Program closure, detailing the process and transition recommendations~~, to the Executive Committee of Academic Council, and subsequently~~ to the Academic Council for final review and approval.

6.7. When the Program closure has been approved by the Academic Council, the President will then inform the Board of Governors of the decision and the reasons for it. Major Program Modifications – Program Closure are reported annually to the Quality Council and the Ministry.

7. If Academic Council Does not Approve the Program Closure

7.1. When, in accordance with the Institutional Quality Assurance Policy, Academic Council does not approve the program closure, Academic Council will strike a three-person Committee of its members to be chaired by the President or designate.

7.2. The Committee will seek the views of the Faculty Council(s), the Dean of the Faculty or School, the Dean(s) of any related Faculty or School, the Dean of the School of Graduate and Postdoctoral Studies, if applicable, the Provost, the Registrar, and at least one ~~external~~ assessor internal to the University but external to the Faculty(ies). The Committee will also invite all faculty members who teach in the program to comment if they wish to do so.

Commented [KM6]: Added for clarity, old language potentially implied someone external to the University.

7.3. The Committee will, within 60 days, issue a report to the Board of Governors that presents the results of the investigation~~s~~ and makes one or more recommendations.

7.3.1 The Committee will discuss its conclusions with the Provost and the appropriate Dean(s) before forwarding its report to the Board of Governors.

7.4. The Board will review the Committee's report and reach a decision. The decision of the Board on the closure of the program is final.

8. Procedures for the Phase-Out of Closed Programs

8.1. In consultation with the Dean of the Faculty in which the program resides, the Registrar, or designate, will prepare an official list of all students currently enrolled in the program.

8.2. The Dean will prepare correspondence to notify all enrolled students of the closure and provide information on the following:

a) The date by which the program must be completed in order to receive the specified degree from the University;

b) A brief description of the program being removed and the current Calendar copy. The last semester and year in which each course required for the program will be offered;

c) The availability of closely related programs offered by the University to which the student may transfer;

d) The extent to which transfer ~~work~~credits, substitutions, etc., may be considered in meeting the requirements of the program.

8.3. Once the decision to close the program has been made, the program will no longer accept applicants and it will be removed from the website and academic calendar.

MONITORING AND REVIEW

9. This procedure will be reviewed as necessary and at least every three years. The Provost's Office, through the Center for Institutional Quality Enhancement, coordinates the ~~day to day~~day-to-day management of the quality assurance process, and works in collaboration with Deans and units to implement the procedures for developing and accessing academic programs. The Provost, or successor thereof, is responsible to monitor and review this Policy.

RELATED POLICIES, PROCEDURES & DOCUMENTS

Ontario Universities Council on Quality Assurance - Quality Assurance Framework
Institutional Quality Assurance Policy
Program Nomenclature Directives
Faculty and Staff Collective Agreements
Protocols associated with consultation/development of Indigenous curriculum

UNDERGRADUATE STUDIES COMMITTEE REPORT

ACTION REQUESTED:

Recommendation	☒
Decision	☐
Discussion/Direction	☐
Information	☐

DATE: **May 19, 2026**

PRESENTED BY: **Adam Wingate, Associate Registrar and Director, Records and Scheduling**

SUBJECT: **Registration and Course Selection Policy Amendments**

COMMITTEE MANDATE:

Under the Policy Framework and the University's Act and By-laws, Academic Council is responsible for approving Academic Policy and to make recommendations to the Board on "the establishment and terms of reference of committees to exercise the Academic Council's delegated authority" under By-law no. 2. The Undergraduate Studies Committee has a mandate of maintaining the academic standards set by Academic Council and to serve as deliberative bodies for academic policy instruments.

We present the attached revised Registration and Course Selection Policy for approval by Academic Council.

MOTION FOR CONSIDERATION:

That USC hereby recommends to Academic Council the approval of the revised Registration and Course Selection Policy for approval by Academic Council.

BACKGROUND/CONTEXT & RATIONALE:

Currently, there is no reference to a graduate-level Consideration for Late Withdrawal process codified in any existing academic policy instruments. To this end, the School of Graduate and Postdoctoral Studies (SGPS) has requested that graduate students be included within the scope of existing Consideration for Late Withdrawal procedures to ensure equity across all student populations.

This change in practice requires a substantive change to the Registration and Course Selection Policy; specifically, the addition of ‘and Graduate Students’ to section 15: Request for Consideration for Late Withdrawal from a Course(s) for Undergraduate Students.

RESOURCES REQUIRED:

- No resources required.

CONSULTATION AND APPROVAL:

- Online Consultation: April 20, 2026 – April 24, 2026
- Undergraduate Studies Committee (Deliberation): May 19, 2026
- Graduate Studies Committee (Deliberation): May 26, 2026
- Academic Council for approval: June 23, 2026

NEXT STEPS:

Pending deliberation by the Undergraduate Studies Committee and Graduate Studies Committee, this policy will be presented to Academic Council for approval and become effective as of the date of approval.

If approved, the Graduate Students - Tuition and Late Withdrawal Appeal Request Form would be considered defunct and replaced by the Consideration for Late Withdrawal process.

