



**ACADEMIC COUNCIL MEETING**  
**Academic Council**

**AGENDA**

**Date: September 22, 2026**

**Orientation Session (AC Members only): 2:30 p.m. - 3:10 p.m.**

**Meeting Time: 3:15 p.m. - 4:30 p.m.**

***In-Person***

***Bordessa Hall, 55 Bond St. E, Oshawa ON***

***DTB 524***

**[Public In-Person Registration](#)**

**[AC Meeting Schedule and Materials 2026-2027](#)**

**An In-Person Academic Council Orientation Session will be held for  
AC Members from 2:30 p.m. to 3:10 p.m.**

| No.            |     | Topic                                           | Lead                       | Suggested Start Time |
|----------------|-----|-------------------------------------------------|----------------------------|----------------------|
| PUBLIC SESSION |     |                                                 |                            |                      |
| 1.             |     | Call to Order and Land Acknowledgement          | Chair                      | 3:15 p.m.            |
| 2.             |     | Agenda (M)                                      |                            |                      |
| 3.             |     | Chair’s Remarks                                 | Chair                      |                      |
|                | 3.1 | Fall 2026 Honorary Degree Recipients (I)        |                            |                      |
| 4.             |     | Inquiries and Communications                    | Chair                      | 3:25 p.m.            |
|                | 4.1 | COU Academic Colleague Report* (I)              | P. Garramone               | 3:30 p.m.            |
| 5.             |     | Provost’s Remarks                               | L. Livingston              | 3:40 p.m.            |
|                | 5.1 | Senior Academic Administrator Search Update (I) |                            |                      |
|                | 5.2 | 2026-2027 Enrollment Update                     | L. Livingston<br>S. Thrush | 3:45 p.m.            |
| 6.             |     | Undergraduate Studies Committee                 | M. Bluechardt              | 3:50 p.m.            |

|            |      |                                                                                                                                                                                                                                                                                                                                                     |                 |           |
|------------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------|
| <b>7.</b>  |      | <b>Graduate Studies Committee</b>                                                                                                                                                                                                                                                                                                                   |                 |           |
|            | 7.1  | New Program Proposals: Faculty of Engineering and Applied Science: Engineering Graduate Diplomas*<br>7.1.1 Advanced Automotive Engineering (M)<br>7.1.2 Advanced Robotics (M)<br>7.1.3 AI Engineering (M)<br>7.1.4 Digital Transformation in Advanced Manufacturing (M)<br>7.1.5 Energy Systems Engineering (M)<br>7.1.6 Smart Grid Engineering (M) | P. Mirza-Babaei | 3:55 p.m. |
| <b>8.</b>  |      | <b>Governance &amp; Nominations Committee</b>                                                                                                                                                                                                                                                                                                       |                 |           |
|            | 8.1  | Academic Council Vice-Chair* (M)                                                                                                                                                                                                                                                                                                                    | L. Livingston   | 4:05 p.m. |
|            | 8.2  | Academic Council Board of Governors Liaison* (M)                                                                                                                                                                                                                                                                                                    |                 |           |
|            | 8.3  | 2026-2027 Research Committee Appointments* (M)                                                                                                                                                                                                                                                                                                      |                 |           |
| <b>9.</b>  |      | <b>Research Committee</b>                                                                                                                                                                                                                                                                                                                           | L. Jacobs       | 4:10 p.m. |
| <b>10.</b> |      | <b>Policy Instruments</b>                                                                                                                                                                                                                                                                                                                           |                 |           |
|            | 10.1 | Procurement of Goods and Services Procedures* (C)                                                                                                                                                                                                                                                                                                   | B. MacIsaac     | 4:15 p.m. |
|            | 10.2 | Procedure for the Use of Service Animals on Campus* (C)                                                                                                                                                                                                                                                                                             | M. Bluehardt    | 4:20 p.m. |
| <b>11.</b> |      | <b>Consent Agenda: (M)</b>                                                                                                                                                                                                                                                                                                                          |                 |           |
|            | 11.1 | Public Minutes of the June 23, 2026 Meeting* (M)                                                                                                                                                                                                                                                                                                    | Chair           | 4:25 p.m. |
|            | 11.2 | 2026-27 Academic Council & Committee Workplans* (I)                                                                                                                                                                                                                                                                                                 |                 |           |
|            | 11.3 | 2026-27 Faculty Council Vice-Chair Appointments* (M)                                                                                                                                                                                                                                                                                                |                 |           |
|            | 11.4 | 2026-27 Faculty Council Membership Lists* (M)                                                                                                                                                                                                                                                                                                       |                 |           |
|            | 11.5 | Minor Program Adjustments from GSC* (I)<br>(i) Faculty of Engineering and Applied Science: PhD in Electrical and Computer Engineering, PhD in Mechanical Engineering, and PhD in Nuclear Engineering* (I)                                                                                                                                           |                 |           |
|            | 11.6 | Conferral of Degrees - Fall 2026* (M)                                                                                                                                                                                                                                                                                                               |                 |           |
| <b>12.</b> |      | <b>Termination</b>                                                                                                                                                                                                                                                                                                                                  | Chair           | 4:30 p.m. |

Nicola Crow, University Secretary

[Policy Instrument\(s\) are available](#) on the Policy Office website for written consultation with Academic Council Members.

## **Council of Ontario Universities**

Academic Colleague

Meeting Notes August 25 and 26

### **Colleagues Meeting, August 25, 2026**

#### *A Conversation with Amanda Demmer, Community-Based Research Canada*

Amanda Demmer, Executive Director, Community-Based Research (CBR) Canada, joined the meeting to provide an overview of CBR in general and the activities of CBR Canada.

Highlights of the presentation and discussion were as follows:

- CBR is a collaborative approach to research that equitably involves those whose lives are affected by the issue being studied in all phases of the research, for the purpose of driving positive social change. It is community-driven, participatory and action-oriented. The researcher is not at arm's length from the project and subjects, which can result in a level of bias.
- Rigour, use, relevance and trust are required elements for research to create change.
- In the university context, CBR can lead to more relevant research, stronger partnerships, and greater impact, thereby helping to ensure research makes its way into practice.
- Academic Colleagues shared examples of successful CBR projects from their respective institutions, which were enabled by flexible timelines, allowing for longer-term involvement of students, relationship brokers with communities, and support from leadership.
- The Colleagues identified a number of barriers to CBR, notably that the research system is built around projects while CBR requires a focus on relationships. Other structural barriers include the timelines allocated to research, particularly for doctoral study, silo-ing across universities, and limited recognition through traditional peer-reviewed processes. It was also noted that CBR may be more suitable for qualitative research than quantitative research, and that researchers and communities may have differing definitions of success.
- There is a need to reconcile the goal of CBR to create positive social change with universities' wish to be non-partisan and neutral bodies.
- It was suggested that CBR Canada may wish to consider the development of guidelines on writing about research impact and ways to connect faculty members with its networks.

## Colleagues Meeting, August 26, 2026

### *COU Update*

Corporate Secretary and Senior Policy Advisor Kathryn White delivered an update on priority issues and activities for COU, including:

- Ongoing research advocacy, including efforts to seek opportunities to leverage federal research funding with provincial matching, and the development of a Commercialization Metrics Sector Working Group by the Ministry of Colleges, Universities, Research Excellence and Security (MCURES) with representation from universities, colleges, IP Ontario and government.
- Current opportunities for capital investment, such as the federal Build Communities Strong Fund, which has Direct Delivery and Provincial streams.
- Opportunities for universities to engage in defence industrial strategy and defence innovation – priority areas of the federal and provincial governments in the shifting geopolitical environment. Three federal Defence Innovation Secure Hubs (DISH) have been awarded to date, and COU is working with Universities Canada and the provincial government to identify opportunities for Ontario universities in this sphere.
- The Canada Investment Summit on September 14 and 15, hosted by the federal government in partnership with the Canada Pension Plan Investment Board and the Public Sector Pension Investment Board, to attract investment and advance nation-building projects.

### ***Follow-up on AI – Potential Next Steps***

Following the May release of the COU AI Task Force Report and the Colleagues' April presentation on AI to the COU Members, the Academic Colleagues had an opportunity to continue the discussion about their potential engagement in the sector's adaptation of AI. The discussion built on conversations at the May 2026 meeting regarding their potential contributions to the sector's AI efforts.

Dominika Flood, Chief of Staff and Strategic Advisor, COU, joined the meeting and briefed Colleagues on the recently-established COU AI Steering Committee and COU AI Community of Practice.

The following comments and observations were raised during the discussion:

- AI initiatives do not appear to be consistently reaching faculty members, despite AI becoming an integral part of students' learning experiences. There may be a role for the Colleagues to support AI fluency in teaching, learning, and research.
- Given limited resources in the sector, it is anticipated that there are productive opportunities for coordination in the AI space, though a key challenge will be creating resources that are not outdated by the time they are finalized.
- Effective use of AI in research could be a valuable area of inquiry for the Colleagues as research represents a significant part of faculty members' roles.

- Interest was expressed in considering the future purpose of universities in an AI-driven world, including how policies and structures are shifting and what human experiences cannot be replaced by AI.
- It was suggested that the Colleagues hear from experts on specific topics and themes under the AI umbrella before identifying initiatives and deliverables.

## ACADEMIC COUNCIL REPORT

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### ACTION REQUESTED:

|                      |                                     |
|----------------------|-------------------------------------|
| Recommendation       | <input checked="" type="checkbox"/> |
| Decision             | <input checked="" type="checkbox"/> |
| Discussion/Direction | <input type="checkbox"/>            |
| Information          | <input type="checkbox"/>            |

**DATE:** 22 September 2026

**FROM:** Graduate Studies Committee

**SUBJECT:** New Program Proposals – Engineering Graduate Diplomas

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### COMMITTEE MANDATE:

In accordance with the Act and By-Law Number 2 the Academic Council (AC) has the delegated authority “to establish the academic standards and curricular policies and procedures of the University, and to regulate such standards, policies and procedures, including...determining the contents and curricula of all programs and courses of study” and, further, to “make recommendations to the Board on matters including...the establishment or termination of degree programs”.

In accordance with the Graduate Studies Committee (GSC) Terms of Reference, GSC has the responsibility “to examine proposals for new graduate degree and diploma programs” and “to recommend their approval, as appropriate, to the Academic Council”. GSC reviewed the New Program Proposals and recommends approval of the new (Type 3) Graduate Diplomas in Advanced Automotive Engineering, Advanced Robotics, AI Engineering, Digital Transformation in Advanced Manufacturing, Energy Systems Engineering, and Smart Grid Engineering.

### MOTIONS FOR CONSIDERATION:

- 7.1.1 That pursuant to the recommendation of the Graduate Studies Committee, Academic Council hereby approves the Graduate Diploma in **Advanced Automotive Engineering** and recommends approval of the program to the Board of Governors.
- 7.1.2 That pursuant to the recommendation of the Graduate Studies Committee, Academic Council hereby approves the Graduate Diploma in **Advanced Robotics** and recommends approval of the program to the Board of Governors.
- 7.1.3 That pursuant to the recommendation of the Graduate Studies Committee, Academic Council hereby approves the Graduate Diploma in **AI Engineering** and recommends approval of the program to the Board of Governors.
- 7.1.4 That pursuant to the recommendation of the Graduate Studies Committee, Academic Council hereby approves the Graduate Diploma in **Digital Transformation in Advanced Manufacturing** and recommends approval of the program to the Board of Governors.

- 7.1.5 That pursuant to the recommendation of the Graduate Studies Committee, Academic Council hereby approves the Graduate Diploma in **Energy Systems Engineering** and recommends approval of the program to the Board of Governors.
- 7.1.6 That pursuant to the recommendation of the Graduate Studies Committee, Academic Council hereby approves the Graduate Diploma in **Smart Grid Engineering** and recommends approval of the program to the Board of Governors.

### **BACKGROUND/CONTEXT & RATIONALE:**

The Faculty of Engineering and Applied Science has proposed the introduction of six (6) new Graduate Diploma (GDip) programs. These diplomas are designed to respond to growing industry demand for advanced, specialized skills in these areas. They provide credential laddering opportunities for recent graduates seeking to deepen their expertise, as well as for working engineers looking to upskill or reskill. The programs will be offered in a flexible hybrid format, allowing for both part-time and full-time study to accommodate diverse learner needs and schedules.

### **RESOURCES REQUIRED:**

The programs are designed to complement, rather than compete with, existing offerings within the Faculty and across the University. By leveraging shared courses with graduate program offerings, the GDips will promote efficient use of resources while maintaining the quality and integrity of graduate education.

As the course delivery will leverage existing graduate course offerings, no additional human resources are required at this time. Additional instructional support may be needed if enrollment grows to the point where multiple sections of a course must be offered. Any such needs will be addressed through normal planning processes, with hiring details and timing coordinated and confirmed with the Provost's Office through regular operational discussions.

No additional space requirements are required.

### **CONSULTATION AND APPROVAL:**

- ✓ Academic Resource Committee: 9 December 2025
- ✓ FEAS Faculty Council: 28 May 2026
- ✓ Graduate Studies Committee: 23 June 2026
- Academic Council (Approval and Recommendation): 22 September 2026
- Board of Governors (Approval): 22 October 2026

### **NEXT STEPS:**

- Pending the approval and recommendation of Academic Council, the new program proposals will be presented to the Board for final approval. The proposals must also proceed through the following external approval steps subsequent to the Board:
  - Ontario Universities Council on Quality Assurance Appraisal Committee
  - Ministry of Colleges, Universities, Research Excellence and Security.
- The preferred date of implementation is the Fall of 2027.

### **SUPPORTING REFERENCE MATERIALS:**

- New Program Proposal with Appendices: Advanced Automotive Engineering
- New Program Proposal with Appendices: Advanced Robotics
- New Program Proposal with Appendices: AI Engineering
- New Program Proposal with Appendices: Digital Transformation in Advanced Manufacturing
- New Program Proposal with Appendices: Energy Systems Engineering
- New Program Proposal with Appendices: Smart Grid Engineering



|                                                                                                                                                                       |                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| <b>Full name of proposed program (as it will appear on the student's transcript):</b><br>(e.g., Master of Arts in Education; Master of Science in Applied Bioscience) | Graduate Diploma in Advanced Automotive Engineering                        |
| <b>Degree designation and short form:</b><br>(e.g., Master of Arts, M.A.; Master of Science, M.Sc.)                                                                   | GDip                                                                       |
| <b>Cost recovery program:</b>                                                                                                                                         | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No        |
| <b>Professional program:</b>                                                                                                                                          | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No        |
| <b>For graduate diplomas:</b>                                                                                                                                         | <input type="checkbox"/> Type 2 <input checked="" type="checkbox"/> Type 3 |
| <b>Faculty offering the program:</b><br>(i.e., where the program will be housed/site of academic authority)                                                           | Faculty of Engineering and Applied Science                                 |
| <b>Collaborating Faculty(ies) (if applicable):</b>                                                                                                                    | N/A                                                                        |
| <b>Collaborating institution(s) (if applicable):</b>                                                                                                                  | N/A                                                                        |
| <b>Program delivery location:</b>                                                                                                                                     | Ontario Tech North Campus and Hybrid                                       |
| <b>Proposed program start date (please change as needed):</b>                                                                                                         | Fall 2027                                                                  |
| <b>Program proponent/contact:</b>                                                                                                                                     | Xianke Lin                                                                 |
| <b>Version date (please change as you edit this proposal):</b>                                                                                                        | May 14, 2026                                                               |
| <b>Date of Academic Council Approval:</b>                                                                                                                             |                                                                            |

# New Graduate 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 graduate 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.

**Brief description of the proposed program<sup>1</sup>:** (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 automotive sector is undergoing rapid transformation driven by electrification, autonomy, and software-defined vehicle technologies, creating strong demand for engineers with advanced, industry-relevant skills. Canada's automotive industry remains a key contributor to the economy and is central to achieving sustainability and innovation goals. The Graduate Diploma in Advanced Automotive Engineering is designed for recent graduates and industry professionals with engineering backgrounds who seek to deepen their expertise and transition into next-generation automotive roles. Students will gain advanced knowledge in electric powertrains, vehicle dynamics, embedded and control systems, and intelligent/autonomous vehicle technologies, along with practical skills in modeling, simulation, and system integration.

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<sup>1</sup> 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 \(oucqa.ca\)](#))

# New Graduate Program Proposal

## Graduate Diploma in Advanced Automotive Engineering Faculty of Engineering and Applied Science

### 1 Program Abstract

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*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 automotive sector is undergoing rapid transformation driven by electrification, autonomy, and software-defined vehicle technologies, creating strong demand for engineers with advanced, industry-relevant skills. Canada's automotive industry remains a key contributor to the economy and is central to achieving sustainability and innovation goals. The Graduate Diploma in Advanced Automotive Engineering is designed for recent graduates and industry professionals with engineering backgrounds who seek to deepen their expertise and transition into next-generation automotive roles. Students will gain advanced knowledge in electric powertrains, vehicle dynamics, embedded and control systems, and intelligent/autonomous vehicle technologies, along with practical skills in modeling, simulation, and system integration.

### 2 Academic Rationale

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- *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*
- *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*

The Graduate Diploma in Advanced Automotive Engineering is designed for engineers in industry and recent graduates seeking specialized expertise in modern vehicle technologies. The program consists of four (4) graduate-level courses (12 credit hours) selected from existing automotive engineering offerings, including vehicle dynamics, powertrains, materials and manufacturing, aerodynamics, and noise-vibration-harshness (NVH).

The program is delivered in a hybrid format and leverages existing graduate courses within the Faculty of Engineering and Applied Science. Courses emphasize advanced, applied learning through modeling, simulation, and system-level analysis, with graduate-level deliverables focused on industry-relevant problem solving.

The program name and nomenclature accurately reflect the scope and objectives, clearly identifying a focused, professionally oriented credential that builds on an engineering foundation while specializing in advanced automotive systems.

Innovative features include:

- Integration of electrified powertrain and software-defined vehicle concepts
- Emphasis on simulation-driven design and system integration
- Flexible course selection aligned with industry needs

The program addresses the rapid transformation of the automotive sector driven by electrification, autonomy, connectivity, and advanced manufacturing.

*Describe any fields and/or any pathways from related programs. (Graduate programs are not required to have fields in order to highlight an area of strength or specialization within a program, nor are they required to provide specific pathways from programs at the college, bachelor, or other level.)*

N/A

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

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- *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 proposed Graduate Diploma in Advanced Automotive Engineering aligns strongly with Ontario Tech University's mission to provide innovative, technology-focused programs that respond to market-driven needs.

The automotive sector is undergoing significant transformation driven by electrification, autonomous systems, and digitalization. The program directly supports Ontario Tech's vision of "embracing technology with a conscience to advance knowledge and promote sustainability," particularly through its focus on electric vehicles, energy efficiency, and intelligent mobility systems.

The program contributes to the university's goal of preparing graduates to solve complex, real-world engineering challenges. Modern automotive systems are highly integrated and multidisciplinary, requiring expertise across mechanical, electrical, and software domains.

This GDip strengthens Ontario Tech's established leadership in automotive engineering and complements existing MAsc and MEng programs, further positioning the university as a hub for advanced mobility research and training.

### 4 Need, Demand, and Duplication

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*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 automotive industry in Canada and globally is undergoing rapid transformation driven by:

- Electrification and EV adoption
- Autonomous and connected vehicle technologies
- Advanced materials and lightweighting
- Digital engineering and simulation

Industry demand for engineers with specialized automotive expertise continues to grow. According to labour market data from the Government of Canada Job Bank, Ontario Job Futures, and the Durham Workforce Authority, employment opportunities in automotive and mobility engineering are expected to remain strong over the next 5–10 years.

Ontario is Canada's automotive hub, with major OEMs, Tier-1 suppliers, and emerging EV and mobility companies requiring engineers with advanced skillsets.

The proposed GDip targets:

- Practicing engineers needing upskilling in EVs and advanced systems
  - Professionals transitioning into automotive roles
  - Recent graduates seeking a short, industry-focused credential.
- *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 GDip in Advanced Automotive Engineering is distinct from existing programs at Ontario Tech because:

- It allows targeted specialization without committing to a full degree
- It leverages existing graduate courses while offering flexible entry points

The program is not expected to negatively impact enrolment in existing programs. Instead, it is expected to:

- Serve as a feeder into MASc/MEng programs
  - Attract new students who would not otherwise enroll.
- *Is this a new area of study? Please explain:*

The Graduate Diploma in Advanced Automotive Engineering is not a new area of study at Ontario Tech University. The Faculty of Engineering and Applied Science has an established strength in automotive engineering, supported by existing undergraduate, MASc, and MEng programs. The proposed GDip builds upon this foundation by leveraging existing graduate-level automotive courses and faculty expertise.

However, the GDip represents a new credential format that addresses a gap in the current program offerings by providing a short, flexible, and stackable option for professionals and recent graduates seeking targeted upskilling in advanced automotive technologies. It expands the University's offerings by introducing a professionally focused pathway aligned with emerging industry needs in electrification, autonomous systems, and software-defined vehicles, without duplicating existing degree programs.

- *Identify similar or complementary programs offered by other universities with specific reference to Ontario and Canadian examples.*
- *Provide additional overall comment on the justification for any duplication*

While MEng and MAsC programs in Automotive Engineering exist (e.g., Ontario Tech), there is no direct equivalent GDip in Ontario, making this offering unique.

## 5 Enrolment Information

- *Please complete Table 1 and provide, in paragraph form, information regarding enrolment projections*
- *Please determine the academic year when the program enrollment 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 Enrollment by Academic and Program Year**

|                  | Academic Year |           |           |           |           |           |
|------------------|---------------|-----------|-----------|-----------|-----------|-----------|
|                  | 2026-2027     | 2027-2028 | 2028-2029 | 2029-2030 | 2030-2031 | 2031-2032 |
| Level of Study   |               |           |           |           |           |           |
| Diploma year 1   | 10            | 10        | 20*       | 20        | 20        | 20        |
| Total Enrollment | 10            | 10        | 20        | 20        | 20        | 20        |

Projected enrollment would initially be around 5-10 students per year. The planned steady-state is 20 students per year. Note these directed offerings may be offered in alternate formats other than the traditional 12-week semester.

## 6 Admission Requirements

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

Minimum Academic Requirements for Graduate Diploma Programs:

- Hold a four-year honours degree or its equivalent from a recognized institution in the area of graduate study or a closely related subject.
- A minimum B-minus average (GPA: 2.7 on a 4.3 scale).
- Applicants that have a degree in subject areas outside of engineering or those who do not meet the minimum GPA requirements, but have relevant engineering experience will be evaluated on an individual case-by-case basis.
- *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*

Graduates from any Canadian accredited undergraduate engineering program (or its equivalent) will be eligible to enrol in the GDip, including: Automotive Engineering, Manufacturing Engineering, Mechanical Engineering and Mechatronics Engineering.

To provide applicants looking to re-skill for the automotive sector the potential opportunity to do the GDip in Advanced Automotive Engineering, applicants from non-engineering programs or those who do not meet the minimum GPA requirements will be considered on a case-by-case basis.

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

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*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 A 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; for researched-focused graduate programs, provide a clear indication of the nature and suitability of the major research requirements for degree completion; for professional graduate programs, 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 program consists of four (4) graduate-level courses totaling 12 credit hours, selected from the list below.

- ENGR 5300G – Automotive Engineering
- ENGR 5310G – Advanced Vehicle Dynamics
- ENGR 5320G – Automotive Aerodynamics
- ENGR 5330G – Automotive Powertrains
- ENGR 5340G – Automotive Noise, Vibrations and Harshness
- ENGR 5350G – Automotive Materials and Manufacturing
- ENGR 5005G – Special Topics\*

\* Registration in Special Topics course(s) are subject to approval by the Graduate Program Director, must be relevant to the GDip program scope, and must be confirmed as enabling the student to meet the program learning outcomes and degree-level expectations for the graduate diploma.

Courses are offered in a hybrid format and may be taken over one year full-time or part-time over a longer period.

The curriculum is designed to provide:

- Core understanding of vehicle systems
- Advanced modeling and simulation skills
- Exposure to industry-relevant engineering problems

Sequencing is flexible to accommodate both full-time students and working professionals.

Delivery mode for the courses will be hybrid. In addition to the traditional 12- week semester delivery, the courses may be delivered in compressed time formats to meet the needs of industry partners.

To facilitate access to all potential students, part-time studies are permitted. In particular, engineers in industry may wish to pursue a graduate diploma program through part-time studies.

The courses available in the program cover the state-of-the-art in advanced automotive engineering and are taught by instructors with subject matter expertise.

All course deliverables will be designed to ensure that the students are meeting the program learning outcomes and support the achievement of Graduate Degree Level Expectations. Assessments will not only measure content knowledge but also foster advanced competencies expected at the graduate level.

*Provide evidence that each graduate student is required to take a minimum of two-thirds of the course requirements from among graduate-level courses*

All courses that are required for the GDip are graduate level.

*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 way 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 Faculty of Engineering and Applied Science (FEAS) is fully committed to Equity, Diversity, and Inclusion (EDI), including in all its courses and all its research activities. The material covered in this program considers the development of automotive and mobility systems that serve the public, so it is critical that EDI considerations are incorporated into the development of these systems, in particular ensuring these systems are accessible for all users. The courses, where appropriate, will cover these issues to ensure that students understand the importance of designing accessible systems.

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? N/A

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

N/A

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.*

N/A

## 8 Assessment of Teaching and Learning

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*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 be used to inform continuous program improvement*

The learning outcomes for the program are achieved through a combination of graduate-level course work, including assignments, exams, projects, and presentations.

Learning activities and materials in graduate courses will be carefully designed to ensure that learners are deliberately exposed to study, the majority of which is at, or informed by, the forefront of engineering theory and practice.

The courses have been designed to give students key knowledge in advanced automotive engineering as well as an opportunity for advanced development of generic skills such as communication and teamwork. In addition, there will be scholarly activities of independent investigation, report writing, and presentations.

Throughout the curriculum, learning activities are planned, and student progress will be monitored to ensure that safety, professional guidelines, and ethical responsibilities relevant to engineering are modelled, developed, and evaluated.

The courses available in the program cover the state-of-the-art in advanced automotive engineering and are taught by instructors with subject matter expertise.

Student feedback surveys will be completed at the end of each course delivery to gather feedback. As well student performance in each course will be monitored yearly. The Graduate Program Director responsible for the program will review both the student feedback surveys and the student performance to ensure that the program is meeting its goals. Insights from these surveys and reviews will be documented and used to identify specific areas for improvement, inform curriculum adjustments, and guide enhancements to teaching and learning strategies.

Any required changes to curriculum, assessment methods, delivery, or administration are implemented as appropriate and feasible at the discretion of the Faculty Dean. Curricular changes are then submitted and documented through appropriate Faculty and University committees consistent with standard curricular change policies and procedures as identified in the IQAP.

To ensure sustained quality, program effectiveness will be assessed and monitored through the cyclical review process, providing actionable insights for continuous improvement. In addition to the external review every eight years, Ontario Tech's Academic Resource Committee (ARC) requires a brief report at program launch and a full report one-year after the launch of a new program. The one-year report will ask the program to review enrollment data, admission averages, and provide an analysis

of successes and challenges encountered in the first year. If there are areas of concern and it is deemed necessary, ARC will make recommendations to enhance program effectiveness and student success and may request a subsequent report. If required, the subsequent 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 ARC's review, further documentation may be required of the program for ongoing monitoring.

## 9 Calendar Copy and Program Map(s)

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- *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*
- *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 B for the Calendar Copy and Appendix C for the List of Program Courses and Descriptions.

## 10 Consultation

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- *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 Graduate Diploma in Advanced Automotive Engineering is designed to complement existing MASc and MEng programs within the Faculty. The program leverages existing graduate courses and faculty expertise, ensuring efficient use of

Template updated: October 2024

resources without duplication.

The program enhances Ontario Tech's leadership in automotive engineering and supports industry demand for advanced, specialized training.

The Office of the Registrar and the School of Graduate and Postdoctoral Studies were both consulted in the development of this program. No issues were raised.

As noted above, there will be no impact on other programs offered at Ontario Tech.

## 11 Resource Requirements

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### **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.*

As the program is leveraging the existing automotive engineering graduate courses, it is anticipated there will be no major resource requirements. By leveraging existing graduate course offerings, the GDip enhances resource efficiency without diminishing the quality of graduate offerings.

***The resource requirements outlined in Section 11 have been reviewed by the Academic Resource Committee (ARC): 9 December 2025  
(date of review)***

### 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?*

*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.*

The program will be delivered by a group of faculty members with expertise in automotive systems, including powertrains, vehicle dynamics, materials, and control systems. Core faculty will be supported by additional faculty and sessional instructors as needed to ensure coverage across all course offerings and maintain flexibility in delivery.

Experiential learning is embedded within course-based projects, including modeling, simulation, and system-level design activities. These projects replicate real-world automotive engineering workflows and provide hands-on experience without requiring formal placements.

Please see Appendix D Faculty Information for a table detailing the list of faculty committed to the program and separate file for Curriculum Vitae (provided to the Quality Council for review).