SUPPORTING REFERENCE MATERIALS:

- ACD 1508 Registration and Course Selection Policy (Tracked Changes)
- ACD 1508_Registration and Course Selection Policy_Clean Copy.docx

Registration and Course Selection Policy

Classification number	ACD 1508
Framework category	Academic
Approving authority	Academic Council
Policy owner	Registrar
Approval date	DRAFT FOR APPROVAL
Review date	TBD
Last updated	~~November 2025~~January 2026
Supersedes	Registration and Course Selection Policy, February 25, 2020; Academic Regulations – Undergraduate Academic Calendar 2016-2017, Academic Regulations, Graduate Academic Calendar 2019-20

Purpose

1. The purpose of this Policy is to outline the University's Registration and Course selection Framework.

Definitions

2. For the purposes of this Policy the following definitions apply:

"Academic Transcript" means the complete report of a student's academic record.

"Academic Year" means the period from September 1 to August 31.

"Credit Hours" means a measure used to reflect the relative weight of a given Course toward the fulfilment of degree requirements. Unless otherwise indicated, a Course normally has a Credit Hour value of three.

“Corequisite” means a Course that must be taken concurrently with the Course for which it is required.

“Course” means a unit of work in a particular subject normally extending through one Semester or Session, the completion of which carries credit toward the requirements of a degree or diploma.

“Examination” means a form of testing intended to assess the level of students' knowledge, ability, skills, comprehension, application, analysis, and/or synthesis of the subject matter in a Course of study. This includes, but is not limited to in-person, online, take-home, practical, and laboratory Examinations. This does not include doctoral candidacy, master’s or doctoral thesis examinations.

“Fee-Per-Credit Program” refers to a graduate program in which students are charged tuition based on the number of credits in which they are registered in a given term.

“Flat-Fee Program” refers to a graduate program in which all students in the same program are charged the same tuition fee for course loads at or above a certain threshold of the normal course load.

“Grade Point Average (GPA)” means the weighted average of the grade points awarded on the basis of academic performance during a single Semester.

“Prerequisite” means a Course that must be successfully completed prior to commencing a second Course for which it is required.

“Program” means a complete set and sequence of Courses, combination of Courses, and/or other units of study, research and practice, the successful completion of which qualifies the candidate for a formal credential (degree with or without major; diploma), provided all other academic and financial requirements are met.

“Semester” means sixty days of lectures and a final Examination period.

“Session” means a period of approximately six consecutive weeks in the summer Semester consisting of 30 days of lectures and a final Examination period. The first half of summer Semester is designated as spring Session; the second half is designated as summer Session.

“Time-Status” means the declared registration status of a graduate student. Graduate students can be registered full-time or part-time regardless of the number of courses in which they are registered. Time-status means full or part-time status for an Undergraduate student, which is defined by the student’s registered course load.

Scope and authority

3. This Policy applies to all Course selections for undergraduate and graduate students.

4. The Registrar, or successor thereof, is the Policy Owner and is responsible for overseeing the implementation, administration and interpretation of this Policy.

5. The Dean of Graduate and Postdoctoral Studies is responsible for overseeing the implementation, administration and interpretation of this Policy as they pertain to graduate students.

Policy

The following outlines the requirements regarding registration and Course selection for undergraduate and graduate students.

6. Course Selection

6.1 Requirements for Programs of study are listed in the faculty or Program sections of the academic calendar. Students should become familiar with the Program and/or degree requirements and plan their Programs accordingly.

6.2 Academic advice is available to undergraduate students who experience difficulty when selecting Courses.

6.3 All candidates pursuing a graduate degree or diploma shall enrol in an advanced course of study.

6.4 Graduate students must consult with their graduate program director, faculty advisor or research supervisor as part of the planning process.

6.5 All Courses in the student's Program must be approved by the graduate program director.

6.6 Graduate students may take graduate Courses outside their Program with permission from the student's supervisor (if applicable), graduate program director for the Program and the graduate program director for the Course. Graduate students may be charged fees in addition to their regular Program fee for such Courses.

6.7 Graduate students cannot take Courses for credit in addition to the Course requirements for their graduate Program.

6.8 Not all Courses are offered in any one Semester, Session, or Academic Year. Elective offerings may vary from Semester to Semester.

7. Prerequisites and Corequisites

7.1 Some Courses have Prerequisites or Corequisites.

7.2 An undergraduate student may have Prerequisites and Corequisites waived with the permission of the faculty.

7.3 A graduate student may have Prerequisites or Corequisites waived with the permission of the graduate program director.

7.4 Any student who requests such a waiver is responsible to ensure that they are adequately prepared to proceed with the level of study required in the Course.

7.5 Inadequate preparation is not a basis for appeal of a final grade in a Course for which a student requested a waiver of Prerequisite or Corequisite.

8. Repeating Courses

8.1 Undergraduate students

a. Undergraduate students are not allowed to repeat the same Course, or its equivalent, more than two times.

b. All instances of a Course will appear on the Academic Transcript. Only the grade achieved on the most recent attempt will be included in the calculation of the student's Grade Point Average.

c. Students who have failed a third attempt of a Program required Course will be dismissed from the Program.