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 the faculty hire be required, and are there additional criteria associated with the hiring requirement (e.g. enrolment levels, program growth, University or Faculty priorities)?*

Since the course delivery will leverage the existing automotive engineering graduate course offerings, no additional human resources will be required, unless the number

of students enrolled reaches the point where more than one section of a given course needs to be offered. Details and timing of proposed hirings are coordinated and confirmed with the Provost's Office through regular operational conversations.

N/A

### **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.*

No TAs will be required unless the enrolment is large enough to warrant it.

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.*

The program will leverage existing institutional resources and targeted supports, including access to modern facilities, technology-enabled classrooms, and research infrastructure. Dedicated student services, academic advising, and wellness initiatives will promote student well-being and resiliency, ensuring a supportive and inclusive learning environment.

Please see Appendix E 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.*

The institution provides robust information technology resources to support high-quality scholarship and research activities for both undergraduate and graduate students. These include access to modern computing facilities, high-speed networks, secure data storage, and discipline-specific software to enhance teaching and learning. Existing spaces are equipped with technology-enabled classrooms and research infrastructure ensuring the program can be successfully implemented and sustained.

Please see Appendix F 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)?*

The program will leverage existing University IT infrastructure. Ontario Tech is a laptop university where students bring their own laptop devices and are provided access to a software portal where they can download any necessary software required for their courses, including a variety of engineering specific packages such as SolidWorks, NX, Multisim, MATLAB, Adams, and Nastran.

The hybrid delivery of the courses will make use of Ontario Tech's flexible hybrid classrooms that allow for synchronous delivery with active participation from students both in room and online and the ability for all students to see all other students.

## 11.4 Financial Support for Graduate Students

*Provide evidence that financial assistance for students, including TA-ships where applicable, will be sufficient to ensure adequate quality and numbers of students.*

No financial assistance will be provided as this is a professional program.

## 11.5 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?*

The hybrid delivery of the courses and the leveraging with the automotive engineering graduate course delivery will have minimal impact on classroom requirements.

No additional space requirements are required.

## 11.6 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 ([cige@ontariotechu.ca](mailto:cige@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 program does not impact any existing agreements Ontario Tech has with institutional and external partners. In addition, there are no inter-Faculty implications.

## 12 Closing Statements Regarding Program Quality

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- *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 Graduate Diploma in Advanced Automotive Engineering is supported by faculty with strong expertise in vehicle systems, powertrains, dynamics, materials, and control systems. The Faculty of Engineering and Applied Science has an established track record in delivering high-quality automotive engineering education and research.

The program leverages existing courses, laboratories, and industry-relevant tools to ensure a high-quality student experience. Through a combination of advanced coursework, applied learning, and industry-aligned content, the program prepares graduates to contribute effectively to the rapidly evolving automotive and mobility sector.

## Appendices

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*Please include at minimum the below. Additional Appendices may be added, as appropriate. Appendices should ultimately be listed below, attached as separate documents, and clearly labelled (A, B, C, etc.) in the order in which they are first mentioned in the document.*

Appendix A: Program Learning Outcome Alignment Map to DLEs, Courses,  
and Assessments

Appendix B: Calendar Copy

Appendix C: List of Program Courses and Descriptions for Existing Courses

Appendix D: Faculty Information

Appendix E: Learning Resources

Appendix F: Information Technology Resources

**Items to be separate documents sent to CIQE:**

New Program Funding and Tuition form (for CIQE use only)

Budget Spreadsheet (for ARC use only)

Curriculum Vitae (for Quality Council use only)

**Graduate Diploma – Advanced Automotive Engineering**

| <b>PLO #</b> | <b>Program Learning Outcomes</b>                                                                                                                                                                                 |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>PLO 1</b> | <b>Analyze Theoretical Foundations:</b> Critically evaluate foundational theory, concepts, and principles that underpin advanced engineering design and development in modern automotive systems.                |
| <b>PLO 2</b> | <b>Develop and Evaluate Engineering Solutions:</b> Design, analyze, and evaluate engineering solutions using systematic and analytical approaches to address complex automotive engineering challenges.          |
| <b>PLO 3</b> | <b>Apply Knowledge in a Practical Context:</b> Utilize advanced knowledge from mechanical, electrical, software, or related engineering disciplines to solve complex real-world automotive engineering problems. |
| <b>PLO 4</b> | <b>Communicate Effectively in Diverse Communities:</b> Communicate complex automotive engineering concepts clearly to both technical and non-technical audiences.                                                |
| <b>PLO 5</b> | <b>Assess Ethical, Societal and Environmental Impacts:</b> Evaluate ethical considerations, limitations of knowledge, and the societal and environmental impacts of automotive technologies.                     |

## Graduate Diploma – Advanced Automotive Engineering

| Graduate Degree Level Expectations |                                            | Depth and Breadth of Knowledge |      |  |  | Research and Scholarship |      |                                      |  | Level of Application of Knowledge |       |  | Professional Capacity/ Autonomy |      |  | Level of Communication Skills |       |  | Awareness of Knowledge Limits |       |  |
|------------------------------------|--------------------------------------------|--------------------------------|------|--|--|--------------------------|------|--------------------------------------|--|-----------------------------------|-------|--|---------------------------------|------|--|-------------------------------|-------|--|-------------------------------|-------|--|
| Program Learning Outcomes          |                                            | PLO1                           | PLO2 |  |  | PLO1                     | PLO3 |                                      |  | PLO2                              | PLO3  |  | PLO2                            | PLO5 |  | PLO2                          | PLO4  |  | PLO3                          | PLO5  |  |
| Course No.                         | Course Title                               |                                |      |  |  |                          |      |                                      |  |                                   |       |  |                                 |      |  |                               |       |  |                               |       |  |
| ENGR 5300G                         | Automotive Engineering                     |                                | 7    |  |  |                          | 7    |                                      |  | 7                                 | 7     |  | 4                               | 4    |  | 7                             | 7     |  | 7                             | 7     |  |
| ENGR 5310G                         | Advanced Vehicle Dynamics                  | 4                              | 4    |  |  | 4                        | 4, 7 |                                      |  | 4                                 | 2,7,3 |  | 7                               | 4    |  | 7                             | 2,7,3 |  | 2,7,3                         | 2,7,3 |  |
| ENGR 5320G                         | Automotive Aerodynamics                    | 4                              | 4    |  |  | 4                        | 4, 7 |                                      |  | 4                                 | 2,7,3 |  | 7                               | 4    |  | 7                             | 2,7,3 |  | 2,7,3                         | 2,7,3 |  |
| ENGR 5330G                         | Automotive Powertrains                     |                                | 7    |  |  |                          | 7    |                                      |  | 7                                 | 7     |  | 7                               |      |  | 7                             | 3     |  | 7                             |       |  |
| ENGR 5340G                         | Automotive Noise, Vibrations and Harshness |                                | 2    |  |  |                          | 7    |                                      |  | 2                                 | 7     |  | 7                               |      |  | 7                             | 3     |  | 3, 7                          |       |  |
| ENGR 5350G                         | Automotive Materials and Manufacturing     | 2,4                            | 3, 7 |  |  | 2, 4                     | 2,4  |                                      |  | 3, 7                              | 2,4   |  | 3, 7                            |      |  | 3, 7                          | 3, 7  |  | 3, 7                          |       |  |
|                                    |                                            |                                |      |  |  |                          |      |                                      |  |                                   |       |  |                                 |      |  |                               |       |  |                               |       |  |
|                                    |                                            |                                |      |  |  |                          |      |                                      |  |                                   |       |  |                                 |      |  |                               |       |  |                               |       |  |
|                                    |                                            |                                |      |  |  |                          |      |                                      |  |                                   |       |  |                                 |      |  |                               |       |  |                               |       |  |
|                                    |                                            |                                |      |  |  |                          |      |                                      |  |                                   |       |  |                                 |      |  |                               |       |  |                               |       |  |
|                                    |                                            |                                |      |  |  |                          |      |                                      |  |                                   |       |  |                                 |      |  |                               |       |  |                               |       |  |
|                                    |                                            |                                |      |  |  |                          |      |                                      |  |                                   |       |  |                                 |      |  |                               |       |  |                               |       |  |
|                                    |                                            |                                |      |  |  |                          |      |                                      |  |                                   |       |  |                                 |      |  |                               |       |  |                               |       |  |
|                                    |                                            |                                |      |  |  |                          |      |                                      |  |                                   |       |  |                                 |      |  |                               |       |  |                               |       |  |
|                                    |                                            |                                |      |  |  |                          |      |                                      |  |                                   |       |  |                                 |      |  |                               |       |  |                               |       |  |
|                                    |                                            |                                |      |  |  |                          |      |                                      |  |                                   |       |  |                                 |      |  |                               |       |  |                               |       |  |
| Degee of Implementation:           |                                            | Assessment Legend:             |      |  |  |                          |      |                                      |  |                                   |       |  |                                 |      |  |                               |       |  |                               |       |  |
| Introduced                         |                                            | 1 Test/Quizz                   |      |  |  |                          |      | 5 Essay                              |  |                                   |       |  |                                 |      |  |                               |       |  |                               |       |  |
| Reinforced                         |                                            | 2 Exam (example)               |      |  |  |                          |      | 6 Thesis                             |  |                                   |       |  |                                 |      |  |                               |       |  |                               |       |  |
| Mastered                           |                                            | 3 Presentation                 |      |  |  |                          |      | 7 Group/individual project           |  |                                   |       |  |                                 |      |  |                               |       |  |                               |       |  |
|                                    |                                            | 4 Assignment                   |      |  |  |                          |      | 8... (Add additional rows as needed) |  |                                   |       |  |                                 |      |  |                               |       |  |                               |       |  |

# **Advanced Automotive Engineering, Graduate Diploma**

## **General Information**

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The Graduate Diploma (GDip) in Advanced Automotive Engineering provides students with specialized knowledge in modern vehicle systems and emerging automotive technologies. The automotive sector is undergoing rapid transformation driven by electrification, autonomous systems, connectivity, and software-defined vehicle architectures. As a key contributor to the Canadian economy, the automotive industry continues to evolve toward sustainable and intelligent mobility solutions.

Designed for recent graduates and industry professionals holding an undergraduate engineering degree, the Graduate Diploma in Advanced Automotive Engineering equips learners with advanced, industry-relevant skills needed to enter or advance within the automotive and mobility sectors. Through four hybrid graduate courses, students develop expertise in key areas of automotive engineering, including electric powertrains, vehicle dynamics, noise-vibration-harshness (NVH), materials and manufacturing, and aerodynamics.

This program prepares graduates to meet the growing demand for engineers with advanced knowledge in next-generation automotive systems and mobility technologies.

## **Admission Requirements**

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In addition to the general admission requirements for graduate studies, applicants must meet the following program-specific requirements:

Minimum Academic Requirements for Graduate Diploma Programs:

- Hold a four-year honours degree or its equivalent from a recognized institution in the area of engineering or a closely related subject.
- A minimum B-minus average (GPA: 2.7 on a 4.3 scale).
- Applicants that have a degree in subject areas outside of engineering or those who do not meet the minimum GPA requirements, but have relevant engineering experience will be evaluated on an individual case-by-case basis.

Graduates from any Canadian accredited undergraduate engineering program (or its equivalent) will be eligible to enrol in the GDip, including: Automotive Engineering, Manufacturing Engineering, Mechanical Engineering and Mechatronics Engineering.

Note, the consideration of applicants from non-engineering programs or those who do not meet the minimum GPA requirements is to provide applicants seeking to re-skill for the automotive and mobility sector the opportunity to pursue the GDip in Advanced Automotive Engineering.

## **Part-time studies**

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To facilitate access to all potential students, part-time studies are permitted. In particular, engineers in industry may wish to pursue a graduate diploma program through part-time studies.

## **Graduate diploma requirements**

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For the graduate diploma, students must complete the four courses below for a total of 12 credits.

**Note:** Graduate diploma students are not permitted to take courses outside of their home program course listings for program credit. In addition, they may not take any senior fourth-year undergraduate courses from the Faculty of Engineering and Applied Science in lieu of a graduate course.

## **Course listings**

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Students must complete four courses selected from the following:

- ENGR 5005G: Special Topics\*
- ENGR 5300G: Automotive Engineering
- ENGR 5310G: Advanced Vehicle Dynamics
- ENGR 5330G: Automotive Powertrains
- ENGR 5340G: Automotive Noise, Vibrations and Harshness
- ENGR 5350G: Automotive Materials and Manufacturing
- ENGR 5320G: Automotive Aerodynamics

\*upon approval by Graduate Program Director and relevant to the scope.

## **Program learning outcomes**

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

Program Learning Outcomes - Advanced Automotive Engineering, Graduate Diploma

## Appendix C - List of Program Courses and Course Descriptions

### List of Program Courses

The program consists of four graduate-level courses (12 credits total), selected from the following:

| Course Code | Course Name                                |                                               |
|-------------|--------------------------------------------|-----------------------------------------------|
| ENGR 5300G  | Automotive Engineering                     | Existing Course - course description enclosed |
| ENGR 5310G  | Advanced Vehicle Dynamics                  | Existing Course - course description enclosed |
| ENGR 5320G  | Automotive Aerodynamics                    | Existing Course - course description enclosed |
| ENGR 5330G  | Automotive Powertrains                     | Existing Course - course description enclosed |
| ENGR 5340G  | Automotive Noise, Vibrations and Harshness | Existing Course - course description enclosed |
| ENGR 5350G  | Automotive Materials and Manufacturing     | Existing Course - course description enclosed |

#### **ENGR 5300G - Automotive Engineering**

Components of the automobile. Engineering factors in all components and subsystem areas of automobile design. Vehicle characteristics and dynamic interactions. Systems modelling approach and mathematical models for ride, vibration, handling control and powertrains of automobiles. Tire mechanics including construction, rolling resistances, traction/braking properties, cornering and aligning properties and measurement methods. Vehicle mobility, motion performance of the vehicle, characterization of resistances, propulsion system and tractive efforts. Brake system design, braking performance and brake distribution. Steady state handling. Measurement methods. Suspension system design considerations. Design and performance of an automobile from a systems point of view. External factors such as markets, financing and sales.

#### **ENGR 5310G - Advanced Vehicle Dynamics**

Introduction to transport systems related to vehicle dynamics behaviour. Pneumatic tire mechanics ride, cornering and aligning properties. Transient and steady-state directional dynamics and handling analyses of road vehicles. Directional response and stability analysis in small and large perturbation maneuvers, roll dynamics and rollover, braking performance analyses, directional responses to simultaneous steering and braking inputs, and performance measures. Characterization of road roughness, ride vibration analyses and assessment of ride comfort. Measurement methods and data analyses techniques. Vehicle-driver interactions analysis of the closed loop vehicle-driver system. Introduction to typical control strategies for vehicle dynamic control.

#### **ENGR 5320G - Automotive Aerodynamics**

Formulation of fluid mechanics and aerodynamics for automotive design. Inviscid and viscous flow. Wind tunnels and their applications to external aerodynamics. Aerodynamic drag coefficient and its effect on vehicle performance. Experimental methods, drag force measurements and wind tunnel instrumentation. Computational aerodynamics. Comparisons between experimental results and numerical results. Aerodynamic design for drag reduction. Aerodynamics of engine cooling. Fluid structure interactions. Aerodynamic noise.

**ENGR 5330G - Automotive Powertrains**

Design of automotive power transmission systems. Loads on the vehicle. Evaluation of various engine and vehicle drive ratios on acceleration performance and fuel economy. Manual transmission and automatic transmission. Combustion in CI and SI engines. Selection of combustion chamber type and shape, intake and exhaust systems. Differences between engine types. Cylinder number, configuration, size and material selection. Selection of mixture preparation and firing order. Mechanism of combustion. Fuel and additive characteristics. Fuel metering and ignition systems. Exhaust emissions and control systems. Heat transfer, friction and lubrication systems. Air pollution. Exhaust systems. Effects of emission on air quality. Sources of auto emission.

**ENGR 5340G - Automotive Noise, Vibrations and Harshness**

Evaluating the vibration and acoustic characteristics of automotive systems and components. Human comfort and annoyance guidelines and standards. Sound, hearing and physiological effects of noise and vibration. Modelling and experiment methods. Modal analysis and digital signal processing. Noise sources such as gears, bearings, rotating imbalance, gas flow, combustion and impact. Source-path-receiver identification. Sound transmission, airborne and structure-borne noise. Structural-acoustic interactions. Noise and vibration passive/active control.

**ENGR 5350G - Automotive Materials and Manufacturing**

Materials in the automotive industry. Selection of materials and shapes. Materials processing and design. Interaction of materials. Performance of materials in service. Examples of new materials. Role of environmental regulations and societal pressures on the selection of alternate materials. Manufacturing processes, including casting, forging, forming, machining and molding, for the automotive industry. Quality control and techniques, process selection and methods. Manufacturing considerations for various lightweight automotive structural materials. Stiffness, fatigue, vibrations, dent resistance and crush resistance. Methods of producing lightweight automotive structures are discussed. Design for manufacturing, assembly, disassembly and recycling.

## Appendix D – Faculty Information

Please include here only those currently at the institution and affiliated with the program. Examples in purple to be removed.

**Where available, link each faculty name to their Research or Profile page on the website.**

| Name and Faculty Status/Rank          | Terminal Degree | Home Faculty/Unit | Areas of Expertise                                                                                                                                                                                                                                                                     | Supervisory Privileges and Role in New Program<br>(Note if faculty will be teaching and/or supervising in the program; indicate primary supervisor by asterisks) | Total Graduate Teaching (including New Program)<br>(Note in bold type if faculty is a core course developer for the program) |
|---------------------------------------|-----------------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Dr. Moustafa El-Gindy<br>Professor    | PhD             | FEAS              | Heavy Vehicle Dynamics, Tire Mechanics, Military Vehicle Dynamics, Ride and Handling Optimization.                                                                                                                                                                                     | Graduate Faculty*<br>Teaching core courses                                                                                                                       | 3-4 courses<br>(undergraduate/graduate level)                                                                                |
| Dr. Yuping He<br>Professor            | PhD             | FEAS              | Autonomous Driving, Vehicle System Dynamics, Vehicle Chassis Design, Vehicle Active Safety Systems, Automated Design Synthesis, Modelling and Simulation, Driver-Hardware-in-the-Loop Real-Time Simulations, Application of Multidisciplinary Design Optimization, Mechatronic Systems | Graduate Faculty*<br>Teaching core courses                                                                                                                       | 3-4 courses<br>(undergraduate/graduate level)                                                                                |
| Dr. Martin Agelin-Chaab<br>Professor  | PhD             | FEAS              | Fluid Mechanics, Aerodynamics, Turbulence and Heat Transfer, Internal Combustion Engines, Sustainable Energy Systems.                                                                                                                                                                  | Graduate Faculty*<br>Teaching core courses                                                                                                                       | 3-4 courses<br>(undergraduate/graduate level)                                                                                |
| Dr. Xianke Lin<br>Associate Professor | PhD             | FEAS              | Battery Management Systems, Electrified Vehicles, Multi-scale Modeling of Materials, Energy Storage, Computational Fluid Dynamics.                                                                                                                                                     | Graduate Faculty*<br>Teaching core courses                                                                                                                       | 3-4 courses<br>(undergraduate/graduate level)                                                                                |

|                                             |     |      |                                                                                                                                                         |                                            |                                               |
|---------------------------------------------|-----|------|---------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------------------------|
| Dr. Atef Mohany<br>Professor                | PhD | FEAS | Aeroacoustics, Flow-Induced Vibration, Noise Control, Structural Integrity, Flow-Acoustic Coupling in Piping Systems.                                   | Graduate Faculty*<br>Teaching core courses | 3-4 courses<br>(undergraduate/graduate level) |
| Dr. Ghaus Rizvi<br>Professor                | PhD | FEAS | Polymer Processing, Composite Materials, Biocomposites, Advanced Manufacturing, Automotive Materials Performance.                                       | Graduate Faculty*<br>Teaching core courses | 3-4 courses<br>(undergraduate/graduate level) |
| Dr. Greg Rohrauer<br>Associate Professor    | PhD | FEAS | Automotive engineering; vehicle crashworthiness; structural design and analysis; impact mechanics; finite element modeling of automotive structures.    | Graduate Faculty*<br>Teaching core courses | 3-4 courses<br>(undergraduate/graduate level) |
| Dr. Zeinab El-Sayegh<br>Assistant Professor | PhD | FEAS | Vehicle system dynamics; tire-soil interaction; autonomous vehicle modeling; off-road vehicle performance; physics-based simulation of vehicle systems. | Graduate Faculty*<br>Teaching core courses | 3-4 courses<br>(undergraduate/graduate level) |

## **Existing Non-Financial Student Support Services**

### **School of Graduate and Post-Doctoral Studies**

Quality graduate and postdoctoral education combines teaching, research, professional development, disciplinary community involvement and personal growth. It is by nature a shared responsibility between students, faculty members, the programs and a large number of support units, with overarching administration being provided by the School of Graduate and Postdoctoral Studies.

The School of Graduate and Postdoctoral Studies (SGPS) furthers the scholarly mission of the university by providing academic and administrative support to the university's postgraduate educational, research, innovation and international activities. Our responsibilities include graduate program development, graduate enrolment management, oversight of academic and quality standards, and the implementation of policies and practices that enhance graduate/postdoctoral scholarly success, career readiness and personal growth. SGPS supports prospective, new and current graduate students through many administrative services including, but not limited to, recruitment, admission, registration, funding and scholarships, orientation, professional development workshops and events, and processing of final theses, projects and papers. SGPS is a single-point-of-contact, multifunctional administrative unit tailored to the complete "life-cycle" of graduate students, providing coordinated support to students and all other stakeholders.

### **Student Life**

Ontario Tech University, as a relatively small campus community, has a centralized delivery model for many 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/>.

### **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.

## **Campus Libraries**

The Campus Libraries support teaching, learning, and research at Ontario Tech University with facilities, collections, and programming.

Library Collections:

- The Library's total collections budget is \$1.7 million.
- Collections include books, e-books, databases, journals, data and statistics, and multimedia materials

Support for teaching and learning:

- A dedicated librarian for each program who provides instruction, research consultations, and collection development
- Research guides for each of Ontario Tech's programs, as well as general guides for citation, copyright, and other broad topics
- Workshops and classes: custom in-class sessions, and general instruction sessions

- Three (3) online modules in Ontario Tech's learning management system, which professors can integrate seamlessly into their course shells

#### Research supports:

- Research consultations with subject librarians
- Extended support via the Library's virtual reference service
- Support for generative artificial intelligence: citation, copyright, and allowable use of library resources

#### Scholarly publishing supports:

- Research data management
- Publishing compliance with Tri-Council and other funders
- Support finding and creating open educational resources (OERs)
- Copyright advice and compliance information
- Support for authors, including reviewing author agreements
- Administration of APC waivers for faculty publishing in open access

#### Facilities:

- The Campus Libraries include the North Oshawa Library, which is the campus' main branch, and the Social Sciences, Humanities, and Education Library, which is located in downtown Oshawa
- The Library's locations include:
  - Extended library hours are available during peak season
  - Groups study rooms are available for student booking
  - Accessible workstations, and sit-stand desks
  - Computers and dual monitor workstations

## **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.



|                                                                                                                                                                       |                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| <b>Full name of proposed program (as it will appear on the student's transcript):</b><br>(e.g., Master of Arts in Education; Master of Science in Applied Bioscience) | Graduate Diploma in Advanced Robotics                                      |
| <b>Degree designation and short form:</b><br>(e.g., Master of Arts, M.A.; Master of Science, M.Sc.)                                                                   | GDip                                                                       |
| <b>Cost recovery program:</b>                                                                                                                                         | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No        |
| <b>Professional program:</b>                                                                                                                                          | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No        |
| <b>For graduate diplomas:</b>                                                                                                                                         | <input type="checkbox"/> Type 2 <input checked="" type="checkbox"/> Type 3 |
| <b>Faculty offering the program:</b><br>(i.e., where the program will be housed/site of academic authority)                                                           | Faculty of Engineering and Applied Science                                 |
| <b>Collaborating Faculty(ies) (if applicable):</b>                                                                                                                    | N/A                                                                        |
| <b>Collaborating institution(s) (if applicable):</b>                                                                                                                  | N/A                                                                        |
| <b>Program delivery location:</b>                                                                                                                                     | Ontario Tech North Campus and Hybrid                                       |
| <b>Proposed program start date (please change as needed):</b>                                                                                                         | Fall 2027                                                                  |
| <b>Program proponent/contact:</b>                                                                                                                                     | Xianke Lin                                                                 |
| <b>Version date (please change as you edit this proposal):</b>                                                                                                        | May 14, 2026                                                               |
| <b>Date of Academic Council Approval:</b>                                                                                                                             |                                                                            |

# New Graduate 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 graduate 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.

**Brief description of the proposed program<sup>1</sup>:** (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 robotics and automation sector is rapidly expanding, driven by advances in artificial intelligence, autonomous systems, and Industry 4.0 technologies. Canada's innovation ecosystem increasingly relies on engineers with expertise in robotic systems, intelligent control, and real-time implementation. The Graduate Diploma in Advanced Robotics is designed for recent graduates and industry professionals with engineering backgrounds who seek to develop specialized skills in robotics and intelligent automation. Delivered through four hybrid courses, the program provides training in robotic manipulators, mobile robotics, control systems, and AI-enabled decision-making. Students gain hands-on experience in modelling, simulation, and system integration, preparing them for careers in industrial automation, autonomous systems, aerospace, medical robotics, and advanced manufacturing.

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<sup>1</sup> 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 \(oucqa.ca\)](#))

# New Graduate Program Proposal

## Graduate Diploma in Advanced Robotics Faculty of Engineering and Applied Science

### 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 robotics and automation sector is rapidly expanding, driven by advances in artificial intelligence, autonomous systems, and Industry 4.0 technologies. Canada's innovation ecosystem increasingly relies on engineers with expertise in robotic systems, intelligent control, and real-time implementation. The Graduate Diploma in Advanced Robotics is designed for recent graduates and industry professionals with engineering backgrounds who seek to develop specialized skills in robotics and intelligent automation. Delivered through four hybrid courses, the program provides training in robotic manipulators, mobile robotics, control systems, and AI-enabled decision-making. Students gain hands-on experience in modelling, simulation, and system integration, preparing them for careers in industrial automation, autonomous systems, aerospace, medical robotics, and advanced manufacturing.

### 2 Academic Rationale

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- *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*
- *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*

The Graduate Diploma in Advanced Robotics is designed for engineers and technical professionals seeking advanced expertise in robotic systems, automation, and intelligent control. The program builds on Ontario Tech's established strengths in mechatronics and robotics by leveraging existing graduate-level courses and faculty expertise.

The program consists of four (4) graduate courses (12 credit hours), including core courses in robotic manipulators and mobile robotics, complemented by electives in advanced control, embedded systems, artificial intelligence, and automation.

The program is delivered in a hybrid format and emphasizes applied, project-based learning through modelling, simulation, and system-level design. Graduate-level deliverables focus on solving real-world robotics challenges in areas such as autonomy, perception, and intelligent control.

The program name and nomenclature accurately reflect its focus on advanced, multidisciplinary robotics education.

Innovative features include:

- Integration of robotics, control, and AI-based decision-making
- Emphasis on real-time implementation and system integration
- Flexible elective structure aligned with industry needs

The program addresses rapid technological advancements in robotics, including autonomous systems, AI-enabled robotics, and intelligent manufacturing.

*Describe any fields and/or any pathways from related programs. (Graduate programs are not required to have fields in order to highlight an area of strength or specialization within a program, nor are they required to provide specific pathways from programs at the college, bachelor, or other level.)*

N/A

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

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- *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 Graduate Diploma in Advanced Robotics aligns with Ontario Tech University's mission to provide innovative, technology-driven education that responds to market needs.

Robotics is a key enabler of sustainable and intelligent systems across industries, including manufacturing, transportation, healthcare, and aerospace. The program supports the university's vision of "embracing technology with a conscience" by addressing ethical, societal, and sustainability aspects of automation and intelligent systems.

The program contributes to preparing graduates to solve complex, multidisciplinary problems involving sensing, control, and decision-making in autonomous systems.

It strengthens Ontario Tech's strategic focus on advanced manufacturing, digital technologies, and intelligent systems, and reinforces the university's leadership in robotics and mechatronics engineering.

## 4 Need, Demand, and Duplication

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*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*

Robotics and automation are rapidly transforming industries across Canada and globally, including manufacturing, logistics, healthcare, aerospace, and mobility.

Key drivers include:

- Industry 4.0 and smart manufacturing
- Autonomous vehicles and robotics
- AI-enabled perception and control
- Labour shortages in automation-intensive sectors

Labour market data (Ontario Job Futures, Government of Canada, Durham Workforce Authority) indicates strong demand for engineers with robotics and automation expertise over the next 5–10 years.

The program targets:

- Engineers seeking upskilling in robotics and AI
  - Professionals transitioning into automation and autonomy
  - Recent graduates pursuing robotics careers
- *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 GDip is distinct because:

- It provides targeted specialization without a full degree commitment
- It integrates robotics, control, and AI in a single program

While related programs exist (e.g., MEng Robotics at Western, UofT), there is no equivalent GDip in Ontario, making this offering unique.

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

The Graduate Diploma in Advanced Robotics is not a new area of study at Ontario Tech. The university has established strengths in mechatronics, control systems, and robotics through existing undergraduate and graduate programs. The GDip builds on this foundation by introducing a focused, professionally oriented credential that enables targeted upskilling in advanced robotics technologies.

- *Identify similar or complementary programs offered by other universities with specific reference to Ontario and Canadian examples.*
- *Provide additional overall comment on the justification for any duplication*

In Ontario, related offerings include the University of Toronto's MEng Emphasis in Robotics and Collaborative Specialization in Robotics, and Western University's graduate-level Robotics and Control area. These programs demonstrate strong academic and labour-market demand for robotics training, but they differ from the proposed GDip in Advanced Robotics because they are generally embedded within full master's or doctoral degree pathways rather than offered as a short, stackable graduate diploma.

The proposed GDip is differentiated by its focused four (4) course structure, hybrid delivery, professional orientation. It is intended for students and professionals who require targeted upskilling in robotic manipulators, mobile robotics, control, embedded systems, and AI-enabled robotics without initially committing to a full graduate degree.

The proposed program does not represent unnecessary duplication. Existing Ontario programs confirm demand for robotics education but are primarily degree-based, research-stream, or college-level credentials. The proposed GDip fills a distinct gap by offering a university-level, professionally focused, stackable credential in advanced robotics. It complements Ontario Tech's existing strengths in mechatronics, robotics, control, and intelligent systems while providing a flexible pathway for working professionals and recent graduates seeking targeted graduate-level training.

## 5 Enrolment Information

- *Please complete Table 1 and provide, in paragraph form, information regarding enrolment projections*
- *Please determine the academic year when the program enrollment 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 Enrollment by Academic and Program Year**

|                  | Academic Year |           |           |           |           |           |
|------------------|---------------|-----------|-----------|-----------|-----------|-----------|
|                  | 2026-2027     | 2027-2028 | 2028-2029 | 2029-2030 | 2030-2031 | 2031-2032 |
| Level of Study   |               |           |           |           |           |           |
| Diploma year 1   | 10            | 10        | 20*       | 20        | 20        | 20        |
| Total Enrollment | 10            | 10        | 20        | 20        | 20        | 20        |

Projected enrollment would initially be around 5-10 students per year. The planned steady-state is 20 students per year. Note these directed offerings may be offered in alternate formats other than the traditional 12-week semester.

## 6 Admission Requirements

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

Minimum Academic Requirements for Graduate Diploma Programs:

- Hold a four-year honours degree or its equivalent from a recognized institution in the area of graduate study or a closely related subject.
- A minimum B-minus average (GPA: 2.7 on a 4.3 scale).
- Applicants that have a degree in subject areas outside of engineering or those who do not meet the minimum GPA requirements, but have relevant engineering experience will be evaluated on an individual case-by-case basis.
- *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*

Graduates from any Canadian accredited undergraduate engineering program (or its equivalent) will be eligible to enrol in the GDip, including: Mechanical Engineering, Mechatronics Engineering, Software Engineering, Automotive Engineering, Electrical Engineering, Energy Engineering, Industrial Engineering, and Manufacturing Engineering.

To provide applicants looking to re-skill for the advanced robotics sector the potential opportunity to do the GDip in Advanced Robotics, applicants from non-engineering programs or those who do not meet the minimum GPA requirements will be considered on a case-by-case basis.

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

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*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 A 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; for researched-focused graduate programs, provide a clear indication of the nature and suitability of the major research requirements for degree completion; for professional graduate programs, 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*

For the graduate diploma, students must complete four (4) graduate-level courses for a total of 12 credit hours. In addition to the two required core courses, students may choose two elective courses for a total of 6 credit hours from the below list.

Core (required):

- METE 5280G – Robotic Manipulators
- METE 5300G – Mobile Robotics

Electives (choose two):

- ENGR 5260G – Advanced Robotics and Automation
- ENGR 5262G – Manipulator and Mechanism Design
- ENGR 5263G – Advanced Control
- ENGR 5910G – Embedded Real-Time Control Systems
- METE 5101G – AI and Machine Learning
- METE 5102G – Control Design in Robotic Systems
- METE 5103G – Model Predictive Control
- ENGR 5005G – Special Topics\*

\* Registration in Special Topics course(s) are subject to approval by the Graduate Program Director, must be relevant to the GDip program scope, and must be confirmed as enabling the student to meet the program learning outcomes and degree-level expectations for the graduate diploma.

Delivery mode for the courses will be hybrid. In addition to the traditional 12-week semester delivery, the courses may be delivered in compressed time formats to meet the needs of industry partners.

To facilitate access to all potential students, part-time studies are permitted. In particular, engineers in industry may wish to pursue a graduate diploma program through part-time studies.

The courses available in the program cover the state-of-the-art in advanced robotics and are taught by instructors with subject matter expertise. The courses were developed in conjunction with subject matter experts from industry.

All course deliverables will be designed to ensure that the students are meeting the program learning outcomes and support the achievement of Graduate Degree Level

Expectations. Assessments will not only measure content knowledge but also foster advanced competencies expected at the graduate level.

*Provide evidence that each graduate student is required to take a minimum of two-thirds of the course requirements from among graduate-level courses*

All courses that are required for the GDip are graduate level.

*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 Faculty of Engineering and Applied Science (FEAS) is fully committed to Equity, Diversity, and Inclusion (EDI), including in all its courses and all its research activities. The material covered in this program considers the development of advanced robotics that serve the public, so it is critical that EDI considerations are incorporated into the development of these systems, in particular ensuring these systems are accessible for all users. The courses, where appropriate, will cover these issues to ensure that students understand the importance of designing accessible systems.

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? N/A

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

N/A

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.*

N/A

## 8 Assessment of Teaching and Learning

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*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 be used to inform continuous program improvement*

The learning outcomes for the program are achieved through a combination of graduate-level course work, including assignments, exams, projects, and presentations.

Learning activities and materials in graduate courses will be carefully designed to ensure that learners are deliberately exposed to study, the majority of which is at, or informed by, the forefront of engineering theory and practice.

The courses have been designed to give students key knowledge in advanced robotics as well as an opportunity for advanced development of generic skills such as communication and teamwork. In addition, there will be scholarly activities of independent investigation, report writing, and presentations.

Throughout the curriculum, learning activities are planned, and student progress will be monitored to ensure that safety, professional guidelines, and ethical responsibilities relevant to engineering are modelled, developed, and evaluated.

The courses available in the program cover the state-of-the-art in advanced robotics and are taught by instructors with subject matter expertise. The courses were developed in conjunction with subject matter experts from industry.

Student feedback surveys will be completed at the end of each course delivery to gather feedback. As well student performance in each course will be monitored

yearly. The Graduate Program Director responsible for the program will review both the student feedback surveys and the student performance to ensure that the program is meeting its goals. Insights from these surveys and reviews will be documented and used to identify specific areas for improvement, inform curriculum adjustments, and guide enhancements to teaching and learning strategies.

Any required changes to curriculum, assessment methods, delivery, or administration are implemented as appropriate and feasible at the discretion of the Faculty Dean. Curricular changes are then submitted and documented through appropriate Faculty and University committees consistent with standard curricular change policies and procedures as identified in the IQAP.

To ensure sustained quality, program effectiveness will be assessed and monitored through the cyclical review process, providing actionable insights for continuous improvement. In addition to the external review every eight years, Ontario Tech's Academic Resource Committee (ARC) requires a brief report at program launch and a full report one-year after the launch of a new program. The one-year report will ask the program to review enrollment data, admission averages, and provide an analysis of successes and challenges encountered in the first year. If there are areas of concern and it is deemed necessary, ARC will make recommendations to enhance program effectiveness and student success and may request a subsequent report. If required, the subsequent 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 ARC's review, further documentation may be required of the program for ongoing monitoring.

## 9 Calendar Copy and Program Map(s)

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- *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*
- *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 B for the Calendar Copy and Appendix C for the List of Program Courses and Descriptions.

## 10 Consultation

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- *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 Graduate Diploma in Advanced Robotics is designed to complement, rather than compete with, existing programs within the Faculty and across the University. The program leverages existing mechatronics graduate course offerings and faculty expertise, ensuring efficient use of resources without duplication.

The Office of the Registrar and the School of Graduate and Postdoctoral Studies were both consulted in the development of this program. No issues were raised.

As noted above, there will be no impact on other programs offered at Ontario Tech.

## 11 Resource Requirements

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### **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.*

As the program is leveraging the existing mechatronics engineering graduate courses, it is anticipated there will be no major resource requirements. By leveraging existing

mechatronics engineering graduate course offerings, the GDip enhances resource efficiency without diminishing the quality of graduate offerings.

***The resource requirements outlined in Section 11 have been reviewed by the Academic Resource Committee (ARC): 9 December 2025***  
*(date of review)*

## 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?*

*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.*

The program will be delivered by a group of faculty members with expertise in advanced robotics, including robotic systems, control systems, embedded systems, artificial intelligence, and autonomous systems. Core faculty will be supported by additional faculty and sessional instructors as needed to ensure coverage across all course offerings and maintain flexibility in delivery.

Experiential learning is embedded within course-based projects, including modelling, simulation, and system-level design activities that reflect real-world robotics applications.

Please see Appendix D Faculty Information for a table detailing the list of faculty committed to the program and separate file for Curriculum Vitae (provided to the Quality Council for review).

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 the faculty hire be required, and are there additional criteria associated with the hiring requirement (e.g. enrolment levels, program growth, University or Faculty priorities)?*

Since the course delivery will leverage the mechatronics engineering graduate course offerings, no additional human resources will be required, unless the number of students enrolled reaches the point where more than one section of a given course needs to be offered. Details and timing of proposed hirings are coordinated and confirmed with the Provost's Office through regular operational conversations.

N/A

### **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.*

No TAs will be required unless the enrolment is large enough to warrant it.

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.*

The program will leverage existing institutional resources and targeted supports, including access to modern facilities, technology-enabled classrooms, and research infrastructure. Dedicated student services, academic advising, and wellness initiatives will promote student well-being and resiliency, ensuring a supportive and inclusive learning environment.

Please see Appendix E 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.*

The institution provides robust information technology resources to support high-quality scholarship and research activities for both undergraduate and graduate students. These include access to modern computing facilities, high-speed networks, secure data storage, and discipline-specific software to enhance teaching and learning. Existing spaces are equipped with technology-enabled classrooms and research infrastructure ensuring the program can be successfully implemented and sustained.

Please see Appendix F 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)?*

The program will leverage existing University IT infrastructure. Ontario Tech is a laptop university where students bring their own laptop devices and are provided access to a software portal where they can download any necessary software required for their courses, including a variety of engineering specific packages such as SolidWorks, NX, Multisim, MATLAB, Adams, and Nastran.

The hybrid delivery of the courses will make use of Ontario Tech's flexible hybrid classrooms that allow for synchronous delivery with active participation from students both in room and online and the ability for all students to see all other students.

## **11.4 Financial Support for Graduate Students**

*Provide evidence that financial assistance for students, including TA-ships where applicable, will be sufficient to ensure adequate quality and numbers of students.*

No financial assistance will be provided as this is a professional program.

## **11.5 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?*

The hybrid delivery of the courses and the leveraging with the mechatronics engineering graduate course delivery will have minimal impact on classroom requirements.

No additional space requirements are required.

## 11.6 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 ([cique@ontariotechu.ca](mailto:cique@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 program does not impact any existing agreements Ontario Tech has with institutional and external partners. In addition, there are no inter-Faculty implications.

## 12 Closing Statements Regarding Program Quality

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- *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 Graduate Diploma in Advanced Robotics is supported by faculty with expertise in robotics, control systems, embedded systems, and artificial intelligence. The program

leverages existing courses, laboratories, and research strengths to deliver a high-quality learning experience.

Through advanced coursework and applied learning, the program prepares graduates to contribute to the rapidly evolving robotics and automation sector across multiple industries.

## Appendices

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*Please include at minimum the below. Additional Appendices may be added, as appropriate. Appendices should ultimately be listed below, attached as separate documents, and clearly labelled (A, B, C, etc.) in the order in which they are first mentioned in the document.*

Appendix A: Program Learning Outcome Alignment Map to DLEs, Courses, and Assessments

Appendix B: Calendar Copy

Appendix C: List of Program Courses and Descriptions for Existing Courses

Appendix D: Faculty Information

Appendix E: Learning Resources

Appendix F: Information Technology Resources

### **Items to be separate documents sent to CIQE:**

New Program Funding and Tuition form (for CIQE use only)

Budget Spreadsheet (for ARC use only)

Curriculum Vitae (for Quality Council use only)

**Graduate Diploma – Advanced Robotics**

| <b>PLO #</b> | <b>Program Learning Outcomes</b>                                                                                   |
|--------------|--------------------------------------------------------------------------------------------------------------------|
| <b>PLO 1</b> | <b>Explain core and applied concepts, principles, and techniques in robotics and mechatronics.</b>                 |
| <b>PLO 2</b> | <b>Analyze and interpret experimental data and computational results related to robotic systems.</b>               |
| <b>PLO 3</b> | <b>Apply engineering methods to solve practical problems in robotics and mechatronic systems.</b>                  |
| <b>PLO 4</b> | <b>Apply professional, ethical, and safety standards in engineering practice.</b>                                  |
| <b>PLO 5</b> | <b>Recognize the importance of lifelong learning and identify pathways for continued professional development.</b> |
| <b>PLO 6</b> | <b>Communicate technical information effectively in written and oral formats.</b>                                  |
| <b>PLO 7</b> | <b>Evaluate technical information and apply it appropriately in engineering practice.</b>                          |

Graduate Diploma – Advanced Robotics

| Graduate Degree Level Expectations |                                                                       | Depth and Breadth of Knowledge |       |  |  | Research and Scholarship |      |  |  | Level of Application of Knowledge |      |  | Professional Capacity/ Autonomy |      |  | Level of Communication Skills |  |  | Awareness of Knowledge Limits |      |  |
|------------------------------------|-----------------------------------------------------------------------|--------------------------------|-------|--|--|--------------------------|------|--|--|-----------------------------------|------|--|---------------------------------|------|--|-------------------------------|--|--|-------------------------------|------|--|
| Program Learning Outcomes          |                                                                       | PLO1                           | PLO3  |  |  | PLO2                     | PLO7 |  |  | PLO3                              | PLO7 |  | PLO4                            | PLO5 |  | PLO6                          |  |  | PLO5                          | PLO7 |  |
| Course No.                         | Course Title                                                          |                                |       |  |  |                          |      |  |  |                                   |      |  |                                 |      |  |                               |  |  |                               |      |  |
| METE 5280G                         | Robotic Manipulators                                                  | 1,2                            | 1,2,4 |  |  | 1,4                      | 1,4  |  |  | 1,2,4                             | 1,4  |  |                                 |      |  | 3                             |  |  |                               | 1,4  |  |
| METE 5300G                         | Mobile Robotics                                                       | 1,2                            | 1,2,4 |  |  | 1,4                      | 1,4  |  |  | 1,2,4                             | 1,4  |  | 1,4                             | 3    |  | 3                             |  |  | 3                             | 1,4  |  |
| ENGR 5260G                         | Advanced Robotics and Automation                                      | 1,2                            | 1,2,4 |  |  | 1,4                      | 1,4  |  |  | 1,2,4                             | 1,4  |  | 1,4                             | 3    |  | 3                             |  |  | 3                             | 1,4  |  |
| ENGR 5262G                         | Manipulator and Mechanism Design                                      | 1,2                            | 1,2,4 |  |  | 1,4                      | 1,4  |  |  | 1,2,4                             | 1,4  |  |                                 |      |  | 3                             |  |  |                               | 1,4  |  |
| ENGR 5263G                         | Advanced Control                                                      | 1,2                            | 1,2   |  |  | 1,4                      | 1,4  |  |  | 1,2,4                             | 1,4  |  |                                 |      |  | 3                             |  |  |                               | 1,4  |  |
| ENGR 5910G                         | Embedded Real-Time Control Systems                                    | 1,2                            | 1,2,4 |  |  | 1,4                      | 1,4  |  |  | 1,2,4                             | 1,4  |  | 1,4                             |      |  | 3                             |  |  |                               | 1,4  |  |
| ENGR 5930G                         | Adaptive Control                                                      | 1,2                            | 1,2   |  |  | 1,4                      | 1,4  |  |  | 1,2,4                             | 1,4  |  |                                 |      |  | 3                             |  |  |                               | 1,4  |  |
| ENGR 5915G                         | Discrete Time Control Systems                                         | 1,2                            | 1,2   |  |  | 1,4                      | 1,4  |  |  | 1,2,4                             | 1,4  |  |                                 |      |  | 3                             |  |  |                               | 1,4  |  |
| METE 5101G                         | Artificial Intelligence and Machine Learning Methods and Applications | 1,2                            | 1,2,4 |  |  | 1,4                      | 1,4  |  |  | 1,2,4                             | 1,4  |  | 1,4                             | 3    |  | 3                             |  |  | 3                             | 1,4  |  |
| METE 5102G                         | Control Design in Robotic Systems                                     | 1,2                            | 1,2,4 |  |  | 1,4                      | 1,4  |  |  | 1,2,4                             | 1,4  |  |                                 |      |  | 3                             |  |  |                               | 1,4  |  |
| METE 5103G                         | Model Predictive Control                                              | 1,2                            | 1,2,4 |  |  | 1,4                      | 1,4  |  |  | 1,2,4                             | 1,4  |  |                                 |      |  | 3                             |  |  |                               | 1,4  |  |
| METE 5104G                         | Multivariable Feedback Control                                        | 1,2                            | 1,2   |  |  | 1,4                      | 1,4  |  |  | 1,2,4                             | 1,4  |  |                                 |      |  | 3                             |  |  |                               | 1,4  |  |
| METE 5105G                         | Nonlinear Control Systems                                             | 1,2                            | 1,2   |  |  | 1,4                      | 1,4  |  |  | 1,2,4                             | 1,4  |  |                                 |      |  | 3                             |  |  |                               | 1,4  |  |
|                                    |                                                                       |                                |       |  |  |                          |      |  |  |                                   |      |  |                                 |      |  |                               |  |  |                               |      |  |
| Degee of Implementation:           |                                                                       | Assessment Legend:             |       |  |  |                          |      |  |  |                                   |      |  |                                 |      |  |                               |  |  |                               |      |  |
| Introduced                         |                                                                       | 1 Assignments                  |       |  |  |                          |      |  |  |                                   |      |  |                                 |      |  |                               |  |  |                               |      |  |
| Reinforced                         |                                                                       | 2 Exam (example)               |       |  |  |                          |      |  |  |                                   |      |  |                                 |      |  |                               |  |  |                               |      |  |
| Mastered                           |                                                                       | 3 Presentation                 |       |  |  |                          |      |  |  |                                   |      |  |                                 |      |  |                               |  |  |                               |      |  |
|                                    |                                                                       | 4 Project                      |       |  |  |                          |      |  |  |                                   |      |  |                                 |      |  |                               |  |  |                               |      |  |

# Advanced Robotics, Graduate Diploma

## **General Information**

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The Graduate Diploma (GDip) in Advanced Robotics provides students with specialized knowledge in robotic systems, intelligent automation, and autonomous technologies. Robotics is a rapidly growing field driven by advancements in artificial intelligence, sensing, control systems, and Industry 4.0 technologies. Across sectors such as manufacturing, healthcare, transportation, aerospace, and logistics, robotics plays a critical role in improving efficiency, safety, and innovation.

Designed for recent graduates and industry professionals holding an undergraduate engineering degree, the Graduate Diploma in Advanced Robotics equips learners with advanced, industry-relevant skills needed to enter or advance within robotics and automation-focused careers. Through four hybrid graduate courses, students develop expertise in robotic manipulators, mobile robotics, control systems, and AI-enabled decision-making.

This program prepares graduates to meet the growing demand for engineers with specialized expertise in robotics, automation, and intelligent systems.

## **Admission Requirements**

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In addition to the general admission requirements for graduate studies, applicants must meet the following program-specific requirements:

Minimum Academic Requirements for Graduate Diploma Programs:

- Hold a four-year honours degree or its equivalent from a recognized institution in the area of engineering or a closely related subject.
- A minimum B-minus average (GPA: 2.7 on a 4.3 scale).
- Applicants that have a degree in subject areas outside of engineering or those who do not meet the minimum GPA requirements, but have relevant engineering experience will be evaluated on an individual case-by-case basis.

Graduates from any Canadian accredited undergraduate engineering program (or its equivalent) will be eligible to enroll in the GDip, including: Mechanical Engineering, Mechatronics Engineering, Electrical Engineering, Computer Engineering, Software Engineering, and Manufacturing Engineering.

Note, the consideration of applicants from non-engineering programs or those who do not meet the minimum GPA requirements is to provide applicants seeking to re-skill for robotics and automation sectors the opportunity to pursue the GDip in Advanced Robotics.

## **Part-time studies**

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To facilitate access to all potential students, part-time studies are permitted. In particular, engineers in industry may wish to pursue a graduate diploma program through part-time studies.

## **Graduate diploma requirements**

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For the graduate diploma, students must complete four courses for a total of 12 credits, including METE 5280G: Robotic Manipulators, METE 5300G: Mobile Robotics, and two elective courses from the below list.

**Note:** Graduate diploma students are not normally permitted to take courses outside of their home program course listings for program credit. In addition, they may not take any senior fourth-year undergraduate courses from the Faculty of Engineering and Applied Science in lieu of a graduate course. If either core course has been completed at the undergraduate level, it will be replaced with an elective course, subject to Graduate Program Director approval.

## **Course listings**

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### **Core courses:**

- METE 5280G: Robotic Manipulators
- METE 5300G: Mobile Robotics

### **Elective courses:**

- ENGR 5005G: Special Topics\*
- ENGR 5260G: Advanced Robotics and Automation
- ENGR 5262G: Manipulator and Mechanism Design
- ENGR 5263G: Advanced Control
- ENGR 5910G: Embedded Real-Time Control Systems
- ENGR 5930G: Adaptive Control
- ENGR 5915G: Discrete Time Control Systems
- METE 5101G: Artificial Intelligence and Machine Learning Methods and Applications
- METE 5102G: Control Design in Robotic Systems
- METE 5103G: Model Predictive Control
- METE 5104G: Multivariable Feedback Control
- METE 5105G: Nonlinear Control Systems

\*upon approval by Graduate Program Director and relevant to the scope.

## **Program learning outcomes**

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

Program Learning Outcomes - Advanced Robotics, Graduate Diploma

## Appendix C - List of Program Courses and Course Descriptions

### List of Program Courses

The program consists of four graduate-level courses (12 credits total), selected from the following:

| Required Courses |                                    |                                               |
|------------------|------------------------------------|-----------------------------------------------|
| Course Code      | Course Name                        |                                               |
| METE 5280G       | Robotic Manipulators               | Existing Course - course description enclosed |
| METE 5300G       | Mobile Robotics                    | Existing Course - course description enclosed |
| Electives:       |                                    |                                               |
| ENGR 5260G       | Advanced Robotics and Automation   | Existing Course - course description enclosed |
| ENGR 5262G       | Manipulator and Mechanism Design   | Existing Course - course description enclosed |
| ENGR 5263G       | Advanced Control                   | Existing Course - course description enclosed |
| ENGR 5910G       | Embedded Real-Time Control Systems | Existing Course - course description enclosed |
| METE 5101G       | AI and Machine Learning            | Existing Course - course description enclosed |
| METE 5102G       | Control Design in Robotic Systems  | Existing Course - course description enclosed |
| METE 5103G       | Model Predictive Control           | Existing Course - course description enclosed |

#### METE 5280G - Robotic Manipulators

Industrial robots; robot kinematics, differential kinematics; statics, dynamics and control of robot arms; noncontact and contact sensors; actuators; real-time joint control; task planning and programming of industrial robots; applications of robots.

#### METE 5300G - Mobile Robotics

Students will learn the basics of mobile robotics through a series of open-ended projects in a hands-on learning environment. Topics covered include: locomotion; mobile robot kinematics; perception; mapping and localization; and path planning, obstacle avoidance, and navigation.

#### ENGR 5260G - Advanced Robotics and Automation

This course builds upon the knowledge students have gained in a first robotics course to cover more advanced kinematics topics and their application to more complex robotic systems such as redundant manipulators and parallel mechanisms. Topics covered include point, direction, line and screw motion descriptions; homogeneous transformations; line and screw coordinates; quaternion representations; inverse displacement solutions by analytic, root finding, hybrid and numerical methods; appropriate frames of reference; screw systems and transforms; local and globally optimum solutions of redundant rates; over determined and near degenerate solutions; singularity analysis; and parallel manipulator kinematics.

#### ENGR 5262G - Manipulator and Mechanism Design

This course is designed to teach students the necessary skills to design or synthesize mechanisms and manipulators to perform desired tasks. Topics covered include synthesis of mechanisms for function generation, path generation and rigid body guidance; graphical, analytical and optimization based

methods of synthesis; mechanism cognates, Chebychev spacing, Burmister curves; manipulator joint layout synthesis for spatial positioning and orientation; conditions of singularity and uncertainty; and solution of nonlinear problems of kinetics involved in mechanism synthesis using compatibility equations,  $1/2$  angle substitutions and dialytic elimination.

### **ENGR 5263G - Advanced Control**

This course builds upon the knowledge students have gained in a first control course to cover more materials in advanced control systems. Topics covered include a. State variables and state space models: relations between state space models and the transfer function models (controllable and observable canonical forms, and diagonal form), Jordan form, solutions of linear state equations, transition matrix. b. Controllability and observability: definition and criteria, state feedback and output feedback, pole assignment via state feedback, design of servo controlled systems. c. State estimation and observer: observer state-variable feedback control. d. Multi-input multi-output (MIMO) systems: pole assignment via state feedback. e. Introduction to nonlinear systems: describing functions for kinds of nonlinear systems (on/off, dry friction, dead one, saturation and hysteresis), phase plane trajectories, concept of limit cycle. f. Stability analysis: Lyapunov function and Lyapunov stability criterion. g. Introduction to optimal control: linear quadratic regulator (LQR), Riccati equation, properties of LQR systems. h. Sampled data systems: pulse transfer function, zero and first order hold systems, stability and root locus in the z-plane, transformations, Routh Hurwitz stability criterion in the z-plane, system compensation in the z-plane using root locus and generalized PID controllers.

### **ENGR 5910G - Embedded Real-Time Control Systems**

This course focuses on the design and implementation techniques for embedded real-time control systems. It covers embedded system design, instruction sets for microprocessor architecture, I/O, interrupts, hardware and software of embedded systems, program design and analysis, practical issues, multi-tasking operating systems, scheduling and system design techniques.

### **METE 5101G - Artificial Intelligence and Machine Learning Methods and Applications**

In this course, students will briefly review fundamental artificial intelligence and machine learning methods such as regression methods and decision trees. Students will develop skills to implement advanced machine learning concepts through coding projects. Data transformation and management methods including kernels, principal component analysis, and manifold learning will be discussed as well as ensemble methods and reinforcement learning strategies. Different artificial neural network structures, deep learning methods, regression, and convolution networks will be presented. Heuristic methods to handle non-linear problems in the context of machine learning will be introduced.

### **METE 5102G - Control Design in Robotic Systems**

This course deals with the topic of control design in robotic systems. Specifically, the course addresses the theories and techniques required to design controllers for robot manipulator systems. The detailed topics include: vectors/coordinate transforms, kinematics, robot dynamics, position control (such as PD control, computed torque control, adaptive control, sliding mode control, time-delayed control, disturbance observer) and force control (such as impedance control, hybrid force control). Students will design the introduced controllers and analyze robot dynamics and control performance through MATLAB/Simulink based simulations.

### **METE 5103G - Model Predictive Control**

Model Predictive Control (MPC) theory will be introduced and developed in this project-based course. System identification modeling and control of linear and non-linear systems will be practiced with the implementation and design of different types of MPC algorithms, including: Simplified MPC, Dynamic Matrix Control, General Predictive Control and other MPC conditioning methodologies.

## Appendix D – Faculty Information

Please include here only those currently at the institution and affiliated with the program. Examples in purple to be removed.