8.2 Graduate students

a) Graduate students who fail a course are required to repeat the Course or an approved alternate within three active semesters after receiving the final grade.

b) Students who do not successfully complete the Course within three active semesters or fail a second Course will be eligible for dismissal from the University.

c) All instances of a Course appear on the Academic Transcript. Only the grade achieved on the most recent attempt, or an approved alternative Course, is used to calculate the student's GPA.

d) Repeating Courses impacts graduate student academic standing. This is outlined in "Graduate Student Grading System, Research Progress and Academic Standing Policy".

9. Auditing Courses

9.1 Undergraduate and graduate students may audit a Course(s) in accordance with the Policy on Auditing an Undergraduate and Graduate Course

9.2 Audited Courses will not appear on a student's Academic Transcript.

10. Curriculum Substitution

10.1 Undergraduate students wishing to substitute one Course for another in a set of Program requirements may request permission to do so from the dean of the faculty or designate. Requests are referred to the appropriate Faculty Council for decision.

10.2 Any changes to a graduate student's Program must be approved by the graduate program director.

11. Letters of Permission for Undergraduate Students

11.1 Students wishing to take a Course at another institution must apply for and receive a letter of permission from the University in advance of their application to the visiting institution.

11.2 A letter of permission ensures that the Courses to be taken at the host institution will be recognized for credit at the University and are applicable to the student's Program of study.

11.3 For application instructions, eligibility requirements, and restrictions, students should visit ontariotechu.ca/lop.

12. Graduate Student Course and Research Exchanges

12.1 Graduate students may apply to take Courses at other universities within and outside Canada and may request for credits earned to be transferred to their graduate Program at the University.

12.2 Graduate students from other universities within and outside Canada may apply to take Courses at the University that can be applied to their graduate work at the institution at which they are registered.

12.3 For application instructions, eligibility requirements, and restrictions, students should review the relevant section of the Graduate Academic Calendar or policy.

13. Registration Changes

13.1 Course Changes

The academic schedule for each Academic Year will outline predetermined dates for the following for each Semester and/or Session:

a. Last day to add Courses.

b. Last day to drop Courses and receive a 100 per cent refund of tuition fees.

c. Last day to drop Courses and receive a 50 per cent refund of

- tuition fees. Dropping Courses on or prior to this date can be done without academic consequences.
- Dropping Courses after this date, and up to the last day to drop Courses, will result in a W being placed on the student's record indicating withdrawal.
- The W will not affect the Grade Point Average (GPA). However, a large number of W grades may affect the way an Academic Transcript is viewed by graduate schools or potential employers.

d. Last day to drop Courses.

- Withdrawal deadlines are not the same as the refund deadlines. Students should consult the University's academic schedule and Fees and Charges policies when considering withdrawal.

13.2 Graduate Student Registration Change Requests

The academic schedule for each Academic Year will outline predetermined dates for graduate students to submit:

a. Request for Program change;
b. Request to change Time-Status; or
c. Requests for Leave of Absence

14. Voluntary Withdrawal

14.1 Withdrawal from a Course can have implications for a student's academic Program, student aid and awards eligibility and full-time status.

14.2 A dropped Course does not count toward degree requirements and cannot be used to satisfy Prerequisites for further Courses. In addition, the Course that is dropped may not be available in the next Semester or Session. Students are advised to consider all Course changes carefully or consult an advisor or graduate program director.

14.3 Students are reminded that non-attendance in a Course is not equivalent to withdrawal. Students who cease to attend a Course but do not formally withdraw will be academically and financially responsible for that Course.

15. Request for Consideration for Late Withdrawal from a Course(s) for Undergraduate and Graduate Students

15.1 Students may submit a request to the Registrar's office to consider a late withdrawal from a Course(s) due to extenuating circumstances beyond their control (such as medical reasons, death in the family, etc.).

15.2 All relevant supporting documentation must accompany the request.

15.3 Such requests must be submitted in writing no later than 10 working days after the commencement of the subsequent Semester (including fall, winter or summer Semester) in which the student is enrolled.

16. Continuous Registration for Graduate Students

16.1 Students enrolled in flat-fee programs must be registered in each Semester (including fall, winter and summer Semester) commencing with the Semester specified in their letter of offer and continuing until graduation. Students enrolled in fee-per-credit programs must consult with their program office or graduate program director regarding the expectations for continuous registration in their program.

16.2 Students enrolled in flat-fee programs are automatically registered in a graduate continuance Course until graduation, withdrawal or Program termination. Students must actively register for all other Program Courses. Students who do not formally register in a course cannot attend classes, access Course materials on the learning management system, submit assignments for evaluation or be assigned a grade in that Course.

16.3 If a student enrolled in a flat-fee program fails to maintain continuous registration in a Program or to register after the expiry of an approved leave of absence, the student's status is changed to inactive for up to one year.