Where available, link each faculty name to their Research or Profile page on the website.

| Name and Faculty Status/Rank                    | Terminal Degree | Home Faculty/Unit | Areas of Expertise                                                                                                                          | Supervisory Privileges and Role in New Program<br>(Note if faculty will be teaching and/or supervising in the program; indicate primary supervisor by asterisks) | Total Graduate Teaching (including New Program)<br>(Note in bold type if faculty is a core course developer for the program) |
|-------------------------------------------------|-----------------|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Dr. Scott Nokleby<br>Professor                  | PhD             | FEAS              | Robotics, Reconfigurable Systems, Manipulator Design, Mechatronics.                                                                         | Graduate Faculty*<br>Teaching core courses                                                                                                                       | 3-4 courses<br>(undergraduate/graduate level)                                                                                |
| Dr. Haoxiang Lang<br>Associate Professor        | PhD             | FEAS              | Robotics, Intelligent Control, Autonomous Systems, Machine Learning, Mechatronics.[cite: 2]                                                 | Graduate Faculty*<br>Teaching core courses                                                                                                                       | 3-4 courses<br>(undergraduate/graduate level)                                                                                |
| Dr. Jaho Seo<br>Associate Professor             | PhD             | FEAS              | Heavy-Duty Mobile Robots, Autonomous Construction Equipment, Control Systems, Human-Robot Interaction.                                      | Graduate Faculty*<br>Teaching core courses                                                                                                                       | 3-4 courses<br>(undergraduate/graduate level)                                                                                |
| Dr. Meaghan Charest-Finn<br>Assistant Professor | PhD             | FEAS              | Advanced Control Systems, Model Predictive Control (MPC), Optimization, Building Energy Management.                                         | Graduate Faculty*<br>Teaching core courses                                                                                                                       | 3-4 courses<br>(undergraduate/graduate level)                                                                                |
| Dr. Shabnam Pejhan<br>Assistant Professor       | PhD             | FEAS              | Biomechatronic mobility assistive devices; smart wearables for rehabilitation; human mobility and motion analysis; biomedical technologies. | Graduate Faculty*<br>Teaching core courses                                                                                                                       | 3-4 courses<br>(undergraduate/graduate level)                                                                                |
| Dr. Mitchell Rushton<br>Assistant Professor     | PhD             | FEAS              | Cable-driven parallel robots; vibration control; continuum robots; automated warehousing and storage/retrieval systems.                     | Graduate Faculty*<br>Teaching core courses                                                                                                                       | 3-4 courses<br>(undergraduate/graduate level)                                                                                |

|                                            |     |      |                                                                                                                                  |                                            |                                               |
|--------------------------------------------|-----|------|----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------------------------|
| Dr. Aaron Yurkewich<br>Assistant Professor | PhD | FEAS | Assistive robotics; human-robot interaction; wearable stroke rehabilitation devices; user-centered design; haptic communication. | Graduate Faculty*<br>Teaching core courses | 3-4 courses<br>(undergraduate/graduate level) |
|--------------------------------------------|-----|------|----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------------------------|

## **Existing Non-Financial Student Support Services**

### **School of Graduate and Post-Doctoral Studies**

Quality graduate and postdoctoral education combines teaching, research, professional development, disciplinary community involvement and personal growth. It is by nature a shared responsibility between students, faculty members, the programs and a large number of support units, with overarching administration being provided by the School of Graduate and Postdoctoral Studies.

The School of Graduate and Postdoctoral Studies (SGPS) furthers the scholarly mission of the university by providing academic and administrative support to the university's postgraduate educational, research, innovation and international activities. Our responsibilities include graduate program development, graduate enrolment management, oversight of academic and quality standards, and the implementation of policies and practices that enhance graduate/postdoctoral scholarly success, career readiness and personal growth. SGPS supports prospective, new and current graduate students through many administrative services including, but not limited to, recruitment, admission, registration, funding and scholarships, orientation, professional development workshops and events, and processing of final theses, projects and papers. SGPS is a single-point-of-contact, multifunctional administrative unit tailored to the complete "life-cycle" of graduate students, providing coordinated support to students and all other stakeholders.

### **Student Life**

Ontario Tech University, as a relatively small campus community, has a centralized delivery model for many 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/>.

### **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.

## **Campus Libraries**

The Campus Libraries support teaching, learning, and research at Ontario Tech University with facilities, collections, and programming.

Library Collections:

- The Library's total collections budget is \$1.7 million.
- Collections include books, e-books, databases, journals, data and statistics, and multimedia materials

Support for teaching and learning:

- A dedicated librarian for each program who provides instruction, research consultations, and collection development
- Research guides for each of Ontario Tech's programs, as well as general guides for citation, copyright, and other broad topics
- Workshops and classes: custom in-class sessions, and general instruction sessions

- Three (3) online modules in Ontario Tech's learning management system, which professors can integrate seamlessly into their course shells

#### Research supports:

- Research consultations with subject librarians
- Extended support via the Library's virtual reference service
- Support for generative artificial intelligence: citation, copyright, and allowable use of library resources

#### Scholarly publishing supports:

- Research data management
- Publishing compliance with Tri-Council and other funders
- Support finding and creating open educational resources (OERs)
- Copyright advice and compliance information
- Support for authors, including reviewing author agreements
- Administration of APC waivers for faculty publishing in open access

#### Facilities:

- The Campus Libraries include the North Oshawa Library, which is the campus' main branch, and the Social Sciences, Humanities, and Education Library, which is located in downtown Oshawa
- The Library's locations include:
  - Extended library hours are available during peak season
  - Groups study rooms are available for student booking
  - Accessible workstations, and sit-stand desks
  - Computers and dual monitor workstations

## **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.



## New Graduate 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 graduate 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.

|                                                                                                                                                                       |                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| <b>Full name of proposed program (as it will appear on the student's transcript):</b><br>(e.g., Master of Arts in Education; Master of Science in Applied Bioscience) | Graduate Diploma in AI Engineering                                         |
| <b>Degree designation and short form:</b><br>(e.g., Master of Arts, M.A.; Master of Science, M.Sc.)                                                                   | GDip                                                                       |
| <b>Cost recovery program:</b>                                                                                                                                         | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No        |
| <b>Professional program:</b>                                                                                                                                          | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No        |
| <b>For graduate diplomas:</b>                                                                                                                                         | <input type="checkbox"/> Type 2 <input checked="" type="checkbox"/> Type 3 |
| <b>Faculty offering the program:</b><br>(i.e., where the program will be housed/site of academic authority)                                                           | Faculty of Engineering and Applied Science                                 |
| <b>Collaborating Faculty(ies) (if applicable):</b>                                                                                                                    | N/A                                                                        |
| <b>Collaborating institution(s) (if applicable):</b>                                                                                                                  | N/A                                                                        |
| <b>Program delivery location:</b>                                                                                                                                     | Ontario Tech North Campus and Hybrid                                       |
| <b>Proposed program start date (please change as needed):</b>                                                                                                         | Fall 2027                                                                  |
| <b>Program proponent/contact:</b>                                                                                                                                     | Akramul Azim                                                               |
| <b>Version date (please change as you edit this proposal):</b>                                                                                                        | May 14, 2026                                                               |
| <b>Date of Academic Council Approval:</b>                                                                                                                             |                                                                            |

**Brief description of the proposed program**<sup>1</sup>: (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 AI Engineering Graduate Diploma incorporates Artificial Intelligence (AI) learning through practical, project-driven coursework centered on the development of AI-enabled software and systems. Throughout the program, students engage directly with contemporary AI engineering tools, platforms, and methodologies as they work on a range of engineering-focused use cases. All assignments and projects are integrated into the existing suite of graduate courses, leveraging current infrastructure and resources within the Faculty of Engineering and Applied Science. No additional facilities are required, ensuring a streamlined and sustainable delivery model. This learning structure not only strengthens students' technical proficiency in designing, implementing, and evaluating AI-based systems, but also enhances their professional skills in collaborative problem-solving, project management, and responsible technology development. Through existing courses, the diploma aligns closely with Ontario Tech University's strategic focus on artificial intelligence, preparing graduates to contribute effectively to emerging AI-driven industries and research initiatives.

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<sup>1</sup> 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 \(oucqa.ca\)](#))

# New Graduate Program Proposal

## Graduate Diploma in AI Engineering Faculty of Engineering and Applied Science

### 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 AI Engineering Graduate Diploma incorporates Artificial Intelligence (AI) learning through practical, project-driven coursework centered on the development of AI-enabled software and systems. Throughout the program, students engage directly with contemporary AI engineering tools, platforms, and methodologies as they work on a range of engineering-focused use cases. All assignments and projects are integrated into the existing suite of graduate courses, leveraging current infrastructure and resources within the Faculty of Engineering and Applied Science. No additional facilities are required, ensuring a streamlined and sustainable delivery model. This learning structure not only strengthens students' technical proficiency in designing, implementing, and evaluating AI-based systems, but also enhances their professional skills in collaborative problem-solving, project management, and responsible technology development. Through existing courses, the diploma aligns closely with Ontario Tech University's strategic focus on artificial intelligence, preparing graduates to contribute effectively to emerging AI-driven industries and research initiatives.

## 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*
- *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*

The proposed GDip in AI Engineering has been designed for engineers in industry and recent engineering graduates who wish to pursue a career in the AI sector. The program structure for the GDip will be hybrid and is comprised of four of the following courses:

- ENGR5775G Knowledge Disc. & Data Mining
- ENGR5785G Real-Time Data Analytics IoT
- ENGR5940G Intelligent Control Systems
- ENGR 5010G Advanced Optimization
- ENGR 5005G – Special Topics\*

\*Registration in Special Topics course(s) are subject to approval by the Graduate Program Director, must be relevant to the GDip program scope, and must be confirmed as enabling the student to meet the program learning outcomes and degree-level expectations for the graduate diploma.

The GDip offering of the courses will share the same lectures as those in the equivalent graduate courses.

The program name and nomenclature accurately reflect the program's scope and objectives. It signals a focused, graduate-level credential that builds on an engineering foundation while specializing in AI systems.

Innovative features of the program include integration with an established graduate program for resource efficiency and academic continuity, graduate-level assignments emphasizing applied research and industry-relevant problem-solving and a curriculum aligned with high-impact practices, fostering expertise in a sector vital to Canada's economic and environmental goals.

The Graduate Diploma in AI Engineering addresses a critical skills gap in a discipline undergoing rapid transformation due to sustainability goals, technological innovation, and infrastructure modernization.

*[Optional] Describe any fields and/or any pathways from related programs. (Graduate programs are not required to have fields in order to highlight an area of strength or specialization within a program, nor are they required to provide specific pathways from programs at the college, bachelor, or other level.)*

N/A

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

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- *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 AI Engineering Graduate Diploma is fully consistent with the academic and research-oriented mandate of the university sector in Ontario. As a graduate-level program, it integrates theoretical foundations with applied, project-based learning, reflecting the balance of scholarly rigor and practical relevance expected of university programming. The curriculum emphasizes advanced concepts in artificial intelligence, data analytics, optimization, and intelligent systems, while also fostering research-informed problem solving and innovation.

The program aligns strongly with key areas of strength and growth identified in Ontario Tech University's Strategic Mandate Agreement (SMA), particularly in the domains of STEM excellence, digital technologies, and industry-responsive education. Artificial intelligence and data-driven engineering are central to Ontario Tech's strategic vision, positioning the institution as a leader in technology-focused education and applied research.

## 4 Need, Demand, and Duplication

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*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*

Ontario and Canadian labour-market data consistently indicate a growing student and societal need for graduates with AI engineering skills. National projections from the Canadian Occupational Projection System show strong long-term demand, with nearly 47,000 job openings expected for software-engineering-related roles over the next decade many of which increasingly require competencies in AI, machine learning, data engineering, and MLOps. Short-term government outlooks for Ontario show a balanced-to-limited forecast for traditional software roles, but sector reports from the Vector Institute highlight rapid job creation and adoption of AI across healthcare, finance, advanced manufacturing, and the public sector. Local planning documents from the Durham Workforce Authority further identify applied digital technology and AI as priority skill gaps in the region, emphasizing employer demand and the need for new training pathways. Taken together, these trends point to sustained and expanding employment opportunities over the next 5 to 10 years, with industry, government, and regional organizations all signaling an urgent need for graduates capable of developing, deploying, and managing AI-enabled systems.

- *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 GDip in AI engineering is distinct from other programs at Ontario Tech. Although AI courses exist for some of the undergraduate programs, the GDip is designed for those who did not have the opportunity to take the AI Engineering Specialization during their undergraduate studies.

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

The GDip builds upon the already existing graduate electrical and software engineering courses, so it is not a new area of study. However, it is a further step into expanding Ontario Tech's offerings that contribute to the training needs of the AI sector.

- *Identify similar or complementary programs offered by other universities with specific reference to Ontario and Canadian examples.*
- *Provide additional overall comment on the justification for any duplication*

There isn't a single, standardized "AI Engineering" graduate diploma across Ontario, but there are many graduate (master's) and graduate-certificate (or diploma) programs in Ontario universities and colleges that are very AI-oriented or allow

specialization in AI.

Here are several graduate-level (master's or post-graduate certificate) AI or AI-engineering-related programs in Ontario, Canada:

*University Programs (Master's / Graduate Degrees):*

1. MEng in Electrical & Computer Engineering – AI Concentration - Toronto Metropolitan University (TMU)
  - o Specialized MEng with AI courses such as neural networks, deep learning, intelligent systems, etc. [Toronto Metropolitan University](#)
  - o Includes a practicum (real-world project) as part of the program. [Toronto Metropolitan University](#)

*College-Level / Graduate Certificates (More Applied AI):*

These are often shorter, more applied programs (graduate certificates) rather than full master's degrees:

1. Applied Artificial Intelligence & Machine Learning (Graduate Certificate) - Conestoga College
  - o 1 year program, includes project-based learning. [Conestoga College](#)
  - o Teaches AI algorithm design, system architecture, real-world applications. [Conestoga College](#)
2. Artificial Intelligence with Machine Learning (Graduate Certificate) - Humber Polytechnic
  - o Two semesters. [Humber Polytechnic](#)
  - o Covers ML algorithms, NLP, computer vision, data analytics, ethical considerations. [Humber Polytechnic](#)
3. Artificial Intelligence (Graduate Certificate) - Fleming College
  - o Hands-on labs, capstone project, applied learning. [Fleming College Toronto+1](#)
  - o Teaches ML, deep learning, vision, NLP, big data fundamentals. [Fleming College Toronto](#)
4. Artificial Intelligence (Graduate Certificate) - Seneca Polytechnic
  - o 2 semester certificate. [Seneca Polytechnic](#)
  - o Topics include machine learning, generative AI, prompt engineering, cloud, data viz. [Seneca Polytechnic](#)
5. Artificial Intelligence – Architecture, Design & Implementation (Graduate Certificate) - Georgian College
  - o Focus on system architecture, neural networks, reinforcement learning, enterprise AI systems. [Georgian College Academic Catalogue](#)

## 5 Enrolment Information

- Please complete Table 1 and provide, in paragraph form, information regarding enrolment projections
- Please determine the academic year when the program enrollment 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 Enrollment by Academic and Program Year**

|                         | Academic Year |           |           |           |           |           |
|-------------------------|---------------|-----------|-----------|-----------|-----------|-----------|
|                         | 2026-2027     | 2027-2028 | 2028-2029 | 2029-2030 | 2030-2031 | 2031-2032 |
| <b>Level of Study</b>   |               |           |           |           |           |           |
| <b>Diploma year 1</b>   | 10            | 10        | 20*       | 20        | 20        | 20        |
| <b>Total Enrollment</b> | 10            | 10        | 20        | 20        | 20        | 20        |

Projected enrollment would initially be around 10-15 students per year. The planned steady-state is 20 students per year. Note these directed offerings may be offered in alternate formats other than the traditional 12-week semester.

## 6 Admission Requirements

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

Minimum Academic Requirements for Graduate Diploma Programs:

- Hold a four-year honours degree or its equivalent from a recognized institution in the area of graduate study or a closely related subject.
- A minimum B-minus average (GPA: 2.7 on a 4.3 scale).
- Applicants that have a degree in subject areas outside of engineering or those who do not meet the minimum GPA requirements, but have relevant engineering experience will be evaluated on an individual case-by-case basis.

- *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*

Graduates from any Canadian accredited undergraduate engineering program (or its equivalent) will be eligible to enrol in the GDip, including: Automotive Engineering, Civil Engineering, Electrical Engineering, Energy Engineering, Industrial Engineering, Manufacturing Engineering, Mechanical Engineering, Mechatronics Engineering, and Software Engineering.

To provide applicants looking to re-skill for the AI sector the potential opportunity to do the GDip in AI Engineering, applicants from non-engineering programs or those who do not meet the minimum GPA requirements will be considered on a case-by-case basis.

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

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*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 A 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; for researched-focused graduate programs, provide a clear indication of the nature and suitability of the major research requirements for degree completion; for professional graduate programs, 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*

Students complete four (4) graduate-level courses (12 credit hours total) from the list below, providing both theoretical understanding and practical training in AI-based engineering:

- ENGR 5010G Advanced Optimization
- ENGR 5775G Knowledge Disc. & Data Mining
- ENGR 5785G Real-Time Data Analytics IoT
- ENGR 5940G Intelligent Control Systems
- ENGR 5005G – Special Topics\*

*\*Registration in Special Topics course(s) are subject to approval by the Graduate Program Director, must be relevant to the GDip program scope, and must be confirmed as enabling the student to meet the program learning outcomes and degree-level expectations for the graduate diploma.*

Delivery mode for the courses will be hybrid. In addition to the traditional 12-week semester delivery.

The courses available in the program cover the state-of-the-art in AI engineering and are taught by instructors with subject matter expertise.

The diploma can be completed on a part-time or full-time basis and it provides a flexible pathway for professionals seeking to upskill in AI Engineering or transition into leadership roles in smart-industry settings.

All course deliverables will be designed to ensure that the students are meeting the program learning outcomes and support the achievement of Graduate Degree Level Expectations. Assessments will not only measure content knowledge but also foster advanced competencies expected at the graduate level.

*Provide evidence that each graduate student is required to take a minimum of two-thirds of the course requirements from among graduate-level courses*

All courses that are required for the GDip are graduate level.

*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 Faculty of Engineering and Applied Science (FEAS) is fully committed to Equity, Diversity, and Inclusion (EDI), including in all its courses and all its research activities.

The material covered in this program considers the development of AI software and systems that serve the public, so it is critical that EDI considerations are incorporated into the development of these systems, in particular ensuring these systems are accessible for all users. The courses, where appropriate, will cover these issues to ensure that students understand the importance of designing accessible systems.

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? [Insert Date Here]

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

N/A

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.*

N/A

## 8 Assessment of Teaching and Learning

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*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 be used to inform continuous program improvement*

The learning outcomes for the program are achieved through a combination of graduate-level course work, including assignments, exams, projects, and presentations.

Learning activities and materials in graduate courses will be carefully designed to ensure that learners are deliberately exposed to study, the majority of which is at, or informed by, the forefront of engineering theory and practice.

The courses have been designed to give students key knowledge in AI engineering as well as an opportunity for advanced development of generic skills such as communication and teamwork. In addition, there will be scholarly activities of independent investigation, report writing, and presentations.

Throughout the curriculum, learning activities are planned, and student progress will be monitored to ensure that safety, professional guidelines, and ethical responsibilities relevant to engineering are modelled, developed, and evaluated.

Student feedback surveys will be completed at the end of each course delivery to gather feedback. As well student performance in each course will be monitored yearly. The Graduate Program Director responsible for the program will review both the student feedback surveys and the student performance to ensure that the program is meeting its goals. In addition, the Industrial Advisory Committee will also provide feedback on the program delivery. Insights from these surveys and reviews will be documented and used to identify specific areas for improvement, inform curriculum adjustments, and guide enhancements to teaching and learning strategies.

Any required changes to curriculum, assessment methods, delivery, or administration are implemented as appropriate and feasible at the discretion of the Faculty Dean. Curricular changes are then submitted and documented through appropriate Faculty and University committees consistent with standard curricular change policies and procedures as identified in the IQAP.

To ensure sustained quality, program effectiveness will be assessed and monitored through the cyclical review process, providing actionable insights for continuous improvement. In addition to the external review every eight years, Ontario Tech's Academic Resource Committee (ARC) requires a brief report at program launch and a full report one-year after the launch of a new program. The one-year report will ask the program to review enrollment data, admission averages, and provide an analysis of successes and challenges encountered in the first year. If there are areas of concern and it is deemed necessary, ARC will make recommendations to enhance program effectiveness and student success and may request a subsequent report. If required, the subsequent 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 ARC's review, further documentation may be required of the program for ongoing monitoring.

## 9 Calendar Copy and Program Map(s)

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- *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*
- *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 B for the Calendar Copy for the program and Appendix C for the List of Program Courses and Descriptions.

## 10 Consultation

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- *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 Graduate Diploma in AI Engineering is designed to complement, rather than compete with, existing programs within the Faculty and across the University. By leveraging shared lectures with the Graduate ECE course offerings, the GDip enhances resource efficiency without diminishing the quality of graduate offerings.

Several discussions were held at the various levels of department and faculty.

As noted above, there will be no impact on other programs offered at Ontario Tech.

# 11 Resource Requirements

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## **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.*

As the program is leveraging the existing graduate ECE courses, it is anticipated there will be no major resource requirements. By leveraging existing graduate course offerings, the GDip enhances resource efficiency without diminishing the quality of graduate offerings.

***The resource requirements outlined in Section 11 have been reviewed by the Academic Resource Committee (ARC): 9 December 2025***  
*(date of review)*

## 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?*

*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.*

The program will be delivered by existing ECSE faculty members.

Please see Appendix D Faculty Information for a table detailing the list of faculty committed to the program and separate file for Curriculum Vitae (provided to the Quality Council for review).

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 the faculty hire be required, and are there additional criteria associated with the hiring requirement (e.g. enrolment levels, program growth, University or Faculty priorities)?

Since the course delivery will leverage the graduate ECE course offerings, no additional human resources will be required, unless the number of students enrolled reaches the point where more than one section of a given course needs to be offered. Details and timing of proposed hirings are coordinated and confirmed with the Provost's Office through regular operational conversations.

N/A

### **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.*

No TAs will be required unless the enrolment is large enough to warrant it.

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'.*

The program will leverage existing institutional resources and targeted supports, including access to modern facilities, technology-enabled classrooms, and research infrastructure. Dedicated student services, academic advising, and wellness initiatives will promote student well-being and resiliency, ensuring a supportive and inclusive learning environment.

Please see Appendix E 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.*

The institution provides robust information technology resources to support high-quality scholarship and research activities for graduate students. These include access to modern computing facilities, high-speed networks, secure data storage, and discipline-specific software to enhance teaching and learning. Existing spaces are equipped with technology-enabled classrooms and research infrastructure ensuring the program can be successfully implemented and sustained.

Please see Appendix F 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)?*

The program will leverage existing University IT infrastructure. Ontario Tech is a laptop university where students bring their own laptop devices and are provided access to a software portal where they can download any necessary software required for their courses, including a variety of engineering specific packages such as Python, Git, MATLAB, and other AI tools as required.

The hybrid delivery of the courses will make use of Ontario Tech's flexible hybrid classrooms that allow for synchronous delivery with active participation from students both in room and online and the ability for all students to see all other students.

## **11.4 Financial Support for Graduate Students**

*Provide evidence that financial assistance for students, including TA-ships where applicable, will be sufficient to ensure adequate quality and numbers of students.*

No financial assistance will be provided as this is a professional program.

## **11.5 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?*

The hybrid delivery of the courses and the leveraging with the current graduate course delivery will have minimal impact on classroom requirements.

No additional space requirements are required.

## 11.6 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 ([cique@ontariotechu.ca](mailto:cique@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 program does not impact any existing agreements Ontario Tech has with institutional and external partners. In addition, there are no inter-Faculty implications.

## 12 Closing Statements Regarding Program Quality

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- *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 GDip in AI Engineering has been designed to meet the demands of this rapidly growing sector. The Faculty has several professors (with also outside faculty members with graduate faculty status) with AI expertise who can deliver courses as needed. The program has been designed to meet the needs of the AI sector. The Faculty has a history of quality program delivery that will serve as a model for the delivery of this new program.

## Appendices

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*Please include at minimum the below. Additional Appendices may be added, as appropriate. Appendices should ultimately be listed below, attached as separate documents, and clearly labelled (A, B, C, etc.) in the order in which they are first mentioned in the document.*

Appendix A: Program Learning Outcome Alignment Map to DLEs, Courses, and Assessments

Appendix B: Calendar Copy

Appendix C: List of Program Courses and Descriptions for Existing Courses

Appendix D: Faculty Information

Appendix E: Learning Resources

Appendix F: Information Technology Resources

### **Items to be separate documents sent to CIQE:**

New Program Funding and Tuition form (for CIQE use only)

Budget Spreadsheet (for ARC use only)

Curriculum Vitae (for Quality Council use only)

**Graduate Diploma – AI Engineering**

| <b>PLO #</b> | <b>Program Learning Outcomes</b>                                                                                                                                                                   |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>PLO 1</b> | <b>Apply advanced concepts, principles, and theories in the field of AI engineering to analyze and solve complex engineering problems and practices.</b>                                           |
| <b>PLO 2</b> | <b>Utilize analytical, numerical, experimental, and interpretive skills in the field of AI Engineering.</b>                                                                                        |
| <b>PLO 3</b> | <b>Design and conduct engineering experiments to identify problems and opportunities for system analysis, design, improvement, and computational optimization in the field of AI engineering..</b> |
| <b>PLO 4</b> | <b>Describe the complexity of AI and exhibit comprehensive knowledge of fundamental principles and methodologies.</b>                                                                              |
| <b>PLO 5</b> | <b>Evaluate the social, professional, and ethical implications inherent in the advancement of research and applications within the field of AI.</b>                                                |
| <b>PLO 6</b> | <b>Demonstrate effective skills for oral and written communication, project management, and teamwork in the field of AI Engineering..</b>                                                          |
| <b>PLO 7</b> | <b>Develop strategies for continuous education and lifelong learning in the field of AI engineering.</b>                                                                                           |

## Graduate Diploma – AI Engineering

| Degree Level Expectation  |                                                 | Depth and Breadth of Knowledge                                                                                                               |                            | Research and Scholarship                                       |                                                       | Application of Knowledge   | Professional Capacity and Autonomy                                      | Awareness of Limits of Knowledge | Communication Skills                                              |                                  |
|---------------------------|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------------------------------------------------------------|-------------------------------------------------------|----------------------------|-------------------------------------------------------------------------|----------------------------------|-------------------------------------------------------------------|----------------------------------|
| DLE Description           |                                                 | A systematic understanding of knowledge, including, where                                                                                    |                            | A conceptual understanding and methodological competence that: |                                                       | Competence in the research | a) The qualities and transferable skills necessary for employment       | Cognizance of the complexity     | The ability to communicate ideas, issues and conclusions clearly. |                                  |
| Program Learning Outcomes |                                                 | PLO1                                                                                                                                         | PLO4                       | PLO2                                                           | PLO3                                                  | PLO1                       | PLO5                                                                    | PLO6                             | PLO5                                                              | PLO7                             |
| PLO Description           |                                                 | Apply advanced concepts,                                                                                                                     | Describe the complexity of | Utilize analytical, numerical,                                 | Design and conduct scientific experiments to identify | Apply advanced concepts,   | Evaluate the social, professional, and ethical implications inherent in | Develop strategies for           | Evaluate the social,                                              | Demonstrate effective skills for |
| Course No.                | Course Title                                    |                                                                                                                                              |                            |                                                                |                                                       |                            |                                                                         |                                  |                                                                   |                                  |
| ENGR 5010G                | Advanced Optimization                           | 3, 4, 7                                                                                                                                      |                            | 3, 4, 7                                                        | 4, 7                                                  | 4, 7                       |                                                                         | 3, 7                             |                                                                   | 3, 7                             |
| ENGR 5775G                | Knowledge Discovery and Data Mining             | 3, 7                                                                                                                                         | 3, 7                       | 3, 7                                                           | 3, 7                                                  | 3, 7                       | 3, 7                                                                    | 3, 7                             | 3, 7                                                              | 3, 7                             |
| ENGR 5785G                | Real-Time Data Analytics for Internet of Things | 3, 7                                                                                                                                         | 3, 7                       | 3, 7                                                           | 3, 7                                                  | 3, 7                       | 3, 7                                                                    | 3, 7                             | 3, 7                                                              | 3, 7                             |
| ENGR 5940G                | Intelligent Control Systems                     | 3, 7                                                                                                                                         | 3, 7                       | 3, 7                                                           | 3, 7                                                  | 3, 7                       | 3, 7                                                                    | 3, 7                             | 3, 7                                                              | 3, 7                             |
|                           |                                                 |                                                                                                                                              |                            |                                                                |                                                       |                            |                                                                         |                                  |                                                                   |                                  |
| Degree of Implementation: |                                                 | Assessments - Identify types of relevant assessments and number them (do not have to be in rank order); those listed below are only examples |                            |                                                                |                                                       |                            |                                                                         |                                  |                                                                   |                                  |
|                           | Introduced                                      | 1 - Test                                                                                                                                     |                            | 4 - Assignment                                                 |                                                       | 7 - Group project          |                                                                         |                                  |                                                                   |                                  |
|                           | Reinforced                                      | 2 - Exam                                                                                                                                     |                            | 5 - Essay                                                      |                                                       |                            |                                                                         |                                  |                                                                   |                                  |
|                           | Mastered                                        | 3 - Presentation                                                                                                                             |                            | 6 - Thesis                                                     |                                                       |                            |                                                                         |                                  |                                                                   |                                  |

## **AI Engineering, Graduate Diploma**

### **General Information**

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The Graduate Diploma (GDip) in AI Engineering incorporates Artificial Intelligence (AI) learning through practical, project-driven coursework centered on the development of AI-enabled software and systems. Throughout the program, students engage directly with contemporary AI engineering tools, platforms, and methodologies as they work on a range of engineering-focused use cases. All assignments and projects are integrated into the existing suite of graduate courses, leveraging current infrastructure and resources within the Faculty of Engineering and Applied Science. No additional facilities are required, ensuring a streamlined and sustainable delivery model. This learning structure not only strengthens students' technical proficiency in designing, implementing, and evaluating AI-based systems, but also enhances their professional skills in collaborative problem-solving, project management, and responsible technology development. Through existing courses, the diploma aligns closely with Ontario Tech University's strategic focus on artificial intelligence, preparing graduates to contribute effectively to emerging AI-driven industries and research initiatives.

### **Admission Requirements**

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In addition to the general admission requirements for graduate studies, applicants must meet the following program-specific requirements:

Minimum Academic Requirements for Graduate Diploma Programs:

- Hold a four-year honours degree or its equivalent from a recognized institution in the area of engineering or a closely related subject.
- A minimum B-minus average (GPA: 2.7 on a 4.3 scale).
- Applicants that have a degree in subject areas outside of engineering or those who do not meet the minimum GPA requirements, but have relevant engineering experience will be evaluated on an individual case-by-case basis.

Graduates from any Canadian accredited undergraduate engineering program (or its equivalent) will be eligible to enrol in the GDip, including: Automotive Engineering, Civil Engineering, Electrical Engineering, Energy Engineering, Industrial Engineering, Manufacturing Engineering, Mechanical Engineering, Mechatronics Engineering, and Software Engineering.

Note, the consideration of applicants from non-engineering programs or those who do not meet the minimum GPA requirements is to provide applicants looking to re-skill for the AI sector the potential opportunity to do the GDip in AI Engineering.

### **Part-time studies**

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To facilitate access to all potential students, part-time studies are permitted. In particular, engineers in industry may wish to pursue a graduate diploma program through part-time studies.

### **Graduate diploma requirements**

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or the graduate diploma, students must complete the four courses below for a total of 12 credits.

**Note:** Graduate diploma students are not permitted to take courses outside of their home program course listings for program credit. In addition, they may not take any senior fourth-year undergraduate courses from the Faculty of Engineering and Applied Science in lieu of a graduate course.

### **Course listings**

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- ENGR 5005G Special Topics\*
- ENGR 5775G Knowledge Disc. & Data Mining
- ENGR 5785G Real-Time Data Analytics IoT
- ENGR 5940G Intelligent Control Systems
- ENGR 5010G Advanced Optimization

\*upon approval by Graduate Program Director and relevant to the scope.

### **Program learning outcomes**

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

Program Learning Outcomes - AI Engineering, Graduate Diploma

## Appendix C - List of Program Courses and Course Descriptions

### List of Program Courses

The program consists of four graduate-level courses (12 credits total), selected from the following:

| Course Code | Course Name                   |                                               |
|-------------|-------------------------------|-----------------------------------------------|
| ENGR 5010G  | Advanced Optimization         | Existing Course - course description enclosed |
| ENGR 5775G  | Knowledge Disc. & Data Mining | Existing Course - course description enclosed |
| ENGR 5785G  | Real-Time Data Analytics IoT  | Existing Course - course description enclosed |
| ENGR 5940G  | Intelligent Control Systems   | Existing Course - course description enclosed |
| ENGR 5005G  | Special Topics                | Existing Course - course description enclosed |

#### **ENGR 5010G - Advanced Optimization**

The objective of this course is to understand the principles of optimization and its application to engineering problems. Topics covered include the steepest descent and Newton methods for unconstrained optimization; golden section, quadratic, cubic and inexact line searches; conjugate and quasi-Newton methods; the Fletcher-Reeves algorithm; fundamentals of constrained optimization theory; simplex methods for linear programming; modern interior-point methods; active-set methods and primal-dual interior point methods for quadratic and convex programming; semi-definite programming algorithms; sequential quadratic programming; and interior-point methods for non-convex optimization. In addition, implementation issues and current software packages/algorithms for optimization will be covered. Global optimization, including genetic algorithms and simulated annealing, will be introduced.

#### **ENGR 5775G - Knowledge Discovery and Data Mining**

This course covers the discovery of new knowledge using various data mining techniques on real-world datasets, and the current research directions represent the foundation 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.

#### **ENGR 5785G - Real-Time Data Analytics for Internet of Things**

The velocity, diversity of data types and sheer volumes of data that IoT (Internet of Things) devices collect present unique challenges on data analytics techniques to support real-time decision making. This requires new perspectives in data collection, processing and management flows to cater to such unique requirements. This course focuses on data analytics specific to real-time data streams in IoT environments and applications. The course begins by defining the IoT conceptual framework, outlines application domains and draws clear distinctions between IoT data processing and typical big data analytics. Themes to be covered: IoT data collection architectures, interactions between service models and human subjects, data preprocessing, feature engineering and extraction, statistical modelling and estimation methods, time series analysis, spatiotemporal modelling, multivariate time series forecasting, real-time streaming data pipelines, anomaly detection in real-time sensing, event detection and classification techniques, privacy and security in IoT scenarios, and dynamic access control for real-

time IoT.

**ENGR 5940G - Intelligent Control Systems**

With the advance of increasingly faster computing hardware and cheaper memory chips, computational intelligence, also known as a part of soft computation, is becoming more and more important in control engineering. This course will equip students with the essential knowledge and useful resources to solve some of the systems control problems not easily solved using conventional control methods. This course will cover fundamentals of fuzzy set theory, structures of fuzzy logic controllers, structures of neural networks, learning algorithms and genetic algorithms.

**ENGR 5005G - Special Topics**

Presents material in an emerging field or one not covered in regular offerings. This course may be taken more than once, provided the subject matter is substantially different.

## Appendix D – Faculty Information

Please include here only those currently at the institution and affiliated with the program. Examples in purple to be removed. **Where available, link each faculty name to their Research or Profile page on the website.**

| Name and Faculty Status/Rank | Terminal Degree | Home Faculty/Unit                          | Areas of Expertise                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------------------|-----------------|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Professor</b>             |                 |                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                              |                 |                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Associate Professor</b>   |                 |                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Akramul Azim                 | PhD             | Faculty of Engineering and Applied Science | <ul style="list-style-type: none"> <li>• Real-Time Systems</li> <li>• Embedded Software</li> <li>• Safety-Critical Systems</li> <li>• Internet of Things</li> <li>• Software Verification and Validation</li> <li>• Software Quality and Testing</li> <li>• Applied Machine Learning</li> </ul>                                                                                                                                                                                                                                                                              |
| Mohamed El-Darieby           | PhD             | Faculty of Engineering and Applied Science | <ul style="list-style-type: none"> <li>• Software Systems Engineering</li> <li>• Software Process Management</li> <li>• Software Analysis</li> <li>• Design</li> <li>• Computer Systems</li> <li>• Cloud computing</li> <li>• Internet of Things</li> <li>• Pervasive Computing</li> <li>• Data Engineering</li> <li>• Big Data</li> <li>• Artificial Intelligence</li> <li>• Applications areas</li> <li>• Connected and Autonomous Vehicles</li> <li>• Smart Agriculture</li> <li>• Intelligent Transportation Systems</li> <li>• Smart City and Infrastructure</li> </ul> |

|                            |     |                                            |                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------|-----|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Khalid Elgazzar            | PhD | Faculty of Engineering and Applied Science | <ul style="list-style-type: none"> <li>• Internet of things</li> <li>• Ubiquitous computing</li> <li>• Real-time data analytics</li> <li>• Distributed systems</li> <li>• Intelligent software systems</li> <li>• Mobile computing</li> <li>• Cloud and edge computing</li> </ul>                                                                  |
| Qusay Mahmoud              | PhD | Faculty of Engineering and Applied Science | <ul style="list-style-type: none"> <li>• software systems</li> <li>• web engineering</li> <li>• mobile computing</li> <li>• engineering education</li> </ul>                                                                                                                                                                                       |
| Masoud Makrehchi           | PhD | Faculty of Engineering and Applied Science | <ul style="list-style-type: none"> <li>• Natural Language Processing</li> <li>• Artificial Intelligence</li> <li>• Machine Learning</li> <li>• Text and Data Mining</li> <li>• Social Computing</li> <li>• Mining Social Networks and Complex Systems</li> <li>• Network Science</li> <li>• Moral AI</li> </ul>                                    |
| <b>Assistant Professor</b> |     |                                            |                                                                                                                                                                                                                                                                                                                                                    |
| Sanaa Alwidian             | PhD | Faculty of Engineering and Applied Science | <ul style="list-style-type: none"> <li>• Software Engineering</li> <li>• Goal-oriented Requirements Engineering</li> <li>• Model-based System Engineering</li> <li>• Software Evolution and Analysis</li> <li>• AI and its application to Software Engineering</li> <li>• Mobile Ad Hoc Networks</li> <li>• Natural Language Processing</li> </ul> |
| Naim Beigi-Mohammadi       | PhD | Faculty of Engineering and Applied Science | <ul style="list-style-type: none"> <li>• Adaptive software systems</li> <li>• Engineering autonomic management systems on cloud</li> </ul>                                                                                                                                                                                                         |

|           |     |                                            |                                                                                                                                                                                                                                                                                                                                          |
|-----------|-----|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |     |                                            | <ul style="list-style-type: none"> <li>• Applications of adaptive software systems in public safety and urban management</li> </ul>                                                                                                                                                                                                      |
| Hani Sami | PhD | Faculty of Engineering and Applied Science | <ul style="list-style-type: none"> <li>• Fog/Edge Computing</li> <li>• Vehicular Networks</li> <li>• Internet of Things</li> <li>• Autonomous Resource Management</li> <li>• Machine Learning</li> <li>• Reinforcement Learning</li> <li>• Large Language Models</li> <li>• Federated Learning</li> <li>• Multi-Agent Systems</li> </ul> |
| Kundi Yao | PhD | Faculty of Engineering and Applied Science | <ul style="list-style-type: none"> <li>• Software engineering</li> <li>• AIOps</li> <li>• Software maintenance</li> <li>• Software testing</li> <li>• Performance engineering</li> <li>• Software Engineering for AI</li> <li>• Mining software repositories</li> <li>• Empirical software engineering</li> </ul>                        |
|           |     |                                            |                                                                                                                                                                                                                                                                                                                                          |

## **Existing Non-Financial Student Support Services**

### **School of Graduate and Post-Doctoral Studies**

Quality graduate and postdoctoral education combines teaching, research, professional development, disciplinary community involvement and personal growth. It is by nature a shared responsibility between students, faculty members, the programs and a large number of support units, with overarching administration being provided by the School of Graduate and Postdoctoral Studies.

The School of Graduate and Postdoctoral Studies (SGPS) furthers the scholarly mission of the university by providing academic and administrative support to the university's postgraduate educational, research, innovation and international activities. Our responsibilities include graduate program development, graduate enrolment management, oversight of academic and quality standards, and the implementation of policies and practices that enhance graduate/postdoctoral scholarly success, career readiness and personal growth. SGPS supports prospective, new and current graduate students through many administrative services including, but not limited to, recruitment, admission, registration, funding and scholarships, orientation, professional development workshops and events, and processing of final theses, projects and papers. SGPS is a single-point-of-contact, multifunctional administrative unit tailored to the complete "life-cycle" of graduate students, providing coordinated support to students and all other stakeholders.

### **Student Life**

Ontario Tech University, as a relatively small campus community, has a centralized delivery model for many 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/>.

### **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.

## **Campus Libraries**

The Campus Libraries support teaching, learning, and research at Ontario Tech University with facilities, collections, and programming.

Library Collections:

- The Library's total collections budget is \$1.7 million.
- Collections include books, e-books, databases, journals, data and statistics, and multimedia materials

Support for teaching and learning:

- A dedicated librarian for each program who provides instruction, research consultations, and collection development
- Research guides for each of Ontario Tech's programs, as well as general guides for citation, copyright, and other broad topics
- Workshops and classes: custom in-class sessions, and general instruction sessions

- Three (3) online modules in Ontario Tech's learning management system, which professors can integrate seamlessly into their course shells

#### Research supports:

- Research consultations with subject librarians
- Extended support via the Library's virtual reference service
- Support for generative artificial intelligence: citation, copyright, and allowable use of library resources

#### Scholarly publishing supports:

- Research data management
- Publishing compliance with Tri-Council and other funders
- Support finding and creating open educational resources (OERs)
- Copyright advice and compliance information
- Support for authors, including reviewing author agreements
- Administration of APC waivers for faculty publishing in open access

#### Facilities:

- The Campus Libraries include the North Oshawa Library, which is the campus' main branch, and the Social Sciences, Humanities, and Education Library, which is located in downtown Oshawa
- The Library's locations include:
  - Extended library hours are available during peak season
  - Groups study rooms are available for student booking
  - Accessible workstations, and sit-stand desks
  - Computers and dual monitor workstations

## **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.



|                                                                                                                                                                       |                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| <b>Full name of proposed program (as it will appear on the student's transcript):</b><br>(e.g., Master of Arts in Education; Master of Science in Applied Bioscience) | Graduate Diploma in Digital Transformation in Advanced Manufacturing       |
| <b>Degree designation and short form:</b><br>(e.g., Master of Arts, M.A.; Master of Science, M.Sc.)                                                                   | GDip                                                                       |
| <b>Cost recovery program:</b>                                                                                                                                         | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No        |
| <b>Professional program:</b>                                                                                                                                          | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No        |
| <b>For graduate diplomas:</b>                                                                                                                                         | <input type="checkbox"/> Type 2 <input checked="" type="checkbox"/> Type 3 |
| <b>Faculty offering the program:</b><br>(i.e., where the program will be housed/site of academic authority)                                                           | Faculty of Engineering and Applied Science                                 |
| <b>Collaborating Faculty(ies) (if applicable):</b>                                                                                                                    | N/A                                                                        |
| <b>Collaborating institution(s) (if applicable):</b>                                                                                                                  | N/A                                                                        |
| <b>Program delivery location:</b>                                                                                                                                     | Ontario Tech North Campus and Hybrid                                       |
| <b>Proposed program start date (please change as needed):</b>                                                                                                         | Fall 2027                                                                  |
| <b>Program proponent/contact:</b>                                                                                                                                     | Sayyed Ali Hosseini                                                        |
| <b>Version date (please change as you edit this proposal):</b>                                                                                                        | May 14, 2026                                                               |
| <b>Date of Academic Council Approval:</b>                                                                                                                             |                                                                            |

# New Graduate 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 graduate 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.

**Brief description of the proposed program<sup>1</sup>:** (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 manufacturing sector is a key driver of the Canadian economy, with increasing demand for digitalization to enhance productivity, sustainability, and global competitiveness. The Digital Transformation in Advanced Manufacturing Graduate Diploma is designed for engineering graduates and professionals seeking to develop expertise in modern manufacturing systems and lead innovation in the sector. Through experiential, project-based coursework embedded within existing graduate courses, students are expected to gain experience on digital manufacturing technologies and tools, including computer-aided manufacturing, digital twins, robotics, and data-driven process optimization to address real-world manufacturing challenges. The program emphasizes smart manufacturing systems, automation, and digital design, while building both technical and professional competencies aligned with applied, technology-driven learning. Graduates will be equipped with the analytical and technical skills required to contribute to advanced, connected manufacturing environments and support the ongoing digital transformation of the industry.

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<sup>1</sup> 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 \(oucqa.ca\)](#))

# New Graduate Program Proposal

## Graduate Diploma in Digital Transformation in Advanced Manufacturing Faculty of Engineering and Applied Science

### 1 Program Abstract

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*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 manufacturing sector is key to the Canadian economy, with increasing demand for digital technologies to enhance productivity, sustainability, and global competitiveness. Digital transformation is a critical component in modernizing manufacturing systems, enabling more efficient, connected, and data-driven production environments. The growth in advanced manufacturing in Canada is significant, with a rising demand from industry for engineers and professionals trained in smart and digital manufacturing systems and applications. The Digital Transformation in Advanced Manufacturing Graduate Diploma is designed for recent graduates and industry professionals with an undergraduate engineering degree who want to develop expertise in advanced manufacturing and lead innovation in the sector. Through experiential, project-based coursework embedded within existing graduate courses, students will gain experience with key areas of advanced manufacturing, including computer-aided manufacturing, digital twins, robotics, and data-driven process optimization, as well as smart design, automation, and connected manufacturing systems.

## 2 Academic Rationale

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- *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*
- *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*

Building upon the success of the Manufacturing Engineering undergraduate program, the proposed GDip in Digital Transformation in Advanced Manufacturing has been designed for engineers in industry and recent engineering graduates who wish to pursue a career in the manufacturing sector. Students complete four (4) graduate-level courses (12 credit hours total), including ENGR 5223G Advanced Manufacturing Processes and Methodologies, ENGR 5271G Innovative Design Engineering, and two elective courses from the list below, providing both theoretical understanding and practical training in advanced manufacturing methodologies and digital tools:

### Core Courses:

- ENGR 5223G - Advanced Manufacturing Processes and Methodologies
- ENGR 5271G - Innovative Design Engineering

### Elective Courses:

- ENGR 5015G - Advanced Computer Aided Geometric Design
- ENGR 5243G - Mechanics and Dynamics of Machine Tools
- ENGR 5245G - Micro and Nano Manufacturing
- ENGR 5260G - Advance Robotics and Automation
- ENGR 5005G - Special Topics\*

\*Registration in Special Topics course(s) are subject to approval by the Graduate Program Director, must be relevant to the GDip program scope, and must be

confirmed as enabling the student to meet the program learning outcomes and degree-level expectations for the graduate diploma.

The diploma can be completed on a part-time or full-time basis and it provides a flexible pathway for professionals seeking to upskill in advanced manufacturing or transition into leadership roles in smart-industry settings.

The program name and nomenclature accurately reflect the program's scope and objectives. It signals a focused, graduate-level credential that builds on an engineering foundation while specializing in advanced manufacturing systems.

Innovative features of the program include integration with existing graduate courses and project-based learning for resource efficiency and academic continuity, graduate-level assignments emphasizing applied, industry-relevant problem-solving, and a curriculum aligned with high-impact practices that foster expertise in advanced manufacturing systems and digital transformation. These features ensure strong alignment between academic learning and real-world industrial needs in a rapidly evolving sector.

The Digital Transformation in Advanced Manufacturing Graduate Diploma addresses a critical skills gap in a discipline undergoing rapid transformation due to Industry 4.0 adoption, rapid technological innovation, and the increasing need for sustainable, data-driven, and highly efficient manufacturing systems.

*Describe any fields and/or any pathways from related programs. (Graduate programs are not required to have fields in order to highlight an area of strength or specialization within a program, nor are they required to provide specific pathways from programs at the college, bachelor, or other level.)*

N/A

### **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 act that created the University of Ontario Institute of Technology (Ontario Tech) states: "The objectives of the university are, (a) to provide undergraduate and postgraduate university programs with a primary focus on those programs that are innovative and responsive to the individual needs of students and to the market-driven needs of employers..." The proposed GDip in Digital Transformation in Advanced Manufacturing is a clear example of delivering on this objective. Industry has clearly demonstrated the need for engineers trained in Canada with knowledge of advanced manufacturing systems.

The vision of Ontario Tech is: "Embracing technology with a conscience to advance knowledge and promote sustainability." Advanced manufacturing is central to Canada's economic resilience and sustainability, enabling more efficient, low- waste, and resource-conscious production systems. Through digital transformation, manufacturing plays a key role in reducing environmental impact while improving productivity and global competitiveness. As demand for sustainable and intelligent production systems continues to grow, Industry 4.0 technologies offer viable solutions for modernizing manufacturing operations and supporting Canada's transition toward a more innovation-driven economy.

The proposed GDip aligns well with Ontario Tech's mission to "... equip future leaders to solve complex problems." Modern manufacturing systems are extremely complex. The proposed GDip will give graduates the skill-set needed by the manufacturing industry to allow them to make immediate contributions to this growing field.

In addition, the proposed GDip will be a unique offering amongst engineering programs in Canada, and Ontario Tech will be the only engineering school offering a GDip in Digital Transformation in Advanced Manufacturing.

## 4 Need, Demand, and Duplication

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*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 Faculty of Engineering and Applied Science originally engaged the Industrial Advisory Committee, School of Graduate and Post-Doctoral Studies (SPGS), and other stakeholders in the advanced manufacturing sector through ongoing consultations and industry engagement regarding the need to develop targeted graduate-level training in digital transformation and smart manufacturing systems. Despite Canada's strong manufacturing base and its critical role in economic productivity, there are currently no graduate-level programs in Digital Transformation in Advanced Manufacturing in Canada.

According to the recent report by the Innovation, Science and Economic Development Canada (ISED), manufacturing remains a foundational component of Canada's economy, employing approximately 1.7 million people (about 10% of the national workforce) and accounting for a significant share of national economic output and innovation activity. The sector also contributes \$114 billion in total compensation and represents approximately 42% of private-sector R&D activity, highlighting its central role in innovation and technological development. However, despite this importance, the sector continues to face challenges related to productivity, skills availability, and uneven technology adoption.

Canada's advanced manufacturing sector is undergoing rapid transformation driven by robotics, additive manufacturing, and data-driven technologies that are essential for improving efficiency, competitiveness, and sustainability. National strategy

directions emphasize accelerating technology adoption, strengthening workforce capabilities, and improving productivity to achieve ambitious growth targets, including increasing manufacturing sales toward \$1 trillion and exports toward \$540 billion by 2030. Achieving these outcomes requires a workforce with strong capabilities in digital tools, automation, and integrated manufacturing systems.

At the same time, the sector faces a persistent and well-documented skills gap. Industry analysis highlights that skilled and digitally skilled labour shortages remain one of the most significant barriers to growth, alongside uneven technology adoption and lagging productivity performance. These challenges are compounded by the rapid pace of technological change associated with Industry 4.0, which is reshaping how manufacturing systems are designed, operated, and optimized across global supply chains.

There is a clear need and demand from industry to train engineers and professionals with expertise in digital transformation in advanced manufacturing in Canada. Through consultations and academic development discussions, there has been repeated interest in upskilling graduates and professionals who did not receive exposure to modern digital manufacturing tools during their undergraduate studies. Projected enrollment is expected to support a steady cohort of learners annually, with potential for future collaboration with industry stakeholders to align training pathways with evolving workforce needs and national productivity goals.

- *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 GDip in Digital Transformation in Advanced Manufacturing is distinct from other programs at Ontario Tech. It is designed for individuals who may not have had significant exposure to contemporary advanced manufacturing and digital manufacturing knowledge during their undergraduate studies, and are now seeking to develop expertise in these areas to support their professional advancement.

The GDip will not affect enrolment in other programs at Ontario Tech.

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

The GDip utilizes the already existing graduate Mechanical and Mechatronics Engineering programs and also builds upon the undergraduate Manufacturing

Engineering program, so it is not a new area of study. However, it is a further/incremental step into expanding Ontario Tech's offerings that contribute to the training needs of the manufacturing sector.

- *Identify similar or complementary programs offered by other universities with specific reference to Ontario and Canadian examples.*
- *Provide additional overall comment on the justification for any duplication*

The GDip in Digital Transformation in Advanced Manufacturing is unique at the graduate level and there are no similar programs available in Ontario and in Canada. While no exact graduate diploma in Digital Transformation in Advanced Manufacturing currently exists in Ontario, there are related credentials and programs that signal demand in this field including Advanced Manufacturing Graduate Certificate in Sheridan College and Master of Engineering in Advanced Manufacturing at Humber College.

## 5 Enrolment Information

- *Please complete Table 1 and provide, in paragraph form, information regarding enrolment projections*
- *Please determine the academic year when the program enrollment 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 Enrollment by Academic and Program Year**

|                  | Academic Year |           |           |           |           |           |
|------------------|---------------|-----------|-----------|-----------|-----------|-----------|
|                  | 2026-2027     | 2027-2028 | 2028-2029 | 2029-2030 | 2030-2031 | 2031-2032 |
| Level of Study   |               |           |           |           |           |           |
| Diploma year 1   | 10            | 10        | 20*       | 20        | 20        | 20        |
| Total Enrollment | 10            | 10        | 20        | 20        | 20        | 20        |

Projected enrollment would initially be around 5-10 students per year. The planned steady-state is 20 students per year. Note these directed offerings may be offered in alternate formats other than the traditional 12-week semester.

## 6 Admission Requirements

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

Minimum Academic Requirements for Graduate Diploma Programs:

- Hold a four-year honours degree or its equivalent from a recognized institution in the area of graduate study or a closely related subject.
- A minimum B-minus average (GPA: 2.7 on a 4.3 scale).
- Applicants that have a degree in subject areas outside of engineering or those who do not meet the minimum GPA requirements, but have relevant engineering experience will be evaluated on an individual case-by-case basis.
- *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*

Graduates from any Canadian accredited undergraduate engineering program (or its equivalent) will be eligible to enrol in the GDip, including Automotive Engineering, Industrial Engineering, Manufacturing Engineering, Mechanical Engineering and Mechatronics Engineering.

To provide applicants looking to re-skill for the manufacturing sector the potential opportunity to do the GDip in Digital Transformation in Advanced Manufacturing, applicants from non-engineering programs or those who do not meet the minimum GPA requirements will be considered on a case-by-case basis.

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

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*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 A 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; for researched-focused graduate programs, provide a clear indication of the nature and suitability of the major research requirements for degree completion; for professional graduate programs, 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 program requires the completion of four (4) graduate-level courses (12 credit hours in total) including ENGR 5223G Advanced Manufacturing Processes and Methodologies, ENGR 5271G Innovative Design Engineering, and two elective courses from the list below, providing both theoretical understanding and advanced training in smart manufacturing methodologies and digital tools:

Core Courses:

- ENGR 5223G - Advanced Manufacturing Processes and Methodologies
- ENGR 5271G - Innovative Design Engineering

Elective Courses:

- ENGR 5015G - Advanced Computer Aided Geometric Design
- ENGR 5243G - Mechanics and Dynamics of Machine Tools
- ENGR 5245G - Micro and Nano Manufacturing
- ENGR 5260G - Advance Robotics and Automation
- ENGR 5005G - Special Topics\*

\*Registration in Special Topics course(s) are subject to approval by the Graduate Program Director, must be relevant to the GDip program scope, and must be confirmed as enabling the student to meet the program learning outcomes and degree-level expectations for the graduate diploma.

Delivery mode for the selected four courses will be hybrid. In addition to the traditional 12-week semester delivery, the courses may be delivered in compressed time formats to meet the needs of industry partners.

To facilitate access to all potential students, part-time studies are permitted. In particular, engineers in industry may wish to pursue a graduate diploma program through part-time studies.

The courses available in the program cover the state-of-the-art in advanced manufacturing and are taught by instructors with subject matter expertise. The courses were developed in conjunction with subject matter experts from industry. An Industrial Advisory Committee made up of representatives from the manufacturing industry will help ensure the courses remain relevant and current.

All course deliverables will ensure that the students are meeting the program learning outcomes and support the achievement of Graduate Degree Level Expectations (available in Appendix A). Assessments will not only measure content knowledge but also foster advanced competencies expected at the graduate level.

*Provide evidence that each graduate student is required to take a minimum of two-thirds of the course requirements from among graduate-level courses*

All courses that are required for the GDip are graduate level.

*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 Faculty of Engineering and Applied Science (FEAS) is fully committed to Equity, Diversity, and Inclusion (EDI), including in all its courses and all its research activities. The material covered in this program considers the development of manufacturing systems that serve the public, so it is critical that EDI considerations are incorporated into the development of these systems ensuring these systems are accessible for all users. The courses, where appropriate, will cover these issues to ensure that students understand the importance of designing accessible systems.

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? N/A

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

N/A

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.*

N/A

## 8 Assessment of Teaching and Learning

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*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 be used to inform continuous program improvement*

The learning outcomes for the program are achieved through a combination of graduate-level course work, including assignments, exams, projects, and presentations.

Learning activities and materials in graduate courses will be carefully designed to ensure that learners are deliberately exposed to study, the majority of which is at, or informed by, the forefront of engineering theory and practice.

The courses have been designed to give students key knowledge in advanced manufacturing as well as an opportunity for advanced development of generic skills such as communication and teamwork. In addition, there will be scholarly activities of independent investigation, report writing, and presentations.

Throughout the curriculum, learning activities are planned, and student progress will be monitored to ensure that safety, professional guidelines, and ethical responsibilities relevant to engineering are modelled, developed, and evaluated.

The courses available in the program cover the state-of-the-art in digital transformation in advanced manufacturing and are taught by instructors with subject matter expertise. The courses were developed in conjunction with subject matter experts from industry. An Industrial Advisory Committee made up of representatives from the manufacturing industry will help ensure the courses remain relevant and current.

Student feedback surveys will be completed at the end of each course delivery to gather feedback. As well student performance in each course will be monitored yearly. The Graduate Program Director responsible for the program will review both the student feedback surveys and the student performance to ensure that the

program is meeting its goals. In addition, the Industrial Advisory Committee will also provide feedback on the program delivery. Insights from these surveys and reviews will be documented and used to identify specific areas for improvement, inform curriculum adjustments, and guide enhancements to teaching and learning strategies.

Any required changes to curriculum, assessment methods, delivery, or administration are implemented as appropriate and feasible at the discretion of the Faculty Dean. Curricular changes are then submitted and documented through appropriate Faculty and University committees consistent with standard curricular change policies and procedures as identified in the IQAP.