16.4 Students who wish to re-register within the one year period may apply for reinstatement. If reinstatement is approved, students are required to pay all fees owing as well as any reinstatement fees that are in effect at the time of reinstatement.

16.5 If the student fails to register for three consecutive Semesters, their file is closed and the student is withdrawn from the Program.

16.6 Should a student who has been withdrawn wish to continue their graduate studies, the student must apply for readmission. Readmission to the University and/or the student's original Program is not guaranteed.

17. Concurrent Registration

17.1 Undergraduate students may not be enrolled concurrently in more than one Program at any institution unless the Programs are formally structured and approved for concurrent registration.

17.2 Graduate students may not be enrolled concurrently in two Programs unless the Programs are formally structured and approved for concurrent registration.

18. Absences from Studies for Graduate Students

18.1 Graduate students are expected to be uninterruptedly registered in their designated Program of study in order to support the timely completion of their degree. However, the University recognizes that under certain circumstances students may need to absent themselves from regular study while maintaining their relationship with the University.

18.2 Such circumstances must have sufficient cause and an official leave of absence must be requested through the School of Graduate and Postdoctoral Studies and approved by the Dean of Graduate and Postdoctoral Studies.

18.3 Acceptable circumstances include the following:

a. Exceptional circumstances, including medical, extraordinary demands of employment and compassionate circumstances.

b. Maternity leave, which is available to students during or following a pregnancy.

c. Parental leave, which is available to students who face extraordinary demands in parental responsibilities or whose duties require that they be absent from their studies for a period of time.

18.4 A leave normally begins on the first day of the Semester for a period of one, two or three academic Semesters. Normally, retroactive leaves of absences will not be granted.

18.5 During the period of leave, the following conditions apply:

a. Students are not registered or required to pay fees.

b. Students may not undertake any academic or research work, or use any of the University's facilities.

c. Students are not eligible to receive scholarships or assistantships from the University. In the case of other graduate student awards, the regulations of the particular granting agency apply.

d. Except for parental leave or in exceptional circumstances, it is not expected that a student will be granted more than one leave under the terms of this policy. The time limits for completing the degree Program will be extended by the duration of the leave taken (i.e., one, two or three Semesters, as appropriate).

e. Leave of absence forms will not be processed for students who have outstanding fees. Students must inform the University immediately upon return.

19. Time Status for Undergraduate Students

19.1 Each Program has associated with it a number of Credit Hours that constitute a full Course load. In many Programs, this number is 15 per Semester or 30 per Academic Year.

19.2 Students will be considered full-time if they are registered in a Course load of nine Credit Hours or more.

a. Full-time status may have an impact on such things as student aid and awards eligibility, fees, income tax credits, athletic eligibility and other areas.

19.3 Students are considered part-time status if they are registered in a Course load of less than nine Credit Hours.

20. Time-Status for Graduate Students

20.1 Students are required to register as full-time or part-time students at the time of admission and registration.

20.2 With permission from the graduate program director, students may change their status from full-time to part-time, or vice versa, by completing a Change in Full-time or Part-time Status form and submitting it to the School of Graduate and Postdoctoral Studies for approval by the Dean of Graduate and Postdoctoral Studies.

20.3 A change in status may have an impact on student aid and awards eligibility, fees, income tax credits and other areas.

20.4 Full-time status

Graduate students are considered full-time if they meet the following criteria:

a. Pursue their studies as a full-time occupation.

b. Formally identify themselves as full-time students on all documentation.

c. Maintain regular contact with their faculty advisor or research supervisor, if applicable, and be geographically available and visit the campus regularly.

20.5 Part-time status

Graduate students who do not meet the above criteria are deemed part-time students. Part-time students may have Course load restrictions. Students should consult the individual faculty with regard to the availability of part-time studies within their Program.

Monitoring and review

21. This Policy will be reviewed as necessary and at least every three years. The Registrar, or successor thereof, is responsible to monitor and review this Policy.

Relevant legislation

22. This section intentionally left blank

Related policies, procedures & documents

23. Undergraduate Fees

and Charges Policy

Graduate Fees and

Charges Policy

Graduate Academic

Calendar

Undergraduate

Academic Calendar

Registration and Course Selection Policy

Classification number	ACD 1508
Framework category	Academic
Approving authority	Academic Council
Policy owner	Registrar
Approval date	DRAFT FOR APPROVAL
Review date	TBD
Last updated	January 2026
Supersedes	Registration and Course Selection Policy, February 25, 2020; Academic Regulations – Undergraduate Academic Calendar 2016-2017, Academic Regulations, Graduate Academic Calendar 2019-20

Purpose

1. The purpose of this Policy is to outline the University's Registration and Course selection Framework.

Definitions

2. For the purposes of this Policy the following definitions apply:

"Academic Transcript" means the complete report of a student's academic record.

"Academic Year" means the period from September 1 to August 31.

"Credit Hours" means a measure used to reflect the relative weight of a given Course toward the fulfilment of degree requirements. Unless otherwise indicated, a Course normally has a Credit Hour value of three.

“Corequisite” means a Course that must be taken concurrently with the Course for which it is required.

“Course” means a unit of work in a particular subject normally extending through one Semester or Session, the completion of which carries credit toward the requirements of a degree or diploma.

“Examination” means a form of testing intended to assess the level of students' knowledge, ability, skills, comprehension, application, analysis, and/or synthesis of the subject matter in a Course of study. This includes, but is not limited to in-person, online, take-home, practical, and laboratory Examinations. This does not include doctoral candidacy, master’s or doctoral thesis examinations.

“Fee-Per-Credit Program” refers to a graduate program in which students are charged tuition based on the number of credits in which they are registered in a given term.

“Flat-Fee Program” refers to a graduate program in which all students in the same program are charged the same tuition fee for course loads at or above a certain threshold of the normal course load.

“Grade Point Average (GPA)” means the weighted average of the grade points awarded on the basis of academic performance during a single Semester.

“Prerequisite” means a Course that must be successfully completed prior to commencing a second Course for which it is required.

“Program” means a complete set and sequence of Courses, combination of Courses, and/or other units of study, research and practice, the successful completion of which qualifies the candidate for a formal credential (degree with or without major; diploma), provided all other academic and financial requirements are met.

“Semester” means sixty days of lectures and a final Examination period.

“Session” means a period of approximately six consecutive weeks in the summer Semester consisting of 30 days of lectures and a final Examination period. The first half of summer Semester is designated as spring Session; the second half is designated as summer Session.

“Time-Status” means the declared registration status of a graduate student. Graduate students can be registered full-time or part-time regardless of the number of courses in which they are registered. Time-status means full or part-time status for an Undergraduate student, which is defined by the student’s registered course load.

Scope and authority

3. This Policy applies to all Course selections for undergraduate and graduate students.

4. The Registrar, or successor thereof, is the Policy Owner and is responsible for overseeing the implementation, administration and interpretation of this Policy.

5. The Dean of Graduate and Postdoctoral Studies is responsible for overseeing the implementation, administration and interpretation of this Policy as they pertain to graduate students.

Policy

The following outlines the requirements regarding registration and Course selection for undergraduate and graduate students.

6. Course Selection

6.1 Requirements for Programs of study are listed in the faculty or Program sections of the academic calendar. Students should become familiar with the Program and/or degree requirements and plan their Programs accordingly.

6.2 Academic advice is available to undergraduate students who experience difficulty when selecting Courses.

6.3 All candidates pursuing a graduate degree or diploma shall enrol in an advanced course of study.

6.4 Graduate students must consult with their graduate program director, faculty advisor or research supervisor as part of the planning process.

6.5 All Courses in the student's Program must be approved by the graduate program director.

6.6 Graduate students may take graduate Courses outside their Program with permission from the student's supervisor (if applicable), graduate program director for the Program and the graduate program director for the Course. Graduate students may be charged fees in addition to their regular Program fee for such Courses.

6.7 Graduate students cannot take Courses for credit in addition to the Course requirements for their graduate Program.

6.8 Not all Courses are offered in any one Semester, Session, or Academic Year. Elective offerings may vary from Semester to Semester.

7. Prerequisites and Corequisites

7.1 Some Courses have Prerequisites or Corequisites.

7.2 An undergraduate student may have Prerequisites and Corequisites waived with the permission of the faculty.

7.3 A graduate student may have Prerequisites or Corequisites waived with the permission of the graduate program director.

7.4 Any student who requests such a waiver is responsible to ensure that they are adequately prepared to proceed with the level of study required in the Course.

7.5 Inadequate preparation is not a basis for appeal of a final grade in a Course for which a student requested a waiver of Prerequisite or Corequisite.

8. Repeating Courses

8.1 Undergraduate students

a. Undergraduate students are not allowed to repeat the same Course, or its equivalent, more than two times.

b. All instances of a Course will appear on the Academic Transcript. Only the grade achieved on the most recent attempt will be included in the calculation of the student's Grade Point Average.

c. Students who have failed a third attempt of a Program required Course will be dismissed from the Program.

8.2 Graduate students

a) Graduate students who fail a course are required to repeat the Course or an approved alternate within three active semesters after receiving the final grade.

b) Students who do not successfully complete the Course within three active semesters or fail a second Course will be eligible for dismissal from the University.

c) All instances of a Course appear on the Academic Transcript. Only the grade achieved on the most recent attempt, or an approved alternative Course, is used to calculate the student's GPA.

d) Repeating Courses impacts graduate student academic standing. This is outlined in "Graduate Student Grading System, Research Progress and Academic Standing Policy".

9. Auditing Courses

9.1 Undergraduate and graduate students may audit a Course(s) in accordance with the Policy on Auditing an Undergraduate and Graduate Course

9.2 Audited Courses will not appear on a student's Academic Transcript.

10. Curriculum Substitution

10.1 Undergraduate students wishing to substitute one Course for another in a set of Program requirements may request permission to do so from the dean of the faculty or designate. Requests are referred to the appropriate Faculty Council for decision.

10.2 Any changes to a graduate student's Program must be approved by the graduate program director.

11. Letters of Permission for Undergraduate Students

11.1 Students wishing to take a Course at another institution must apply for and receive a letter of permission from the University in advance of their application to the visiting institution.