To ensure sustained quality, program effectiveness will be assessed and monitored through the cyclical review process, providing actionable insights for continuous improvement. In addition to the external review every eight years, Ontario Tech's Academic Resource Committee (ARC) requires a brief report at program launch and a full report one-year after the launch of a new program. The one-year report will ask the program to review enrollment data, admission averages, and provide an analysis of successes and challenges encountered in the first year. If there are areas of concern and it is deemed necessary, ARC will make recommendations to enhance program effectiveness and student success and may request a subsequent report. If required, the subsequent 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 ARC's review, further documentation may be required of the program for ongoing monitoring.

## 9 Calendar Copy and Program Map(s)

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- *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*
- *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 B for the Calendar Copy for the program and Appendix C for the List of Program Courses and Descriptions.

## 10 Consultation

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- *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*

Consultations were held within the Faculty of Engineering and Applied Science, including discussions with the Graduate Program Directors, department faculty, and the Dean's Office. Input from the School of Graduate and Postdoctoral Studies (SGPS) will ensure alignment with Ontario Tech's graduate credential framework.

The Office of the Registrar and the SPGS were both consulted in the development of this program. No issues were raised.

As noted above, there will be no impact on other programs offered at Ontario Tech.

## 11 Resource Requirements

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### **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.*

As the program is leveraging the existing graduate engineering courses, it is anticipated there will be no major resource requirements. By leveraging shared graduate engineering course offerings, the GDip enhances resource efficiency without diminishing the quality of graduate course offerings.

Graduate-level course deliverables ensure academic rigor and differentiation, maintaining clear boundaries between credential levels.

***The resource requirements outlined in Section 11 have been reviewed by the Academic Resource Committee (ARC): 9 December 2025***  
*(date of review)*

## 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?*

*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 D Faculty Information for a table detailing the list of faculty committed to the program and a separate file for Curriculum Vitae (provided to the Quality Council for review).

The program will be delivered by three existing faculty members in the Faculty of Engineering and Applied Science with advanced manufacturing engineering expertise including Ahmad Barari, Remon Pop-Iliev, Amirkianoosh Kiani, and Jana Abou-Ziki.

Some courses may be taught by sessional instructors with relevant expertise.

There is no supervision of experiential learning opportunities in this 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 the faculty hire be required, and are there additional criteria associated with the hiring requirement (e.g. enrolment levels, program growth, University or Faculty priorities)?*

Since the course delivery will leverage the graduate engineering course offerings, no additional human resources will be required, unless the number of students enrolled reaches the point where more than one section of a given course needs to be offered. Details and timing of proposed hirings are coordinated and confirmed with the Provost's Office through regular operational conversations.

### **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.*

No. TAs will be required unless the enrolment is large enough to warrant it (exceeds 40-50 students).

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.*

The program will leverage existing institutional resources and targeted supports, including access to modern facilities, technology-enabled classrooms, and research infrastructure. Dedicated student services, academic advising, and wellness initiatives will promote student well-being and resiliency, ensuring a supportive and inclusive learning environment.

Please see Appendix E 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.*

The institution provides robust information technology resources to support high-quality scholarship and research activities for both undergraduate and graduate students. These include access to modern computing facilities, high-speed networks, secure data storage, and discipline-specific software to enhance teaching and learning. Existing spaces are equipped with technology-enabled classrooms and research infrastructure ensuring the program can be successfully implemented and sustained.

Please see Appendix F 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)?*

The program will utilize existing University IT infrastructure. Ontario Tech is a laptop university where students bring their own laptop devices and are provided access to a software portal where they can download any necessary software required for their courses, including a variety of engineering specific packages such as SolidWorks, Siemens NX, Tecnomatix, Hyperworks, MATLAB/Simulink, Fusion 360, and Nastran.

The hybrid delivery of the courses will make use of Ontario Tech's flexible hybrid classrooms that allow for synchronous delivery with active participation from students both in room and online and the ability for all students to see all other students.

## **11.4 Financial Support for Graduate Students**

*Provide evidence that financial assistance for students, including TA-ships where applicable, will be sufficient to ensure adequate quality and numbers of students.*

No financial assistance will be provided as this is a professional program.

## **11.5 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?*

The hybrid delivery of the courses and the leveraging with the existing graduate engineering course delivery will have minimal impact on classroom requirements.

No additional space requirements are required.

## 11.6 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 ([cique@ontariotechu.ca](mailto:cique@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 program does not impact any existing agreements Ontario Tech has with institutional and external partners. In addition, there are no inter-Faculty implications.

## 12 Closing Statements Regarding Program Quality

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- *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 GDip in Digital Transformation in Advanced Manufacturing has been designed in consultation with experts from the Industry Advisory Committee and the SPGS to meet the demands of this rapidly growing sector. The faculty has several professors with manufacturing expertise as well as access to a slate of industry experts from our partner companies who can consult with the courses delivery as needed. The program has been designed to meet the needs of the manufacturing sector. The faculty has a history of quality program delivery that will serve as a model for the delivery of this new program.

## Appendices

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*Please include at minimum the below. Additional Appendices may be added, as appropriate. Appendices should ultimately be listed below, attached as separate documents, and clearly labelled (A, B, C, etc.) in the order in which they are first mentioned in the document.*

Appendix A: Program Learning Outcome Alignment Map to DLEs, Courses, and Assessments

Appendix B: Calendar Copy

Appendix C: List of Program Courses and Descriptions for Existing Courses

Appendix D: Faculty Information

Appendix E: Learning Resources

Appendix F: Information Technology Resources

**Items to be separate documents sent to CIQE:**

New Program Funding and Tuition form (for CIQE use only)

Budget Spreadsheet (for ARC use only)

Curriculum Vitae (for Quality Council use only)

**Graduate Diploma – Digital Transformation in Advanced Manufacturing**

| <b>PLO #</b> | <b>Program Learning Outcomes</b>                                                                                                                                                                                                                                                                      |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>PLO 1</b> | <b>Advanced Manufacturing Technologies Application - Apply emerging technologies such as robotics, additive manufacturing, Digital twins, IoT and Data Analytics and Decision-Making tools to improve production efficiency, flexibility, and quality.</b>                                            |
| <b>PLO 2</b> | <b>Digital Strategy Development - Evaluate and implement digital transformation strategies aligned with advanced manufacturing goals, integrating business objectives with emerging technologies.</b>                                                                                                 |
| <b>PLO 3</b> | <b>Smart Systems Integration and Process Optimization - Integrate digital systems across lean manufacturing principles and other processes/operations, to enable smooth information flow and smart factory environments leading to optimized processes, reduced waste, and enhanced productivity.</b> |
| <b>PLO 4</b> | <b>Cybersecurity and Risk Management - Evaluate and mitigate cybersecurity risks in digitally connected manufacturing systems while ensuring data integrity, privacy, and operational continuity.</b>                                                                                                 |
| <b>PLO 5</b> | <b>Communications and Life Long Learning - Communicate complex manufacturing principles and issues clearly to both technical and non-technical audiences. Explain the importance of continuing professional education and the strategies necessary for lifelong learning in the discipline.</b>       |
| <b>PLO 6</b> | <b>Ethical Practices - Assess and articulate the environmental and ethical impacts of digital transformation initiatives and implement responsible manufacturing solutions.</b>                                                                                                                       |

Graduate Diploma – Digital Transformation in Advanced Manufacturing

Graduate Diploma in Digital Transformation in Advanced Manufacturing

| Graduate Degree Level Expectations |                                                    | Depth and Breadth of Knowledge |     |     |  | Research and Scholarship |       |       |  | Level of Application of Knowledge |       |     | Professional Capacity/ Autonomy |     |  | Level of Communication Skills |  |  | Awareness of Knowledge Limits |     |  |
|------------------------------------|----------------------------------------------------|--------------------------------|-----|-----|--|--------------------------|-------|-------|--|-----------------------------------|-------|-----|---------------------------------|-----|--|-------------------------------|--|--|-------------------------------|-----|--|
| Program Learning Outcomes          |                                                    | LO1                            | LO2 | LO3 |  | LO1                      | LO2   | LO3   |  | LO1                               | LO2   | LO3 | LO2                             | LO4 |  | LO5                           |  |  | LO5                           | LO6 |  |
| Course No.                         | Course Title                                       |                                |     |     |  |                          |       |       |  |                                   |       |     |                                 |     |  |                               |  |  |                               |     |  |
| ENGR 5223G                         | Advanced Manufacturing Processes and Methodologies | 1,2                            | 1,2 | 1,2 |  | 4                        | 4     | 4     |  | 1,2                               | 1,2   | 1,2 | 14                              |     |  | 3                             |  |  |                               | 4   |  |
| ENGR 5243G                         | Mechanics and Dynamics of Machine Tools            | 1,2                            |     | 1,2 |  | 3,4                      |       | 3,4   |  | 1,2                               |       | 1,2 |                                 |     |  |                               |  |  |                               |     |  |
| ENGR 5245G                         | Micro and Nano Manufacturing                       | 1                              |     | 1   |  | 3,4                      |       | 3,4   |  | 1                                 |       | 1   |                                 |     |  |                               |  |  |                               |     |  |
| ENGR 5271G                         | Innovative Design Engineering                      | 1                              | 1   | 1   |  | 3,4,5                    | 3,4,5 | 3,4,5 |  | 1,2                               | 1,2   | 1,2 | 3,5                             | 3,5 |  | 3,4,5                         |  |  | 4                             |     |  |
| ENGR 5015G                         | Advanced Computer Aided Geometric Design           | 1,2                            | 1,2 |     |  | 3,4                      | 3,4   |       |  | 1,2,4                             | 1,2,4 |     |                                 |     |  | 3                             |  |  |                               |     |  |
| ENGR 5260G                         | Advance Robotics and Automation                    | 1                              | 1   |     |  | 3,4                      | 3,4   |       |  | 1,4                               | 1,4   |     | 3,6                             |     |  |                               |  |  |                               |     |  |
| ENGR 5005G                         | Sp Tp: Digital Twin Engineering                    | 1,2                            | 1,2 | 1,2 |  | 3,4                      | 3,4   | 3,4   |  | 1,2                               | 1,2   | 1,2 | 3,5                             | 3,5 |  | 3,5                           |  |  |                               |     |  |
|                                    |                                                    |                                |     |     |  |                          |       |       |  |                                   |       |     |                                 |     |  |                               |  |  |                               |     |  |
|                                    |                                                    |                                |     |     |  |                          |       |       |  |                                   |       |     |                                 |     |  |                               |  |  |                               |     |  |
|                                    |                                                    |                                |     |     |  |                          |       |       |  |                                   |       |     |                                 |     |  |                               |  |  |                               |     |  |
|                                    |                                                    |                                |     |     |  |                          |       |       |  |                                   |       |     |                                 |     |  |                               |  |  |                               |     |  |
|                                    |                                                    |                                |     |     |  |                          |       |       |  |                                   |       |     |                                 |     |  |                               |  |  |                               |     |  |
|                                    |                                                    |                                |     |     |  |                          |       |       |  |                                   |       |     |                                 |     |  |                               |  |  |                               |     |  |
|                                    |                                                    |                                |     |     |  |                          |       |       |  |                                   |       |     |                                 |     |  |                               |  |  |                               |     |  |
|                                    |                                                    |                                |     |     |  |                          |       |       |  |                                   |       |     |                                 |     |  |                               |  |  |                               |     |  |

| Degee of Implementation: |  | Assessment Legend: |              |  |  |   |              |  |  |
|--------------------------|--|--------------------|--------------|--|--|---|--------------|--|--|
| Introduced               |  | 1                  | Exam         |  |  | 5 | Case Studies |  |  |
| Reinforced               |  | 2                  | Assignment   |  |  | 6 | Proposal     |  |  |
| Mastered                 |  | 3                  | Presentation |  |  |   |              |  |  |
|                          |  | 4                  | Project      |  |  |   |              |  |  |

# Digital Transformation in Advanced Manufacturing, Graduate Diploma

## **General Information**

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The Graduate Diploma (GDip) in Digital Transformation in Advanced Manufacturing is intended for engineering graduates and professionals seeking to develop expertise in modern manufacturing systems and to lead innovation in the sector. As a key driver of the Canadian economy, the manufacturing industry increasingly requires digitalization to enhance productivity, sustainability, and global competitiveness. This program prepares graduates to meet these evolving demands.

The program emphasizes smart manufacturing systems, automation, and digital design, while building both technical and professional competencies through applied, technology-driven learning. Graduates will develop the analytical and technical skills required to contribute to advanced, interconnected manufacturing environments and support the ongoing digital transformation of the industry.

Designed for both recent graduates and industry professionals holding an undergraduate degree in engineering or a related field, the program equips students with the foundational knowledge required to enter or advance in the manufacturing sector. Students gain a combination of theoretical understanding and practical training in advanced manufacturing methodologies and digital tools.

The program offers a range of courses that enable students to tailor their studies to specific interests and career objectives. Areas of study include digital manufacturing technologies and tools, such as computer-aided manufacturing, digital twins, robotics, and data-driven process optimization, with an emphasis on addressing real-world manufacturing challenges.

The diploma may be completed on either a full-time or part-time basis and is fully stackable into the Master of Applied Science (MASc) or Master of Engineering (MEng) in Mechanical Engineering programs. It provides a flexible pathway for professionals seeking to enhance their expertise in advanced manufacturing or to transition into leadership roles within digitally enabled industrial environments.

## **Admission Requirements**

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In addition to the general admission requirements for graduate studies, applicants must meet the following program-specific requirements:

Minimum Academic Requirements for Graduate Diploma Programs:

- Hold a four-year honours degree or its equivalent from a recognized institution in the area of engineering or a closely related subject.
- A minimum B-minus average (GPA: 2.7 on a 4.3 scale).

- Applicants that have a degree in subject areas outside of engineering or those who do not meet the minimum GPA requirements, but have relevant engineering experience will be evaluated on an individual case-by-case basis.

Graduates from any Canadian accredited undergraduate engineering program (or its equivalent) will be eligible to enrol in the GDip, including: Automotive Engineering, Industrial Engineering, Manufacturing Engineering, Mechanical Engineering and Mechatronics Engineering.

Note, the consideration of applicants from non-engineering programs or those who do not meet the minimum GPA requirements is to provide applicants looking to re-skill for the digital manufacturing sector the potential opportunity to do the GDip in Digital Transformation in Advanced Manufacturing.

### **Part-time studies**

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To facilitate access to all potential students, part-time studies are permitted. In particular, engineers in industry may wish to pursue a graduate diploma program through part-time studies.

### **Graduate diploma requirements**

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For the graduate diploma, students must complete the four courses below for a total of 12 credits, including ENGR 5223G Advanced Manufacturing Processes and Methodologies, ENGR 5271G Innovative Design Engineering, and two elective courses from the below list.

**Note:** Graduate diploma students are not permitted to take courses outside of their home program course listings for program credit. In addition, they may not take any senior fourth-year undergraduate courses from the Faculty of Engineering and Applied Science in lieu of a graduate course.

### **Course listings**

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Core Courses:

- ENGR 5223G - Advanced Manufacturing Processes and Methodologies
- ENGR 5271G - Innovative Design Engineering

Elective Courses:

- ENGR 5243G - Mechanics and Dynamics of Machine Tools
- ENGR 5245G - Micro and Nano Manufacturing

- ENGR 5015G - Advanced Computer Aided Geometric Design
- ENGR 5260G - Advanced Robotics and Automation
- ENGR 5005G - Special Topics\*

\*upon approval by Graduate Program Director and relevant to the scope.

### **Program learning outcomes**

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

Program Learning Outcomes - Digital Transformation in Advanced Manufacturing,  
Graduate Diploma

## Appendix C - List of Program Courses and Course Descriptions

### List of Program Courses

The program consists of four graduate-level courses (12 credits total), including ENGR 5223G Advanced Manufacturing Processes and Methodologies, ENGR 5271G Innovative Design Engineering, and two elective courses from the list below selected from the following:

| Course Code | Course Name                                        |                                               |
|-------------|----------------------------------------------------|-----------------------------------------------|
| ENGR 5223G  | Advanced Manufacturing Processes and Methodologies | Existing Course - course description enclosed |
| ENGR 5271G  | Innovative Design Engineering                      | Existing Course - course description enclosed |
| ENGR 5015G  | Advanced Computer Aided Geometric Design           | Existing Course - course description enclosed |
| ENGR 5243G  | Mechanics and Dynamics of Machine Tools            | Existing Course - course description enclosed |
| ENGR 5245G  | Micro and Nano Manufacturing                       | Existing Course - course description enclosed |
| ENGR 5260G  | Advance Robotics and Automation                    | Existing Course - course description enclosed |
| ENGR 5005G  | Special Topics                                     | Existing Course - course description enclosed |

### **ENGR 5223G - Advanced Manufacturing Processes and Methodologies**

This course is about implementing advanced manufacturing processes and methodologies into production operations as the strategy for achieving reductions in inventory costs, faster manufacturing turnaround times, fewer faulty products and using less floor space for production. It addresses the next generation manufacturing and production techniques that take advantage of the opportunities offered by selective use of new materials and emerging technologies for high efficient machining, coating, forming, assembly operations, etc. Virtual manufacturing methodologies and multi-objective optimization in terms of design, performance, safety, cost and environment as well as advanced manufacturing methodologies, such as lean manufacturing, are also addressed.

### **ENGR 5271G - Innovative Design Engineering**

This course introduces students to the theory, tools and techniques of innovative design engineering and creative problem-solving. The design process in engineering is considered and addressed by stressing its most creative aspects, especially problem definition and concept generation, through emphasis on current industry best practices. A short history of creative engineering solutions, effective methods for communicating new ideas, techniques for creative solutions, and cost effectiveness and tools for innovation are considered and thoroughly addressed. The course involves fundamental coverage of principles of inventive problem solving (TRIZ). TRIZ provides a dialectic way of thinking, i.e., to understand the problem as a system, to make an image of the ideal solution first and to solve contradictions. The course involves hands-on use of computer-aided design (CAD) tools and project management software in engineering applications.

**ENGR 5015G - Advanced Computer Aided Geometric Design**

This course will cover advanced computational topics in the design of geometric objects and various techniques for mathematically representing, modeling and inspecting complex curves and surfaces. The course provides an advanced study of geometric modeling and the required methods to describe the shape of complex three-dimensional objects for engineering design and computer-aided engineering applications. The course also covers the engineering applications of curves and surface geometric modeling, reconstruction of 3-D CAD models from digital scans, accuracy and robustness of geometric computations, geometric tolerances and the principles of coordinate metrology-based surface inspection methods.

**ENGR 5243G - Mechanics and Dynamics of Machine Tools**

This course covers the advanced mechanics and dynamics of machine tools, including applications to automotive machining processes. The course includes advanced topics in the theory of metal removal, mechanics of chip formation, forces, statics and dynamics of machine tool structures. Also, self-excited vibration (chatter), sensor assisted machining and high speed machining of materials will be covered.

**ENGR 5245G - Micro and Nano Manufacturing**

This course will cover principles of fabrication and characterization technologies in micro and nano scale to learn major applications and principles of micro/nano systems in photonics, ICs and MEMS, and biomedical devices. The course will address specific techniques, such as photolithography, thin-film deposition, Chemical Vapor Deposition (CVD), Physical Vapor Deposition (PVD), advanced lithography, etc. The optical, electron and probe microscopy techniques for imaging at the micro and nano scale will be discussed. Also, the current status and future of micro and nano manufacturing in the field of microelectronics, photonics and biomedical engineering will be discussed in this course.

**ENGR 5260G - Advanced Robotics and Automation**

This course builds upon the knowledge students have gained in a first robotics course to cover more advanced kinematics topics and their application to more complex robotic systems such as redundant manipulators and parallel mechanisms. Topics covered include point, direction, line and screw motion descriptions; homogeneous transformations; line and screw coordinates; quaternion representations; inverse displacement solutions by analytic, root finding, hybrid and numerical methods; appropriate frames of reference; screw systems and transforms; local and globally optimum solutions of redundant rates; over determined and near degenerate solutions; singularity analysis; and parallel manipulator kinematics.

**ENGR 5005G - Special Topics**

Presents material in an emerging field or one not covered in regular offerings. This course may be taken more than once, provided the subject matter is substantially different.

## Appendix D – Faculty Information

Please include here only those currently at the institution and affiliated with the program. Examples in purple to be removed.

Where available, link each faculty name to their Research or Profile page on the website.

| Name and Faculty Status/Rank | Terminal Degree | Home Faculty/Unit | Areas of Expertise                                                                                                                                                                                                                                                                                                  | Supervisory Privileges and Role in New Program<br>(Note if faculty will be teaching and/or supervising in the program; indicate primary supervisor by asterisks) | Total Graduate Teaching (including New Program)<br>(Note in bold type if faculty is a core course developer for the program) |
|------------------------------|-----------------|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Jana Abou Ziki               | PhD             | FEAS              | <ul style="list-style-type: none"> <li>Spark Assisted Chemical engraving (SACE)</li> <li>Hybrid additive-subtractive micro-manufacturing</li> <li>Surface functionalization</li> <li>Microfluidic devices</li> <li>Advanced manufacturing</li> <li>Electroplating and electroforming of 3D printed parts</li> </ul> | Graduate Faculty*<br>Teaching core courses                                                                                                                       | 3-4 courses<br>(undergraduate/graduate level)                                                                                |
| Ali Sayyed Hosseini          | PhD             | FEAS              | <ul style="list-style-type: none"> <li>Additive Manufacturing</li> <li>Subtractive Manufacturing</li> <li>Modeling and Simulation of Machining Operations</li> <li>Machining Difficult-to-Cut Materials</li> <li>Surface Integrity</li> <li>Material Behavior</li> <li>Design and Optimization</li> </ul>           | Graduate Faculty*<br>Teaching core courses                                                                                                                       | 3-4 courses<br>(undergraduate/graduate level)                                                                                |
| Amirkianoosh Kiani           | PhD             | FEAS              | <ul style="list-style-type: none"> <li>Laser Materials Processing</li> <li>Micro/Nano Manufacturing</li> <li>Nano Energy Materials</li> <li>Nano Opto-Electronic Materials</li> </ul>                                                                                                                               | Graduate Faculty*<br>Teaching core courses                                                                                                                       | 3-4 courses<br>(undergraduate/graduate level)                                                                                |

|                 |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |                                               |
|-----------------|-----|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------------------------|
|                 |     |      | <ul style="list-style-type: none"> <li>• Nano Sensing Materials</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                            |                                               |
| Remon Pop-Iliev | PhD | FEAS | <ul style="list-style-type: none"> <li>• Processing Functionally Graded Polymeric Composites and Nanocomposites</li> <li>• Fabrication of Biodegradable Nanocomposites for Bone Tissue Regeneration</li> <li>• Manufacturing Multifunctional Nanocomposite Fibers</li> <li>• Rapid Rotational Foam Molding</li> <li>• Innovative Design Engineering Education</li> </ul>                                                                                                                                                                                                                       | Graduate Faculty*<br>Teaching core courses | 3-4 courses<br>(undergraduate/graduate level) |
| Ahmad Barari    | PhD | FEAS | <ul style="list-style-type: none"> <li>• Advanced Manufacturing Technologies</li> <li>• Digital Manufacturing</li> <li>• Precision Manufacturing</li> <li>• Measurement Uncertainty</li> <li>• 3D Coordinate Metrology</li> <li>• Additive Manufacturing and Rapid Prototyping of Sculptured Surfaces</li> <li>• Manufacturing Surface Integrity</li> <li>• Surface Quality, Surface Tribology</li> <li>• Reverse Engineering</li> <li>• Surface Reconstruction</li> <li>• Structural Design Optimization</li> <li>• Topology Optimization</li> <li>• FEA-Based Design Optimization</li> </ul> | Graduate Faculty*<br>Teaching core courses | 3-4 courses<br>(undergraduate/graduate level) |

|               |     |      |                                                                                                                                                                                                                                                                                                                                         |                                            |                                               |
|---------------|-----|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------------------------|
| Scott Nokleby | PhD | FEAS | <ul style="list-style-type: none"> <li>• Robotics</li> <li>• Mechatronics</li> <li>• Mechanisms</li> <li>• Automation</li> <li>• Advanced Kinematics of Robots and Mechanisms</li> <li>• Redundant Manipulator Systems</li> <li>• Mobile-Manipulator Systems</li> <li>• Mechanism and Robot Design</li> <li>• Optimal Design</li> </ul> | Graduate Faculty*<br>Teaching core courses | 3-4 courses<br>(undergraduate/graduate level) |
| Haoxiang Lang | PhD | FEAS | <ul style="list-style-type: none"> <li>• Mechatronics</li> <li>• Autonomous Robotics</li> <li>• Visual Servoing and Advanced Controls</li> <li>• Machine Learning</li> </ul>                                                                                                                                                            | Graduate Faculty*<br>Teaching core courses | 3-4 courses<br>(undergraduate/graduate level) |

## **Existing Non-Financial Student Support Services**

### **School of Graduate and Post-Doctoral Studies**

Quality graduate and postdoctoral education combines teaching, research, professional development, disciplinary community involvement and personal growth. It is by nature a shared responsibility between students, faculty members, the programs and a large number of support units, with overarching administration being provided by the School of Graduate and Postdoctoral Studies.

The School of Graduate and Postdoctoral Studies (SGPS) furthers the scholarly mission of the university by providing academic and administrative support to the university's postgraduate educational, research, innovation and international activities. Our responsibilities include graduate program development, graduate enrolment management, oversight of academic and quality standards, and the implementation of policies and practices that enhance graduate/postdoctoral scholarly success, career readiness and personal growth. SGPS supports prospective, new and current graduate students through many administrative services including, but not limited to, recruitment, admission, registration, funding and scholarships, orientation, professional development workshops and events, and processing of final theses, projects and papers. SGPS is a single-point-of-contact, multifunctional administrative unit tailored to the complete "life-cycle" of graduate students, providing coordinated support to students and all other stakeholders.

### **Student Life**

Ontario Tech University, as a relatively small campus community, has a centralized delivery model for many 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/>.

### **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.

## **Campus Libraries**

The Campus Libraries support teaching, learning, and research at Ontario Tech University with facilities, collections, and programming.

Library Collections:

- The Library's total collections budget is \$1.7 million.
- Collections include books, e-books, databases, journals, data and statistics, and multimedia materials

Support for teaching and learning:

- A dedicated librarian for each program who provides instruction, research consultations, and collection development
- Research guides for each of Ontario Tech's programs, as well as general guides for citation, copyright, and other broad topics
- Workshops and classes: custom in-class sessions, and general instruction sessions

- Three (3) online modules in Ontario Tech's learning management system, which professors can integrate seamlessly into their course shells

#### Research supports:

- Research consultations with subject librarians
- Extended support via the Library's virtual reference service
- Support for generative artificial intelligence: citation, copyright, and allowable use of library resources

#### Scholarly publishing supports:

- Research data management
- Publishing compliance with Tri-Council and other funders
- Support finding and creating open educational resources (OERs)
- Copyright advice and compliance information
- Support for authors, including reviewing author agreements
- Administration of APC waivers for faculty publishing in open access

#### Facilities:

- The Campus Libraries include the North Oshawa Library, which is the campus' main branch, and the Social Sciences, Humanities, and Education Library, which is located in downtown Oshawa
- The Library's locations include:
  - Extended library hours are available during peak season
  - Groups study rooms are available for student booking
  - Accessible workstations, and sit-stand desks
  - Computers and dual monitor workstations

## **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.



|                                                                                                                                                                       |                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| <b>Full name of proposed program (as it will appear on the student's transcript):</b><br>(e.g., Master of Arts in Education; Master of Science in Applied Bioscience) | Graduate Diploma in Energy Systems Engineering                             |
| <b>Degree designation and short form:</b><br>(e.g., Master of Arts, M.A.; Master of Science, M.Sc.)                                                                   | GDip                                                                       |
| <b>Cost recovery program:</b>                                                                                                                                         | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No        |
| <b>Professional program:</b>                                                                                                                                          | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No        |
| <b>For graduate diplomas:</b>                                                                                                                                         | <input type="checkbox"/> Type 2 <input checked="" type="checkbox"/> Type 3 |
| <b>Faculty offering the program:</b><br>(i.e., where the program will be housed/site of academic authority)                                                           | Faculty of Engineering and Applied Science                                 |
| <b>Collaborating Faculty(ies) (if applicable):</b>                                                                                                                    | N/A                                                                        |
| <b>Collaborating institution(s) (if applicable):</b>                                                                                                                  | N/A                                                                        |
| <b>Program delivery location:</b>                                                                                                                                     | Ontario Tech North Campus and Hybrid                                       |
| <b>Proposed program start date (please change as needed):</b>                                                                                                         | Fall 2027                                                                  |
| <b>Program proponent/contact:</b>                                                                                                                                     | Akira Tokuhiko, Daniel Hoornweg                                            |
| <b>Version date (please change as you edit this proposal):</b>                                                                                                        | May 14, 2026                                                               |
| <b>Date of Academic Council Approval:</b>                                                                                                                             |                                                                            |

# New Graduate 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 graduate 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.