11.2 A letter of permission ensures that the Courses to be taken at the host institution will be recognized for credit at the University and are applicable to the student's Program of study.

11.3 For application instructions, eligibility requirements, and restrictions, students should visit ontariotechu.ca/lop.

12. Graduate Student Course and Research Exchanges

12.1 Graduate students may apply to take Courses at other universities within and outside Canada and may request for credits earned to be transferred to their graduate Program at the University.

12.2 Graduate students from other universities within and outside Canada may apply to take Courses at the University that can be applied to their graduate work at the institution at which they are registered.

12.3 For application instructions, eligibility requirements, and restrictions, students should review the relevant section of the Graduate Academic Calendar or policy.

13. Registration Changes

13.1 Course Changes

The academic schedule for each Academic Year will outline predetermined dates for the following for each Semester and/or Session:

a. Last day to add Courses.

b. Last day to drop Courses and receive a 100 per cent refund of tuition fees.

c. Last day to drop Courses and receive a 50 per cent refund of

- tuition fees. Dropping Courses on or prior to this date can be done without academic consequences.
- Dropping Courses after this date, and up to the last day to drop Courses, will result in a W being placed on the student's record indicating withdrawal.
- The W will not affect the Grade Point Average (GPA). However, a large number of W grades may affect the way an Academic Transcript is viewed by graduate schools or potential employers.

d. Last day to drop Courses.

- Withdrawal deadlines are not the same as the refund deadlines. Students should consult the University's academic schedule and Fees and Charges policies when considering withdrawal.

13.2 Graduate Student Registration Change Requests

The academic schedule for each Academic Year will outline predetermined dates for graduate students to submit:

a. Request for Program change;
b. Request to change Time-Status; or
c. Requests for Leave of Absence

14. Voluntary Withdrawal

14.1 Withdrawal from a Course can have implications for a student's academic Program, student aid and awards eligibility and full-time status.

14.2 A dropped Course does not count toward degree requirements and cannot be used to satisfy Prerequisites for further Courses. In addition, the Course that is dropped may not be available in the next Semester or Session. Students are advised to consider all Course changes carefully or consult an advisor or graduate program director.

14.3 Students are reminded that non-attendance in a Course is not equivalent to withdrawal. Students who cease to attend a Course but do not formally withdraw will be academically and financially responsible for that Course.

15. Request for Consideration for Late Withdrawal from a Course(s) for Undergraduate and Graduate Students

15.1 Students may submit a request to the Registrar's office to consider a late withdrawal from a Course(s) due to extenuating circumstances beyond their control (such as medical reasons, death in the family, etc.).

15.2 All relevant supporting documentation must accompany the request.

15.3 Such requests must be submitted in writing no later than 10 working days after the commencement of the subsequent Semester (including fall, winter or summer Semester) in which the student is enrolled.

16. Continuous Registration for Graduate Students

16.1 Students enrolled in flat-fee programs must be registered in each Semester (including fall, winter and summer Semester) commencing with the Semester specified in their letter of offer and continuing until graduation. Students enrolled in fee-per-credit programs must consult with their program office or graduate program director regarding the expectations for continuous registration in their program.

16.2 Students enrolled in flat-fee programs are automatically registered in a graduate continuance Course until graduation, withdrawal or Program termination. Students must actively register for all other Program Courses. Students who do not formally register in a course cannot attend classes, access Course materials on the learning management system, submit assignments for evaluation or be assigned a grade in that Course.

16.3 If a student enrolled in a flat-fee program fails to maintain continuous registration in a Program or to register after the expiry of an approved leave of absence, the student's status is changed to inactive for up to one year.

16.4 Students who wish to re-register within the one year period may apply for reinstatement. If reinstatement is approved, students are required to pay all fees owing as well as any reinstatement fees that are in effect at the time of reinstatement.

16.5 If the student fails to register for three consecutive Semesters, their file is closed and the student is withdrawn from the Program.

16.6 Should a student who has been withdrawn wish to continue their graduate studies, the student must apply for readmission. Readmission to the University and/or the student's original Program is not guaranteed.

17. Concurrent Registration

17.1 Undergraduate students may not be enrolled concurrently in more than one Program at any institution unless the Programs are formally structured and approved for concurrent registration.

17.2 Graduate students may not be enrolled concurrently in two Programs unless the Programs are formally structured and approved for concurrent registration.

18. Absences from Studies for Graduate Students

18.1 Graduate students are expected to be uninterruptedly registered in their designated Program of study in order to support the timely completion of their degree. However, the University recognizes that under certain circumstances students may need to absent themselves from regular study while maintaining their relationship with the University.

18.2 Such circumstances must have sufficient cause and an official leave of absence must be requested through the School of Graduate and Postdoctoral Studies and approved by the Dean of Graduate and Postdoctoral Studies.

18.3 Acceptable circumstances include the following:

a. Exceptional circumstances, including medical, extraordinary demands of employment and compassionate circumstances.

b. Maternity leave, which is available to students during or following a pregnancy.

c. Parental leave, which is available to students who face extraordinary demands in parental responsibilities or whose duties require that they be absent from their studies for a period of time.

18.4 A leave normally begins on the first day of the Semester for a period of one, two or three academic Semesters. Normally, retroactive leaves of absences will not be granted.

18.5 During the period of leave, the following conditions apply:

a. Students are not registered or required to pay fees.

b. Students may not undertake any academic or research work, or use any of the University's facilities.

c. Students are not eligible to receive scholarships or assistantships from the University. In the case of other graduate student awards, the regulations of the particular granting agency apply.

d. Except for parental leave or in exceptional circumstances, it is not expected that a student will be granted more than one leave under the terms of this policy. The time limits for completing the degree Program will be extended by the duration of the leave taken (i.e., one, two or three Semesters, as appropriate).

e. Leave of absence forms will not be processed for students who have outstanding fees. Students must inform the University immediately upon return.

19. Time Status for Undergraduate Students

19.1 Each Program has associated with it a number of Credit Hours that constitute a full Course load. In many Programs, this number is 15 per Semester or 30 per Academic Year.

19.2 Students will be considered full-time if they are registered in a Course load of nine Credit Hours or more.

a. Full-time status may have an impact on such things as student aid and awards eligibility, fees, income tax credits, athletic eligibility and other areas.

19.3 Students are considered part-time status if they are registered in a Course load of less than nine Credit Hours.

20. Time-Status for Graduate Students

20.1 Students are required to register as full-time or part-time students at the time of admission and registration.

20.2 With permission from the graduate program director, students may change their status from full-time to part-time, or vice versa, by completing a Change in Full-time or Part-time Status form and submitting it to the School of Graduate and Postdoctoral Studies for approval by the Dean of Graduate and Postdoctoral Studies.

20.3 A change in status may have an impact on student aid and awards eligibility, fees, income tax credits and other areas.

20.4 Full-time status

Graduate students are considered full-time if they meet the following criteria:

a. Pursue their studies as a full-time occupation.

b. Formally identify themselves as full-time students on all documentation.

c. Maintain regular contact with their faculty advisor or research supervisor, if applicable, and be geographically available and visit the campus regularly.

20.5 Part-time status

Graduate students who do not meet the above criteria are deemed part-time students. Part-time students may have Course load restrictions. Students should consult the individual faculty with regard to the availability of part-time studies within their Program.

Monitoring and review

21. This Policy will be reviewed as necessary and at least every three years. The Registrar, or successor thereof, is responsible to monitor and review this Policy.

Relevant legislation

22. This section intentionally left blank

Related policies, procedures & documents

23. Undergraduate Fees

and Charges Policy

Graduate Fees and

Charges Policy

Graduate Academic

Calendar

Undergraduate

Academic Calendar

ACADEMIC COUNCIL
UNDERGRADUATE STUDIES COMMITTEE (USC)

Minutes of the Public Session of the April 21, 2026 Meeting
via Videoconference
9:00 a.m. - 10:16 a.m.

[Undergraduate Studies Committee Agenda & Materials 2025-2026]

Present:
Mary Bluechardt, Chair
Martin Agelin-Chaab
Wendy Barber
Jessica Boswell
Nicola Crow
Ana Duff
Christian Elia
Tyler Frederick
Andrew Hogue
Holly MacPherson
Janet McCabe
Kimberley McCartney
Adam Wingate

Regrets:
Randy Fortier
Jemma Tam

Staff and Guests:
Sandra Grouette (Secretary)

1. **Call to Order and Land Acknowledgement**
The Chair called the Public Session of the Undergraduate Studies Committee (USC) Meeting to order at 9:00 a.m. and C. Elia provided their personal Land Acknowledgement.

2. **Approval of Agenda**
Upon a motion duly made by A. Hogue and seconded by C. Elia, the USC Agenda was approved as presented, including approving and receiving the Consent Agenda and its contents.

3. **Chair's Remarks**
The Chair opened the meeting with brief remarks, thanking faculty and staff for their cooperation during the examination period, particularly in supporting accommodations through the Student Accessibility Services and the Test Centre. The Chair noted that examinations were proceeding smoothly and acknowledged the significant behind-the-scenes effort required to support student success. The Chair also highlighted that the agenda included several substantive items relevant to undergraduate studies, offering opportunities for discussion and feedback, and encouraged members to remain focused while engaging in necessary discussion.

4. **Academic Policy Instruments**

4.1 Examination and Grading Policy Amendments* (M)
A. Wingate provided an overview of the proposed amendments to the Examination and Grading Policy to address an increase in repeated deferred examinations. He highlighted the changes would generally prevent additional exam deferrals if a deferred examination is missed, direct

cases involving transitory illness or injury toward late withdrawal, clarify the University's authority to deregister students until deferred exams are completed, and reaffirm good-faith consideration of accommodation requests. A. Wingate also noted that the amendments reflect consultations with the General Counsel and Human Rights Offices and aligns with practices at several Ontario universities.