**Brief description of the proposed program<sup>1</sup>:** (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 Energy Systems Engineering Graduate Diploma is designed to prepare energy professionals to understand and lead innovations in energy systems. The program provides an overview of energy systems, focuses on integrating energy components, approaches, conservation, and digital technologies such as automation, robotics, data analytics, and smart design to enhance productivity, sustainability, and competitiveness in energy systems.

Students in the program will complete two core courses that assess energy applications across systems. The broader program is supported through the availability of elective courses with wider energy applications, such as energy storage, HVAC and nuclear facility decommissioning. All courses proposed for inclusion in the program are currently available in the Graduate Academic Calendar. Several new courses, such as Small Modular Reactors, Railway and Transit systems, and electrifying mobility, are expected to be added to the list of elective course options over the next few years.

With the new Energy Engineering Program scheduled to have its first graduates in May 2027, this GDip will support potential continued graduate studies for these students, as well as a comprehensive and pragmatic pathway to graduate studies for professionals working on the quickening energy transition.

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<sup>1</sup> 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 \(oucqa.ca\)](#))

# New Graduate Program Proposal

## Graduate Diploma in Energy Systems Engineering Faculty of Engineering and Applied Science

### 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 Energy Systems Engineering Graduate Diploma is designed to prepare energy professionals to understand and lead innovations in energy systems. The program provides an overview of energy systems, focuses on integrating energy components, approaches, conservation, and digital technologies such as automation, robotics, data analytics, and smart design to enhance productivity, sustainability, and competitiveness in energy systems.

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With the new Energy Engineering Program scheduled to have its first graduates in May 2027, this GDip will support potential continued graduate studies for these students, as well as a comprehensive and pragmatic pathway to graduate studies for professionals working on the quickening energy transition.

## 2 Academic Rationale

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- *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*
- *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*

Students complete four (4) graduate-level courses (12 credit hours total) from the lists below, providing both theoretical understanding of overall energy systems and practical training in specific energy applications:

At least two courses from the following list:

- ENGR 5014G - Pollution Prevention and Sustainable Engineering
- ENGR 5100G - Advanced Energy Systems
- ENGR 5101G - Thermal Energy Storage
- ENGR 5102G - Fuel Cells and Hydrogen Systems
- ENGR 5965G - Digital Devices and Techniques for Smart Grid Automation and Protection
- NUCL 5100G - Nuclear Plant Systems and Operation
- NUCL 5300G - Advanced Topics in Radioactive Waste Management
- NUCL 5510G - Nuclear Safety Design and Regulation
- NUCL 5600G - Future Role of Nuclear Energy
- NUCL 6140G - Life Cycle Assessment in Nuclear Applications

Elective courses:

- ENGR 5161G - HVAC and Refrigeration Systems Design and Analysis
- ENGR 5410G - Project Management for Engineers or NUCL 5010G - Project Management for Nuclear Engineers
- ENGR 5415G - Foundations of Engineering Management
- ENGR 5511G - Introduction to Railway Systems
- ENGR 5544G - Railway Systems Operation and Maintenance
- ENGR 5925G - Control and Operation of AC Drives
- ENGR 5930G - Adaptive Control

- ENGR 5940G - Intelligent Control Systems
- ENGR 5945G - Mobile Robotic Systems
- ENGR 5005G - Special Topics\*
- NUCL 5250G - Power Plant Thermodynamics
- NUCL 5330G - Principles of Nuclear Facility Decommissioning

\*Registration in Special Topics course(s) are subject to approval by the Graduate Program Director, must be relevant to the GDip program scope, and must be confirmed as enabling the student to meet the program learning outcomes and degree-level expectations for the graduate diploma.

In addition to the courses above, several courses are under development and would be considered for inclusion as part of the program requirements and approved through the regular program change process. Many have already been offered as Special Topics courses. The proposed courses include:

- Smart Energy Systems
- Waste-to-Energy Systems
- Nuclear-Renewable Hybrid Systems
- Micro Energy Grids
- Cyber Security for Energy Systems
- Measuring and Modelling Sustainability
- Integrated Mobility
- Advanced Community Energy Systems
- Small Modular Reactors
- Nuclear Energy in Society
- Life Cycle Assessment in Energy Applications

The program name and nomenclature accurately reflect the program's scope and objectives. It signals a focused, graduate-level credential that builds on an engineering foundation while specializing in energy systems engineering.

Innovative features of the program include integration with an established suite of relevant and integrated courses with specialization for resource efficiency and academic continuity, graduate-level assignments emphasizing applied research and industry-relevant problem-solving and a curriculum aligned with high-impact practices, fostering expertise in an area vital to Canada's economic and environmental goals.

The Graduate Diploma in Energy Systems Engineering addresses a critical skills gap in a discipline undergoing rapid transition due to sustainability goals, technological innovation, and infrastructure modernization and integration.

*Describe any fields and/or any pathways from related programs. (Graduate programs are not required to have fields in order to highlight an area of strength or specialization within a program, nor are they required to provide specific pathways from programs at the college, bachelor, or other level.)*

N/A

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

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- *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 act that created the University of Ontario Institute of Technology (Ontario Tech) states: "The objectives of the university are, (a) to provide undergraduate and postgraduate university programs with a primary focus on those programs that are innovative and responsive to the individual needs of students and to the market-driven needs of employers..." The proposed GDip in Energy Systems Engineering is a clear example of delivering on this objective. Industry has clearly demonstrated the need for engineers trained in Canada with knowledge of energy systems and the transition underway.

The vision of Ontario Tech is: "Embracing technology with a conscience to advance knowledge and promote sustainability." Energy is key to the sustainability of Canada, including making cities economically productive and livable, as well as playing a key role in the decarbonization of the energy sector. As the population of Canada continues to grow, climate changes further taxing energy systems, more sector specialists are needed to assist in the energy transition.

The proposed GDip aligns well with Ontario Tech's mission to "... equip future leaders to solve complex problems." Modern energy systems are complex. The proposed GDip will give graduates the skill-set needed by the energy sector to allow them to make immediate contributions to this growing field, nationally and internationally

The proposed GDip will be a unique offering that builds on existing engineering programs, while providing an integrated program that uses existing courses and facilities, e.g., hydrogen, nuclear, smart grid expertise. The program is also designed to be flexible and grow as student interests warrant and the energy transition speeds up in Canada and internationally.

## 4 Need, Demand, and Duplication

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*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 Faculty of Engineering and Applied Science has a long-standing partnership with the energy sector in Ontario. For example, Ontario Power Generation (OPG) was a founding partner of the university. OPG is a strong proponent for the Energy Systems Engineering program as it complements their broader training program and increasing workforce needs.

Canada is a key member of the Clean Energy Ministerial working toward broader electrification with low carbon electricity. Worker shortfalls in excess of 100,000 employees in the energy sector are projected beyond 2030.

Key industry partners approached during the development of this program include Hydro One, OPG, Bruce Power, Enbridge, local distribution companies such as Elexicon Toronto Hydro, and OPUC, government agencies and institutions such as OEB, IESO, Ministry of Energy, and support firms and consultancies such as WSP, Ellis Don, Aecon, AECOM, and Hatch.

Ontario Tech University also hosted more than 30 international delegations in the last 3 years reviewing energy systems education capacities and partnership opportunities, especially in the nuclear sector, and increasingly in smart grids, transmission, resilient infrastructure, hydrogen, and renewables.

The proposed GDip in Energy Systems Engineering is designed to provide engineers in industry, from a wide range of engineering disciplines, the necessary core competencies in energy engineering that employers need.

- *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 GDip in energy systems engineering complements other programs at Ontario Tech. Energy Systems Engineering is designed to enable the development of a broad understanding of how various forms of energy generation and application are integrated and complementary, as well as sufficient technical rigour in specific areas.

The GDip will not affect enrolment in other programs at Ontario Tech.

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

The GDip in energy systems engineering is unique at the graduate level and builds upon the already existing undergraduate Energy Engineering program as well as related specializations in Electrical, Automotive, Software and Mechanical Engineering.

- *Identify similar or complementary programs offered by other universities with specific reference to Ontario and Canadian examples.*
- *Provide additional overall comment on the justification for any duplication*

Comparable programs at Ontario institutions:

While no exact graduate diploma in Energy Systems Engineering exists in Ontario, there are related credentials and programs that signal demand in this field:

- Toronto Metropolitan University — Professional Master’s Diploma in Energy and Innovation  
<https://www.torontomu.ca/cue/education/masters-diploma/>
- University of Waterloo — Green Energy Graduate Diploma  
<https://uwaterloo.ca/mechanical-mechatronics-engineering/waterloo-announces-new-green-energy-graduate-diploma>
- McMaster University Power and Energy Engineering Technology diploma  
<https://www.eng.mcmaster.ca/sept/degree-options/power-and-energy-engineering-technology/>

## 5 Enrolment Information

- *Please complete Table 1 and provide, in paragraph form, information regarding enrolment projections*
- *Please determine the academic year when the program enrollment 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 Enrollment by Academic and Program Year**

|                         | Academic Year |           |           |           |           |           |
|-------------------------|---------------|-----------|-----------|-----------|-----------|-----------|
|                         | 2026-2027     | 2027-2028 | 2028-2029 | 2029-2030 | 2030-2031 | 2031-2032 |
| <b>Level of Study</b>   |               |           |           |           |           |           |
| <b>Diploma Year 1</b>   | 10            | 10        | 20*       | 20        | 20        | 20        |
| <b>Total Enrollment</b> | 10            | 10        | 20        | 20        | 20        | 20        |

Projected enrollment would initially be around 5-10 students per year. The planned steady-state is 20 students per year. Note these directed offerings may be offered in alternate formats other than the traditional 12-week semester.

## 6 Admission Requirements

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

Minimum Academic Requirements for Graduate Diploma Programs:

- Hold a four-year honours degree or its equivalent from a recognized institution in the area of graduate study or a closely related subject.
- A minimum B-minus average (GPA: 2.7 on a 4.3 scale).
- Applicants that have a degree in subject areas outside of engineering or those who do not meet the minimum GPA requirements, but have relevant engineering experience will be evaluated on an individual case-by-case basis.
- *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*

Graduates from any Canadian accredited undergraduate engineering program (or its equivalent) will be eligible to enrol in the GDip, including Automotive Engineering, Civil Engineering, Electrical Engineering, Energy Engineering, Industrial Engineering, Manufacturing Engineering, Mechanical Engineering, Mechatronics Engineering, and Software Engineering.

To provide applicants looking to reskill for the energy sector the potential opportunity to do the GDip in Energy Systems Engineering, applicants from non-engineering programs or those who do not meet the minimum GPA requirements will be considered on a case-by-case basis.

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

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*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 A 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; for researched-focused graduate programs, provide a clear indication of the nature and suitability of the major research requirements for degree completion; for professional graduate programs, 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 program takes advantage of Ontario Tech's already extensive array of energy-related courses. This facilitates quick initiation as well as flexibility to develop additional courses as industry interest warrants. Students in the program will complete two core courses that assess energy applications across systems. The broader program is supported through the availability of elective courses in specific energy technologies and applications.

Students complete four (4) graduate-level courses (12 credit hours total) from the lists below, providing both theoretical understanding of overall energy systems and practical training in specific energy applications:

At least two courses from the following list:

- ENGR 5014G - Pollution Prevention and Sustainable Engineering
- ENGR 5100G - Advanced Energy Systems
- ENGR 5101G - Thermal Energy Storage
- ENGR 5102G - Fuel Cells and Hydrogen Systems
- ENGR 5965G - Digital Devices and Techniques for Smart Grid Automation and Protection

- NUCL 5100G - Nuclear Plant Systems and Operation
- NUCL 5300G - Advanced Topics in Radioactive Waste Management
- NUCL 5510G - Nuclear Safety Design and Regulation
- NUCL 5600G - Future Role of Nuclear Energy
- NUCL 6140G - Life Cycle Assessment in Nuclear Applications

Elective courses:

- ENGR 5161G - HVAC and Refrigeration Systems Design and Analysis
- ENGR 5410G - Project Management for Engineers or NUCL 5010G - Project Management for Nuclear Engineers
- ENGR 5415G - Foundations of Engineering Management
- ENGR 5511G - Introduction to Railway Systems
- ENGR 5544G - Railway Systems Operation and Maintenance
- ENGR 5925G - Control and Operation of AC Drives
- ENGR 5930G - Adaptive Control
- ENGR 5940G - Intelligent Control Systems
- ENGR 5945G - Mobile Robotic Systems
- 5005G - Special Topics\*
- NUCL 5250G - Power Plant Thermodynamics
- NUCL 5330G - Principles of Nuclear Facility Decommissioning

\*Registration in Special Topics course(s) are subject to approval by the Graduate Program Director, must be relevant to the GDip program scope, and must be confirmed as enabling the student to meet the program learning outcomes and degree-level expectations for the graduate diploma.

In addition to the courses above, several courses are under development and would be considered for inclusion as part of the program requirements. Many have already been offered as Special Topics courses. The proposed courses include:

- Smart Energy Systems
- Waste-to-Energy Systems
- Nuclear-Renewable Hybrid Systems
- Micro Energy Grids
- Cyber Security for Energy Systems
- Measuring and Modelling Sustainability
- Integrated Mobility
- Advanced Community Energy Systems
- Small Modular Reactors
- Nuclear Energy in Society
- Life Cycle Assessment in Energy Applications

The program delivery mode will be hybrid. In addition to the traditional 12-week semester delivery, the courses may be delivered in compressed time formats to meet the needs of industry partners.

To facilitate access to all potential students, part-time studies are permitted. In particular, engineers in industry may wish to pursue a graduate diploma program

through part-time studies.

All course deliverables will be designed to ensure that the students are meeting the program learning outcomes and support the achievement of Graduate Degree Level Expectations. Assessments will not only measure content knowledge but also foster advanced competencies expected at the graduate level.

*Provide evidence that each graduate student is required to take a minimum of two-thirds of the course requirements from among graduate-level courses*

All courses required for the GDip are graduate level.

*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 Faculty of Engineering and Applied Science (FEAS) is fully committed to Equity, Diversity, and Inclusion (EDI), including in all its courses and all its research activities. The material covered in this program considers the development of energy systems that serve the public, so it is critical that EDI considerations are incorporated into the development of these systems, in particular ensuring these systems are accessible for all users. The courses, where appropriate, will cover these issues to ensure that students understand the importance of designing accessible systems.

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? N/A

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

N/A

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.*

N/A

## 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 be used to inform continuous program improvement*

The learning outcomes for the program are achieved through a combination of graduate-level course work, including assignments, exams, projects, and presentations.

Learning activities and materials in graduate courses will be carefully designed to ensure that learners are deliberately exposed to study, the majority of which is at, or informed by, the forefront of engineering theory and practice.

The selection of courses is designed to give students key knowledge in energy systems engineering as well as an opportunity for advanced development of generic skills such as communication and teamwork. In addition, there will be scholarly activities of independent investigation, report writing, and presentations.

Throughout the curriculum, learning activities are planned, and student progress will be monitored to ensure that safety, professional guidelines, and ethical responsibilities relevant to engineering are modelled, developed, and evaluated.

The courses available in the program cover the state-of-the-art in energy applications and are taught by instructors with subject matter expertise. Courses are developed in conjunction with subject matter experts from industry. An Industrial Advisory Committee made up of representatives from the energy sector will help ensure the courses remain relevant and current.

Student feedback surveys will be completed at the end of each course delivery to gather feedback. As well student performance in each course will be monitored yearly. The Graduate Program Director responsible for the program will review both the student feedback surveys and the student performance to ensure that the program is

meeting its goals. In addition, the Industrial Advisory Committee will also provide feedback on the program delivery. Insights from these surveys and reviews will be documented and used to identify specific areas for improvement, inform curriculum adjustments, and guide enhancements to teaching and learning strategies.

Any required changes to curriculum, assessment methods, delivery, or administration are implemented as appropriate and feasible at the discretion of the Faculty Dean. Curricular changes are then submitted and documented through appropriate Faculty and University committees consistent with standard curricular change policies and procedures as identified in the IQAP.

To ensure sustained quality, program effectiveness will be assessed and monitored through the cyclical review process, providing actionable insights for continuous improvement. In addition to the external review every eight years, Ontario Tech's Academic Resource Committee (ARC) requires a brief report at program launch and a full report one-year after the launch of a new program. The one-year report will ask the program to review enrollment data, admission averages, and provide an analysis of successes and challenges encountered in the first year. If there are areas of concern and it is deemed necessary, ARC will make recommendations to enhance program effectiveness and student success and may request a subsequent report. If required, the subsequent 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 ARC's review, further documentation may be required of the program for ongoing monitoring.

## 9 Calendar Copy and Program Map(s)

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- *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*
- *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 B for the Calendar Copy for the program and Appendix C for the List of Program Courses and Descriptions.

## 10 Consultation

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- *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*

Consultations were held within the Faculty of Engineering and Applied Science, including discussions with the Graduate Program Directors, department faculty, and the Dean's Office. Input from the School of Graduate and Postdoctoral Studies (SGPS) will ensure alignment with Ontario Tech's graduate credential framework.

Feedback confirmed that the proposed diploma complements existing MASc and MEng offerings without duplication and supports the university's strategic focus on digitalization, advanced manufacturing, and applied research. The program also aligns with ongoing collaborations and industry engagement in automation, robotics, railway engineering, and energy engineering.

Discussions have also been held with industry representatives. Companies such as OPG, Bruce Power, Westinghouse, Atkins-Realis, Alstom, Siemens, and AECOM, as well as agencies such as NWMO, AECL, CNSC, Ministry of Energy, Natural Resources Canada have all expressed interest in supporting current staff to join the program.

## 11 Resource Requirements

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### **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.*

As the program is leveraging the undergraduate Energy Systems Engineering program, it is anticipated there will be no major resource requirements. By leveraging existing graduate course offerings, the GDip enhances resource efficiency without diminishing the quality of graduate offerings.

***The resource requirements outlined in Section 11 have been reviewed by the Academic Resource Committee (ARC): December 9, 2025***  
(date of review)

## 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?*

*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 D Faculty Information for a table detailing the list of faculty committed to the program and Appendix E for Curriculum Vitae.

The program will be delivered by several existing faculty members in the Faculty of Engineering and Applied Science with energy engineering expertise: Jennifer McKellar, Hossam Gaber, Daniel Hoornweg, Akira Tokuhiko, Glenn Harvel, Mark Rosen, Brendan Macdonald, Martin Agelin-Chaab, Sheldon Willimason, Ibrahim Dincer.

There is no supervision of experiential learning opportunities in this 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 the faculty hire be required, and are there additional criteria associated with the hiring requirement (e.g. enrolment levels, program growth, University or Faculty priorities)?*

N/A - Since the course delivery will leverage existing graduate course offerings, no additional human resources will be required, unless the number of students enrolled reaches the point where more than one section of a given course needs to be offered. Details and timing of proposed hirings are coordinated and confirmed with the Provost's Office through regular operational conversations.

### **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.*

No TAs will be required unless the enrolment is large enough to warrant it.

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.*

The program will leverage existing institutional resources and targeted supports, including access to modern facilities, technology-enabled classrooms, and research infrastructure. Dedicated student services, academic advising, and wellness initiatives will promote student well-being and resiliency, ensuring a supportive and inclusive learning environment.

Please see Appendix E 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.*

The institution provides robust information technology resources to support high-quality scholarship and research activities for both undergraduate and graduate students. These include access to modern computing facilities, high-speed networks, secure data storage, and discipline-specific software to enhance teaching and learning. Existing spaces are equipped with technology-enabled classrooms and research infrastructure ensuring the program can be successfully implemented and sustained.

Please see Appendix F 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)?*

The program will leverage existing University IT infrastructure. Ontario Tech is a laptop university where students bring their own laptop devices and are provided access to a software portal where they can download any necessary software required

for their courses, including a variety of engineering specific packages such as SolidWorks, NX, Multisim, MATLAB, Adams, and Nastran.

The hybrid delivery of the courses will make use of Ontario Tech's flexible hybrid classrooms that allow for synchronous delivery with active participation from students both in room and online and the ability for all students to see all other students.

## 11.4 Financial Support for Graduate Students

*Provide evidence that financial assistance for students, including TA-ships where applicable, will be sufficient to ensure adequate quality and numbers of students.*

No financial assistance will be provided as this is a professional program.

## 11.5 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?*

The hybrid delivery of the courses and the leveraging with other graduate courses will have minimal impact on classroom requirements.

No additional space requirements are required.

## 11.6 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 ([cique@ontariotechu.ca](mailto:cique@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 program does not impact any existing agreements Ontario Tech has with institutional and external partners. In addition, there are no inter-Faculty implications.

## 12 Closing Statements Regarding Program Quality

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- *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 GDip in Energy Systems Engineering was designed in consultation with experts from the energy sector to meet the demands of the energy transition in Canada and internationally. The Faculty has several professors with energy sector expertise as well as access to a slate of industry experts from our partner companies who can support courses as needed. The program has been designed to meet the needs of the energy sector. The Faculty has a history of quality program delivery that will serve as a model for the delivery of this new program.

## Appendices

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*Please include at minimum the below. Additional Appendices may be added, as appropriate. Appendices should ultimately be listed below, attached as separate documents, and clearly labelled (A, B, C, etc.) in the order in which they are first mentioned in the document.*

Appendix A: Program Learning Outcome Alignment Map to DLEs, Courses, and Assessments

Appendix B: Calendar Copy

Appendix C: List of Program Courses and Descriptions for Existing Courses

Appendix D: Faculty Information

Appendix E: Learning Resources

Appendix F: Information Technology Resources

### **Items to be separate documents sent to CIQE:**

New Program Funding and Tuition form (for CIQE use only)

Budget Spreadsheet (for ARC use only)

Curriculum Vitae (for Quality Council use only)

**Graduate Diploma – Energy Systems Engineering**

| <b>PLO #</b> | <b>Program Learning Outcomes</b>                                                                                                      |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------|
| <b>PLO 1</b> | <b>Explain advanced concepts, principles, and theories in energy systems engineering.</b>                                             |
| <b>PLO 2</b> | <b>Solve engineering problems related to energy systems using engineering knowledge and methods.</b>                                  |
| <b>PLO 3</b> | <b>Recognize and be guided by social, professional, and ethical expectations and concerns in engineering.</b>                         |
| <b>PLO 4</b> | <b>Explain the importance of continuing professional education and the strategies necessary for lifelong learning in engineering.</b> |
| <b>PLO 5</b> | <b>Communicate engineering concepts, principles, and results effectively using written and verbal formats.</b>                        |
| <b>PLO 6</b> | <b>Evaluate advanced information using knowledge of energy systems engineering and apply it in engineering practice.</b>              |

Graduate Diploma – Energy Systems Engineering

| Graduate Degree Level Expectations |                                                                         | Depth and Breadth of Knowledge |  |  |  | Research and Scholarship |  |  |  | Level of Application of Knowledge |  |  | Professional Capacity/ Autonomy |         |  | Level of Communication Skills |  |  | Awareness of Knowledge Limits |  |  |
|------------------------------------|-------------------------------------------------------------------------|--------------------------------|--|--|--|--------------------------|--|--|--|-----------------------------------|--|--|---------------------------------|---------|--|-------------------------------|--|--|-------------------------------|--|--|
| Program Learning Outcomes          |                                                                         | PLO1                           |  |  |  | PLO2                     |  |  |  | PLO2                              |  |  | PLO3                            | PLO4    |  | PLO5                          |  |  | PLO6                          |  |  |
| Course No.                         | Course Title                                                            |                                |  |  |  |                          |  |  |  |                                   |  |  |                                 |         |  |                               |  |  |                               |  |  |
| ENGR 5014G                         | Pollution Prevention and Sustainable Engineering                        | 1, 3                           |  |  |  | 1, 3                     |  |  |  | 1, 3, 5                           |  |  | 1, 2, 4                         | 4, 3    |  | 2, 4                          |  |  | 1, 3, 5                       |  |  |
| ENGR 5005G                         | Special Topics                                                          | 1, 5                           |  |  |  | 1, 5                     |  |  |  | 1, 5                              |  |  | 1, 5, 6                         | 2, 5, 6 |  | 2, 6                          |  |  | 2, 5                          |  |  |
| ENGR 5100G                         | Advanced Energy Systems                                                 | 3, 5                           |  |  |  | 1, 3                     |  |  |  | 1, 3                              |  |  | 1, 2, 4                         | 2, 4    |  | 2, 4                          |  |  | 1, 3                          |  |  |
| ENGR 5101G                         | Thermal Energy Storage                                                  | 1, 3                           |  |  |  | 1, 3                     |  |  |  | 1, 3                              |  |  | 1, 2, 4                         | 2, 4    |  | 2, 4                          |  |  | 1, 3                          |  |  |
| ENGR 5102G                         | Fuel Cells and Hydrogen Systems                                         | 1, 3                           |  |  |  | 1, 3, 5                  |  |  |  | 1, 3, 5                           |  |  | 1, 2, 4                         | 4, 5    |  | 2, 4                          |  |  | 1, 3                          |  |  |
| ENGR 5161G                         | HVAC and Refrigeration Systems Design and Analysis                      | 1, 3                           |  |  |  | 1, 3                     |  |  |  | 1, 3                              |  |  | 1, 2, 4                         | 4       |  | 2, 4                          |  |  | 1, 3                          |  |  |
| ENGR 5410G                         | Project Management for Engineers                                        | 1, 3                           |  |  |  | 1, 3                     |  |  |  | 1, 3                              |  |  | 1, 2, 4                         | 4       |  | 2, 4                          |  |  | 1, 3                          |  |  |
| ENGR 5415G                         | Foundations of Engineering Management                                   | 1, 3                           |  |  |  | 1, 3                     |  |  |  | 1, 3                              |  |  | 1, 2, 4                         | 4       |  | 2, 4                          |  |  | 1, 3                          |  |  |
| ENGR 5511G                         | Introduction to Railway Systems                                         | 1, 3                           |  |  |  | 1, 3                     |  |  |  | 1, 3                              |  |  | 1, 2, 4                         | 4       |  | 2, 4                          |  |  | 1, 3                          |  |  |
| ENGR 5544G                         | Railway Systems Operation and Maintenance                               | 1, 3                           |  |  |  | 1, 3                     |  |  |  | 1, 3                              |  |  | 1, 2, 4                         | 4, 6    |  | 2, 4                          |  |  | 1, 3                          |  |  |
| ENGR 5925G                         | Control and Operation of AC Drives                                      | 1, 3                           |  |  |  | 1, 3                     |  |  |  | 1, 3                              |  |  | 1, 2, 4                         | 4       |  | 2, 4                          |  |  | 1, 3                          |  |  |
| ENGR 5930G                         | Adaptive Control                                                        | 1, 3                           |  |  |  | 1, 3                     |  |  |  | 1, 3                              |  |  | 1, 2, 4                         | 4       |  | 2, 4                          |  |  | 1, 3                          |  |  |
| ENGR 5940G                         | Intelligent Control Systems                                             | 1, 3                           |  |  |  | 1, 3                     |  |  |  | 1, 3                              |  |  | 1, 2, 4                         | 4       |  | 2, 4                          |  |  | 1, 3                          |  |  |
| ENGR 5945G                         | Mobile Robotic Systems                                                  | 1, 3                           |  |  |  | 1, 3                     |  |  |  | 1, 3                              |  |  | 1, 2, 4                         | 4       |  | 2, 4                          |  |  | 1, 3                          |  |  |
| ENGR 5965G                         | Digital Devices and Techniques for Smart Grid Automation and Protection | 1, 3                           |  |  |  | 1, 3                     |  |  |  | 1, 3                              |  |  | 1, 2, 4                         | 4       |  | 2, 4                          |  |  | 1, 3                          |  |  |
| NUCL 5005G                         | Special Topics                                                          | 1, 3                           |  |  |  | 1, 3                     |  |  |  | 1, 3                              |  |  | 1, 2, 4                         | 4       |  | 2, 4                          |  |  | 1, 3                          |  |  |
| NUCL 5010G                         | Project Management for Nuclear Engineers                                | 1, 3                           |  |  |  | 1, 3                     |  |  |  | 1, 3                              |  |  | 1, 2, 4                         | 4       |  | 2, 4                          |  |  | 1, 3                          |  |  |
| NUCL 5100G                         | Nuclear Plant Systems and Operation                                     | 1, 3                           |  |  |  | 1, 3                     |  |  |  | 1, 3                              |  |  | 1, 2, 4                         | 4       |  | 2, 4                          |  |  | 1, 3                          |  |  |
| NUCL 5300G                         | Advanced Topics in Radioactive Waste Management                         | 1, 3                           |  |  |  | 1, 3                     |  |  |  | 1, 3                              |  |  | 1, 2, 4                         | 4       |  | 2, 4                          |  |  | 1, 3                          |  |  |
| NUCL 5330G                         | Principles of Nuclear Facility Decommissioning                          | 1, 3                           |  |  |  | 1, 3                     |  |  |  | 1, 3                              |  |  | 1, 2, 4                         | 4, 6    |  | 2, 4                          |  |  | 1, 3                          |  |  |
| NUCL 5510G                         | Nuclear Safety Design and Regulation                                    | 1, 3                           |  |  |  | 1, 3                     |  |  |  | 1, 3                              |  |  | 1, 2, 4                         | 4       |  | 2, 4                          |  |  | 1, 3                          |  |  |
| NUCL 5600G                         | Future Role of Nuclear Energy                                           | 1, 3                           |  |  |  | 1, 3, 5                  |  |  |  | 1,3,5                             |  |  | 1, 2, 4                         | 4, 6    |  | 2, 4                          |  |  | 1,3,5                         |  |  |
| NUCL 6140G                         | Life Cycle Assessment in Nuclear Applications                           | 1, 3                           |  |  |  | 1, 3                     |  |  |  | 1, 3                              |  |  | 1, 2, 4                         | 4       |  | 2, 4                          |  |  | 1, 3                          |  |  |
|                                    |                                                                         |                                |  |  |  |                          |  |  |  |                                   |  |  |                                 |         |  |                               |  |  |                               |  |  |
| Degree of Implementation:          |                                                                         | Assessment Legend:             |  |  |  |                          |  |  |  |                                   |  |  |                                 |         |  |                               |  |  |                               |  |  |
| Introduced                         |                                                                         | 1 Assignments                  |  |  |  |                          |  |  |  | 5 Projects                        |  |  |                                 |         |  |                               |  |  |                               |  |  |
| Reinforced                         |                                                                         | 2 Presentation                 |  |  |  |                          |  |  |  | 6 Communication                   |  |  |                                 |         |  |                               |  |  |                               |  |  |
| Mastered                           |                                                                         | 3 Exam                         |  |  |  |                          |  |  |  | 7                                 |  |  |                                 |         |  |                               |  |  |                               |  |  |
|                                    |                                                                         | 4 Professionalism              |  |  |  |                          |  |  |  | 8                                 |  |  |                                 |         |  |                               |  |  |                               |  |  |

# Energy Systems Engineering, Graduate Diploma

## **General Information**

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The Graduate Diploma (GDip) in Energy Systems Engineering is designed to prepare graduates to understand, analyze, and lead innovation in modern energy systems. The program provides a comprehensive foundation in energy systems, with an emphasis on integrating system components, conservation strategies, and digital technologies – such as automation, robotics, data analytics, and smart design – to enhance productivity, sustainability, and competitiveness.