A question was raised on whether prerequisite waivers could be considered for students who have completed coursework but not the final examination due to repeated deferrals. It was clarified that permission to proceed into a subsequent course without completion of the prerequisite examination would be at the discretion of the relevant Faculty, in consultation with the Academic Advising unit.

Upon a motion duly made by A. Duff and seconded by M. Agelin-Chaab, that USC hereby recommends to Academic Council the approval of the revised Examination and Grading Policy for approval by Academic Council.

4.2 Institutional Quality Assurance Process (IQAP) Policy and Procedures* (M)
The Chair shared that this item is being brought forward to USC and the Graduate Studies Committee (GSC) for approval of amendments to specific IQAP related procedures, after completing the established process, including community consultation. They noted that at this stage, the Committee's role is focused on review and approval rather than wordsmithing as minor changes in this regard can unintentionally alter the policy instrument's intent. The Chair advised that any suggested minor editorial changes can be referred to CIQE to consider outside of the current formal approval process.

K. McCartney provided an overview of the changes that reflect routine realignment with the Quality Assurance Framework (QAF), which is periodically revised following Quality Council reviews, with the timing of these changes also aligning with the University's standard three-year policy review cycle. She added that minor clarifications have also been made where interpretation or application of IQAP requirements had been identified as unclear through academic governance discussions. She advised that overall, the changes are intended to improve clarity and consistency, with no substantive policy shifts introduced.

K. McCartney noted in accordance with the established process, for USC's consideration today and GSC's next week, there are proposed amendments to three IQAP related procedures. She advised that the IQAP related policy amendments were editorial in nature and so are provided to USC for information purposes only in accordance with the Policy Framework.

A Member raised a range of questions which included the scope of the motion; how the proposed changes were classified (e.g., non-substantive versus substantive); the governance process for consultation, review and approval; and, specific amendments relating to authority and process for curriculum and program changes. The Member further commented on the removal of explicit references to curriculum committees, the reclassification of mode of delivery as an administrative matter, and the potential implications for Faculty oversight, transparency, and the protection of consultation at the Faculty and program levels, including impacts on sessional instructors.

Through ensuing discussion, a few other Members also sought clarification regarding the proposed changes relating to mode of delivery process and associated responsibility areas for Faculties and curriculum committees.

K. McCartney clarified that the revisions were not intended to introduce major structural changes, emphasized that Faculties retain authority over academic matters through established governance pathways, and noted that program-level changes would continue to require formal approval in accordance with the IQAP. She also reiterated that consultation had occurred in accordance with the Policy Framework with the review and approval process also following the established practices. K. McCartney further advised that existing systems provide mechanisms for tracking and oversight of changes.

It was reaffirmed that USC and GSC were the appropriate authorities to approve the proposed procedural amendments and Academic Council would receive this matter as information only pursuant to the proper governance pathways.

W. Barber left the meeting.

Motion to Extend Meeting
Due to the Meeting likely going beyond the time prescribed in the Agenda, N. Crow recommended that the Committee approve a meeting extension.

Upon a motion duly made by A. Duff and seconded by M. Agelin-Chaab, the USC approved a meeting extension past the scheduled end time of 9:55 a.m., to allow for the completion of the Agenda's business in a timely manner.

With a motion on the floor, and given the time constraints and quorum considerations, the Committee supported a deferral of the matter to the May 19, 2026 meeting. It was noted that accordingly, the matter would come to USC in May for approval, with the likelihood that it will also go to Academic Council for information in May to meet implementation timelines for the next academic year.

A. Wingate and C. Elia left the meeting.

Upon a motion duly made by A. Duff and seconded by T. Frederick, that USC defers the IQAP agenda item and associated motion until the May 19, 2026 USC Meeting.

5. **New Program Proposal (Recommendation)**
A. Hogue shared a new program proposal from the Faculty of Business and Information Technology for a Bachelor of Business Analytics and Artificial Intelligence. He highlighted the program as an innovative initiative that integrates business analytics and artificial intelligence, aligning with emerging industry needs.

A Member asked about the number of new courses and associated teaching resources required, workload, and physical resources, particularly those associated with AI. The Chair noted that the Provost has repeatedly noted that resources will follow enrollment.

A Member noted that the enrollment projections within the proposal start at 2026, instead of 2027.

Upon a motion duly made by A. Hogue and seconded by A. Duff, that USC hereby recommends to Academic Council the approval of the Bachelor of Business Analytics and Artificial Intelligence program and the subsequent recommendation of the program to the Board.

6. Consent Agenda* (M)

The Chair confirmed that the contents of the Consent Agenda were approved and received under Agenda Item # 2.

6.1 Public Minutes of the March 17, 2026 Meeting* (M)

7. Termination

There being no other business, and upon a motion to terminate by A. Duff, the USC Meeting terminated at 10:16 a.m.

Further to the IQAP related discussion, Members were asked to submit any further questions/comments before the next meeting directly to CIQE, to help distinguish between clarification requests and substantive matters. It was noted that substantive items would be identified for Committee discussion, with this approach enabling a more effective and focused process.

Sandra Grouette, Assistant University Secretary