Intended for both recent graduates and industry professionals holding an undergraduate degree in engineering or a related field, the program equips students with the foundational knowledge required to enter or advance within this rapidly evolving sector. Students complete two core courses that provide a thorough grounding in the key components of energy systems.

A range of elective courses allows students to tailor their studies to specific interests and career goals, with topics including energy storage, heating, ventilation and air conditioning (HVAC), and nuclear facility decommissioning.

Overall, the program prepares graduates to address the growing demand for engineers capable of contributing to the accelerating global energy transition.

## **Admission Requirements**

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In addition to the general admission requirements for graduate studies, applicants must meet the following program-specific requirements:

Minimum Academic Requirements for Graduate Diploma Programs:

- Hold a four-year honours degree or its equivalent from a recognized institution in the area of engineering or a closely related subject.
- A minimum B-minus average (GPA: 2.7 on a 4.3 scale).
- Applicants that have a degree in subject areas outside of engineering or those who do not meet the minimum GPA requirements, but have relevant engineering experience will be evaluated on an individual case-by-case basis.

Graduates from any Canadian accredited undergraduate engineering program (or its equivalent) will be eligible to enrol in the GDip, including: Automotive Engineering, Civil Engineering, Electrical Engineering, Energy Engineering, Industrial Engineering, Manufacturing Engineering, Mechanical Engineering, Mechatronics Engineering, and Software Engineering.

Note, the consideration of applicants from non-engineering programs or those who do not meet the minimum GPA requirements is to provide applicants looking to re-skill for the nuclear sector the potential opportunity to do the GDip in Energy Systems Engineering.

## **Part-time studies**

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To facilitate access to all potential students, part-time studies are permitted. In particular, engineers in industry may wish to pursue a graduate diploma program through part-time studies.

## **Graduate diploma requirements**

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For the graduate diploma, students must complete four courses for a total of 12 credits from the below list. At least two of the courses must be from the list of core courses.

**Note:** Graduate diploma students are not permitted to take courses outside of their home program course listings for program credit. In addition, they may not take any senior fourth-year undergraduate courses from the Faculty of Engineering and Applied Science in lieu of a graduate course.

## **Course listings**

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Core courses:

- ENGR 5014G - Pollution Prevention and Sustainable Engineering
- ENGR 5100G - Advanced Energy Systems
- ENGR 5101G - Thermal Energy Storage
- ENGR 5102G - Fuel Cells and Hydrogen Systems
- ENGR 5965G - Digital Devices and Techniques for Smart Grid Automation and Protection
- NUCL 5100G - Nuclear Plant Systems and Operation
- NUCL 5300G - Advanced Topics in Radioactive Waste Management
- NUCL 5510G - Nuclear Safety Design and Regulation
- NUCL 5600G - Future Role of Nuclear Energy
- NUCL 6140G - Life Cycle Assessment in Nuclear Applications

Elective courses:

- ENGR 5005G - Special Topics\*
- ENGR 5161G - HVAC and Refrigeration Systems Design and Analysis
- ENGR 5410G - Project Management for Engineers or NUCL 5010G - Project Management for Nuclear Engineers
- ENGR 5415G - Foundations of Engineering Management

- ENGR 5925G - Control and Operation of AC Drives
- ENGR 5930G - Adaptive Control
- ENGR 5940G - Intelligent Control Systems
- ENGR 5945G - Mobile Robotic Systems
- NUCL 5250G - Power Plant Thermodynamics
- NUCL 5330G - Principles of Nuclear Facility Decommissioning
- ENGR 5511G - Introduction to Railway Systems
- ENGR 5544G - Railway Systems Operation and Maintenance

\*upon approval by Graduate Program Director and relevant to the scope.

### **Program learning outcomes**

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

Program Learning Outcomes - Energy Systems Engineering, Graduate Diploma

## Appendix C - List of Program Courses and Course Descriptions

### List of Program Courses

The program consists of four graduate-level courses (12 credits total), selected from the following:

| Approved Program Courses |                                                                         |                                               |
|--------------------------|-------------------------------------------------------------------------|-----------------------------------------------|
| Course Code              | Course Name                                                             |                                               |
| ENGR 5014G               | Pollution Prevention and Sustainable Engineering                        | Existing Course - course description enclosed |
| ENGR 5100G               | Advanced Energy Systems                                                 | Existing Course - course description enclosed |
| ENGR 5101G               | Thermal Energy Storage                                                  | Existing Course - course description enclosed |
| ENGR 5102G               | Fuel Cells and Hydrogen Systems                                         | Existing Course - course description enclosed |
| ENGR 5965G               | Digital Devices and Techniques for Smart Grid Automation and Protection | Existing Course - course description enclosed |
| NUCL 5100G               | Nuclear Plant Systems and Operation                                     | Existing Course - course description enclosed |
| NUCL 5300G               | Advanced Topics in Radioactive Waste Management                         | Existing Course - course description enclosed |
| NUCL 5510G               | Nuclear Safety Design and Regulation                                    | Existing Course - course description enclosed |
| NUCL 5600G               | Future Role of Nuclear Energy                                           | Existing Course - course description enclosed |
| NUCL 6140G               | Life Cycle Assessment in Nuclear Applications                           | Existing Course - course description enclosed |
| Elective Courses:        |                                                                         |                                               |
| ENGR 5161G               | HVAC and Refrigeration Systems Design and Analysis                      | Existing Course - course description enclosed |
| ENGR 5410G               | Project Management for Engineers                                        | Existing Course - course description enclosed |
| ENGR 5415G               | Foundations of Engineering Management                                   | Existing Course - course description enclosed |
| ENGR 5511G               | Introduction to Railway Systems                                         | Existing Course - course description enclosed |
| ENGR 5544G               | Railway Systems Operation and Maintenance                               | Existing Course - course description enclosed |
|                          |                                                                         |                                               |

|            |                                                |                                               |
|------------|------------------------------------------------|-----------------------------------------------|
| ENGR 5925G | Control and Operation of AC Drives             | Existing Course - course description enclosed |
| ENGR 5930G | Adaptive Control                               | Existing Course - course description enclosed |
| ENGR 5940G | Intelligent Control Systems                    | Existing Course - course description enclosed |
| ENGR 5945G | Mobile Robotic Systems                         | Existing Course - course description enclosed |
| ENGR 5005G | Special Topics                                 | Existing Course - course description enclosed |
| NUCL 5010G | Project Management for Nuclear Engineers       | Existing Course - course description enclosed |
| NUCL 5250G | Power Plant Thermodynamics                     | Existing Course - course description enclosed |
| NUCL 5330G | Principles of Nuclear Facility Decommissioning | Existing Course - course description enclosed |

#### **ENGR 5014G - Pollution Prevention and Sustainable Engineering**

Industry-environment interactions; pollution prevention; sustainability and sustainable development; sustainable engineering; industrial ecology; environmental impacts and concerns; material and energy budgets, life-cycle assessment, reduction of industrial process wastes (solid, liquid, gaseous); design for environment; design for energy use and efficiency; energy sustainability; industrial applications.

#### **ENGR 5100G - Advanced Energy Systems**

Advanced power and refrigeration cycles. Advanced gas turbine systems. Combustion systems and applications. Energy storage. Nuclear reactor technology. Fuel cells. Solar power. Wind power. Hydro power. Co- and tri-generation. Geothermal district heating systems. Energy and exergy analysis of advanced energy systems.

#### **ENGR 5101G - Thermal Energy Storage**

General introductory aspects for thermal engineering including energy storage systems, thermal energy storage methods, thermal energy storage and environmental impact, energy storage and energy savings, solar energy and thermal energy storage, heat transfer and stratification in sensible heat storage systems, latent heat storage systems, heat storage with phase change, thermodynamic optimization of thermal energy storage systems, energy and exergy analyses of thermal energy storage systems, and thermal energy storage case studies.

#### **ENGR 5102G - Fuel Cells and Hydrogen Systems**

Introduction to hydrogen and hydrogen fuel cells. Efficiency and open circuit voltage. Operational fuel cell voltages. Proton exchange membrane fuel cells. Alkaline electrolyte fuel cells. Direct methanol fuel cells. Medium and high-temperature fuel cells. Fuelling fuel cells. Components of fuel cell power systems. Delivering fuel cell power. Analysis of fuel cell systems. Fuel cell calculations. Tests.

#### **ENGR 5965G - Digital Devices and Techniques for Smart Grid Automation and Protection**

This course explores digital devices and technologies essential for smart grids, with a focus on both hardware and software aspects of protective relays and automation systems. Topics include digital algorithms for phasor estimation and the protection of critical components such as lines, transformers, generators, and motors. Advanced concepts, including synchronized phasor measurements, adaptive

relaying, relay testing, and integrated protection and control systems, will be examined alongside associated communication challenges. The course also introduces IEC 61850, the latest standard for substation protection and automation.

### **NUCL 5100G - Nuclear Plant Systems and Operation**

A combination of lectures and self-paced interactive CD are used to present the key design and operating features of a CANDU generating unit, including the principles of overall unit operation and control; the functions, equipment and operation of the main process systems; how each major system is controlled; and how reactor safety and the protection of the public is achieved. Students gain familiarity with the conduct of normal and abnormal operations on a simulated CANDU generating unit, including power manoeuvres; poison override operations; recoveries from reactor trips; recoveries from turbine trips; and responses to reactor, heat transport, steam and feed-water system malfunctions.

### **NUCL 5300G - Advanced Topics in Radioactive Waste Management**

This course examines the various international approaches used for the development of publicly acceptable radioactive waste disposal facilities. Particular emphasis is placed on the technical aspects of geologic disposal systems, used/recycled fuel disposal and the assessment of radioisotope release. The influence of public acceptance on the selection and implementation of technical solutions is also considered.

### **NUCL 5510G - Nuclear Safety Design and Regulation**

This course describes the regulatory requirements and the principles guiding the protection of workers, the general public and the plant from potential harm as a result of nuclear facility operations. Topics include: worker and public safety design requirements; nuclear codes and standards; sources of radioactive release; advanced defense in depth concepts; principles of control, cool, contain and monitor; design for accident prevention, mitigation and accommodation; concepts of separation, independence, redundancy; common mode events and inherent safety features; safety and safety-related system design; safety culture and management; design basis and beyond design basis accidents; human factors; extreme events and emerging issues.

### **NUCL 5600G - Future Role of Nuclear Energy**

The course will provide students with a thorough understanding of the nuclear (power) industry. What are the main global trends in the industry, why these are manifesting now and what is likely to transpire in the next 35 years. This includes an understanding of nuclear technologies across the world and likely advances. In addition to technology, industry assessment includes: social licence, communications, risk management, finance, waste management, geopolitical trends, local political imperatives and the role of nuclear energy in the broader mix of energy supply (mostly electricity generation). Students will be able to cogently (and respectfully) argue both sides of the debate on the future role of nuclear power, especially as it relates to low carbon energy supply. Using Ontario as an example, the nuclear industry and its likely future role will be evaluated in several other jurisdictions, e.g., India and China.

### **NUCL 6140G - Life Cycle Assessment in Nuclear Applications**

Life cycle assessment (LCA) can be used to investigate systems-level environmental impacts of using nuclear energy. For nuclear-powered electricity generation this includes examining life cycle stages from fuel mining to waste management, as well as plant construction and decommissioning. Application of LCA to subsets of this life cycle, as well as to other nuclear applications, will also be discussed. This course aims to instill an appreciation for the importance of LCA; explain how LCAs are conducted, with reference to the ISO standards; and, describe how and why this analytical approach may be applied to

nuclear energy systems.

### **ENGR 5161G - HVAC and Refrigeration Systems Design and Analysis**

Basic concepts. Elements of heat transfer for buildings. Thermodynamic processes in buildings. Energy use and environmental impact. Human thermal comfort and indoor air quality. Fluid mechanics in building systems. Solar radiation. Heating and cooling loads. Annual energy consumption. Heat transfer equipment. Cooling equipment. Thermal energy storage. Software use and tests.

### **ENGR 5410G - Project Management for Engineers**

This course prepares engineers for the effective application of project management to their work. It covers the following topics: project integration, project scope, cost management, time management, engineering quality, human resources, project communications, risk management and procurement management. The course uses the Project Management Institute's (PMI) Project Management Body of Knowledge (PMBOK) with relevant examples from nuclear, software and other fields of engineering. Special emphasis is placed on Risk Management, particularly in the area of safety-critical engineering projects. The student will be well-positioned both to apply the knowledge in their area of engineering and to write the PMI's Project Management Professional (PMP) examination.

### **ENGR 5415G - Foundations of Engineering Management**

Fundamentals of engineering management. Managerial accounting: cost-volume-profit analysis, costing systems and standard costs, activity-based costing, relevant costing. Organizational behaviour: motivation, stress management, effective leadership, communication, work teams. Quantitative decision making in engineering: scoring models, AHP, decision trees, mini-max regret and other strategies.

### **ENGR 5511G - Railway Systems Foundations**

This course covers railway systems including the environmental needs and contributions of railway systems in a global context. The course will cover the history of railways, the requirements of regulatory authorities and the factors considered in designing railway systems, including the main economic parameters of railway systems to be considered for any project. Engineering methodologies of railway systems, including design of metro, tram, and mainline/commuter systems will be covered along with the principles for managing the operational capability of railway systems.

### **ENGR 5544G - Operation and Maintenance of Railway Systems**

This course covers the operation and maintenance of both urban and main line railway systems. Topics include: scheduling; Operations Control Centre (OCC); maintenance options, tools, procedures and training; emergency measures; and testing and commissioning.

### **ENGR 5925G - Control and Operation of AC Drives**

The main objective of this course is to provide students with a thorough understanding of the design, modeling and control of electric drives. The course starts with a thorough review of the fundamentals of power electronics, machines and control theory in the world of drives as applies to research and development. AC machines are introduced using the concept of rotating magnetic field and comparisons to the DC machine. Details of operation, construction, design and control are then presented for

induction machines, permanent magnet synchronous machines and switched-reluctance machines (SRM). Rail, electric and hybrid vehicle application examples are emphasized.

#### **ENGR 5930G - Adaptive Control**

This is a course on the general principles of adaptive control and learning. This course will cover real-time parameter estimation, deterministic self-tuning regulators, stochastic and predictive self-tuning regulators, model reference adaptive systems, gain-scheduling, properties of adaptive systems, robust adaptive control schemes, adaptive control of nonlinear systems, and practical issues and implementation.

#### **ENGR 5940G - Intelligent Control Systems**

With the advance of increasingly faster computing hardware and cheaper memory chips, computational intelligence, also known as a part of soft computation, is becoming more and more important in control engineering. This course will equip students with the essential knowledge and useful resources to solve some of the systems control problems not easily solved using conventional control methods. This course will cover fundamentals of fuzzy set theory, structures of fuzzy logic controllers, structures of neural networks, learning algorithms and genetic algorithms.

#### **ENGR 5945G - Mobile Robotic Systems**

This course covers kinematics models and motion control for mobile robots; navigation, including path planning, obstacle avoidance and techniques for decomposition, localization using odometry, map representation, map building and introduction to probabilistic map-based localization; Kalman filter localization and other localization systems; computer vision, including imaging and image representation, feature extraction, pattern recognition, motion from 2D image sequences, image segmentation, sensing and object pose computation, and virtual reality.

#### **ENGR 5005G - Special Topics**

Presents material in an emerging field or one not covered in regular offerings. This course may be taken more than once, provided the subject matter is substantially different.

#### **NUCL 5250G - Power Plant Thermodynamics**

This course presents the theoretical and practical analysis of the following, with the particular reference to modern advanced nuclear-power reactors / plants and Generation-IV concepts of nuclear-power reactors / plants. Thermodynamic Cycles include: (1) Modern advanced combined cycles and subcritical- and supercritical-pressure Rankine cycles of various options used in thermal-power industry; (2) Modern subcritical-pressure Rankine cycles of various options used in nuclear-power industry; and (3) Future advanced combined cycles and subcritical- and supercritical-pressure Rankine cycles of various options proposed to be used in the nearest future with the deployment of Generation-IV nuclear-power reactors. Description of power cycles includes: Their layouts, major equipment, T-s diagrams, cycle efficiency; turbine configurations, etc.

#### **NUCL 5010G - Project Management for Nuclear Engineers**

This course in project management prepares nuclear engineers and scientists in the application of this discipline in their work. It is an intensive investigation into the major principles of project management slanted towards, but not exclusively about, the management of nuclear engineering projects. The course uses the Project Management Institute's (PMI) Project Management Body of Knowledge (PMBOK) as a skeleton and expands that coverage with relevant examples from nuclear, software and general engineering. Special emphasis is placed on risk management, particularly in the area of safety-critical projects. Graduates will be well positioned both to apply the knowledge in their area of engineering and

to sit the PMI's Project Management Professional (PMP) examination. The course is taught using many case studies from industry and engineering.

**NUCL 5330G - Principles of Nuclear Facility Decommissioning**

This course will cover an introduction to nuclear decommissioning technology and practice, covering the transition from an operating state to safe storage surveillance, decommissioning, and return to end state. The regulations, codes and standard, current practices and methods will be covered. Practices and methods for planning, cost estimating and preparing for decommissioning including historical data gathering and site characterization, are included. Decontamination technologies, decontamination factors and generation of secondary contamination will be examined. Dismantling technologies for components and systems and their relationship to waste transport requirements and waste site acceptance criteria will be studied. End states and site release criteria will be discussed.

## Appendix D – Faculty Information

Please include here only those currently at the institution and affiliated with the program. Examples in purple to be removed.

**Where available, link each faculty name to their Research or Profile page on the website.**

| Name and Faculty Status/Rank | Terminal Degree | Home Faculty/Unit | Areas of Expertise                                                                                                                                                                                                                                                                                                                                                                                                                                              | Supervisory Privileges and Role in New Program<br>(Note if faculty will be teaching and/or supervising in the program; indicate primary supervisor by asterisks) | Total Graduate Teaching (including New Program)<br>(Note in bold type if faculty is a core course developer for the program) |
|------------------------------|-----------------|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Akira Tokuhiko               | PhD             | FEAS              | <ul style="list-style-type: none"> <li>• Education/Learning</li> <li>• Energy</li> <li>• Nuclear</li> <li>• Public Safety</li> <li>• Plant Engineering and Operations</li> <li>• Program Development</li> <li>• Research</li> <li>• Safety</li> </ul>                                                                                                                                                                                                           | Graduate Faculty*<br>Teaching core courses                                                                                                                       | 3-4 courses<br>(undergraduate/graduate level)                                                                                |
| Brian Ikeda                  | PhD             | FEAS              | <ul style="list-style-type: none"> <li>• Corrosion of materials in molten fluoride salts</li> <li>• Corrosion of nuclear waste container materials</li> <li>• Electrochemical and physical degradation of fluorine anodes</li> <li>• Localized corrosion of metals at elevated temperatures</li> <li>• Stress-assisted corrosion cracking of metals</li> <li>• Long-term performance assessment of materials</li> <li>• Radioactive waste management</li> </ul> | Graduate Faculty*<br>Teaching core courses                                                                                                                       | 3-4 courses<br>(undergraduate/graduate level)                                                                                |

|                |     |      |                                                                                                                                                                                                                                                                                                                                      |                                            |                                               |
|----------------|-----|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------------------------|
| Dan Hoornweg   | PhD | FEAS | <ul style="list-style-type: none"> <li>• Climate change</li> <li>• Energy systems</li> <li>• Greenhouse gas emissions</li> <li>• Hydrogen</li> <li>• Material flows in cities (e.g. energy and solid waste)</li> <li>• Sustainability</li> <li>• Sustainable development</li> </ul>                                                  | Graduate Faculty*<br>Teaching core courses | 3-4 courses<br>(undergraduate/graduate level) |
| Dima Jawad     | PhD | FEAS | <ul style="list-style-type: none"> <li>• Recent trends and Innovative Tools in Project Management</li> <li>• Economic Evaluation and Optimization Under Uncertainty</li> <li>• Risk Management</li> <li>• Sustainability and Resiliency of Infrastructure</li> <li>• Infrastructure and Transportation Systems Management</li> </ul> | Graduate Faculty*<br>Teaching core courses | 3-4 courses<br>(undergraduate/graduate level) |
| Glenn Harvel   | PhD | FEAS | <ul style="list-style-type: none"> <li>• Diagnostic techniques</li> <li>• Electrohydrodynamic and plasma technology for particle capture</li> <li>• Nuclear decommissioning</li> <li>• Nuclear plant design</li> <li>• Plant operations and maintenance optimization</li> <li>• Small modular reactors</li> </ul>                    | Graduate Faculty*<br>Teaching core courses | 3-4 courses<br>(undergraduate/graduate level) |
| Ibrahim Dincer | PhD | FEAS | <ul style="list-style-type: none"> <li>• Drying</li> <li>• Energy and exergy analyses</li> <li>• Energy conversion and management</li> <li>• Heat and mass transfer</li> <li>• Hydrogen and fuel cell systems</li> <li>• Refrigeration</li> <li>• Renewable energies</li> </ul>                                                      | Graduate Faculty*<br>Teaching core courses | 3-4 courses<br>(undergraduate/graduate level) |

|                   |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                            |                                               |
|-------------------|-----|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------------------------|
|                   |     |      | <ul style="list-style-type: none"> <li>• Thermal energy storage</li> <li>• Thermodynamics</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |                                               |
| Jennifer McKellar | PhD | FEAS | <ul style="list-style-type: none"> <li>• Life cycle assessment</li> <li>• Life cycle costing</li> <li>• Real options analysis</li> <li>• Expert elicitation</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Graduate Faculty*<br>Teaching core courses | 3-4 courses<br>(undergraduate/graduate level) |
| Jing Ren          | PhD | FEAS | <ul style="list-style-type: none"> <li>• Haptics and virtual reality</li> <li>• robotics and control</li> <li>• image processing</li> <li>• soft computing</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Graduate Faculty*<br>Teaching core courses | 3-4 courses<br>(undergraduate/graduate level) |
| Marc Rosen        | PhD | FEAS | <ul style="list-style-type: none"> <li>• Polygeneration (cogeneration, trigeneration, etc.)</li> <li>• District energy</li> <li>• Efficiency improvement</li> <li>• Electricity generation</li> <li>• Energy Environmental impact assessment and reduction</li> <li>• Energy analysis</li> <li>• Geothermal energy</li> <li>• Heat transfer</li> <li>• Hydrogen energy and fuel cells</li> <li>• Integrated energy systems</li> <li>• Modelling and simulation of energy systems</li> <li>• Renewable energy</li> <li>• Solar energy</li> <li>• Sustainable energy and sustainability</li> <li>• Wind energy</li> <li>• Thermal energy storage</li> <li>• Thermodynamics</li> </ul> | Graduate Faculty*<br>Teaching core courses | 3-4 courses<br>(undergraduate/graduate level) |
| Masoud Makrehchi  | PhD | FEAS | <ul style="list-style-type: none"> <li>• Natural Language Processing</li> <li>• Artificial Intelligence</li> <li>• Machine Learning</li> <li>• Text and Data Mining</li> <li>• Social Computing</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Graduate Faculty*<br>Teaching core courses | 3-4 courses<br>(undergraduate/graduate level) |

|                 |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                            |                                               |
|-----------------|-----|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------------------------|
|                 |     |      | <ul style="list-style-type: none"> <li>• Mining Social Networks and Complex Systems</li> <li>• Network Science</li> <li>• Moral AI</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                            |                                               |
| Mohamed Youssef | PhD | FEAS | <ul style="list-style-type: none"> <li>• Propulsion Systems for the Automotive and Innovative Technologies like Hyperloop;</li> <li>• Power Train for New Drives like Water Pumps;</li> <li>• Railway Electromagnetic Compatibility (EMC);</li> <li>• Railways Traction Substation Design Planning, and Commissioning;</li> <li>• Power Electronics Applications for the Information Technology (IoT);</li> <li>• Power Electronics Applications in the Innovative Renewable Energy Resources;</li> <li>• Power Supply Design for the Oil/Gas;</li> <li>• Power Systems Operation and Stability.</li> </ul> | Graduate Faculty*<br>Teaching core courses | 3-4 courses<br>(undergraduate/graduate level) |
| Scott Nokleby   | PhD | FEAS | <ul style="list-style-type: none"> <li>• Robotics</li> <li>• Mechatronics</li> <li>• Mechanisms</li> <li>• Automation</li> <li>• Advanced Kinematics of Robots and Mechanisms</li> <li>• Redundant Manipulator Systems</li> <li>• Mobile-Manipulator Systems</li> <li>• Mechanism and Robot Design</li> <li>• Optimal Design</li> </ul>                                                                                                                                                                                                                                                                     | Graduate Faculty*<br>Teaching core courses | 3-4 courses<br>(undergraduate/graduate level) |

## **Existing Non-Financial Student Support Services**

### **School of Graduate and Post-Doctoral Studies**

Quality graduate and postdoctoral education combines teaching, research, professional development, disciplinary community involvement and personal growth. It is by nature a shared responsibility between students, faculty members, the programs and a large number of support units, with overarching administration being provided by the School of Graduate and Postdoctoral Studies.

The School of Graduate and Postdoctoral Studies (SGPS) furthers the scholarly mission of the university by providing academic and administrative support to the university's postgraduate educational, research, innovation and international activities. Our responsibilities include graduate program development, graduate enrolment management, oversight of academic and quality standards, and the implementation of policies and practices that enhance graduate/postdoctoral scholarly success, career readiness and personal growth. SGPS supports prospective, new and current graduate students through many administrative services including, but not limited to, recruitment, admission, registration, funding and scholarships, orientation, professional development workshops and events, and processing of final theses, projects and papers. SGPS is a single-point-of-contact, multifunctional administrative unit tailored to the complete "life-cycle" of graduate students, providing coordinated support to students and all other stakeholders.

### **Student Life**

Ontario Tech University, as a relatively small campus community, has a centralized delivery model for many 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/>.

### **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.

## **Campus Libraries**

The Campus Libraries support teaching, learning, and research at Ontario Tech University with facilities, collections, and programming.

Library Collections:

- The Library's total collections budget is \$1.7 million.
- Collections include books, e-books, databases, journals, data and statistics, and multimedia materials

Support for teaching and learning:

- A dedicated librarian for each program who provides instruction, research consultations, and collection development
- Research guides for each of Ontario Tech's programs, as well as general guides for citation, copyright, and other broad topics
- Workshops and classes: custom in-class sessions, and general instruction sessions

- Three (3) online modules in Ontario Tech's learning management system, which professors can integrate seamlessly into their course shells

#### Research supports:

- Research consultations with subject librarians
- Extended support via the Library's virtual reference service
- Support for generative artificial intelligence: citation, copyright, and allowable use of library resources

#### Scholarly publishing supports:

- Research data management
- Publishing compliance with Tri-Council and other funders
- Support finding and creating open educational resources (OERs)
- Copyright advice and compliance information
- Support for authors, including reviewing author agreements
- Administration of APC waivers for faculty publishing in open access

#### Facilities:

- The Campus Libraries include the North Oshawa Library, which is the campus' main branch, and the Social Sciences, Humanities, and Education Library, which is located in downtown Oshawa
- The Library's locations include:
  - Extended library hours are available during peak season
  - Groups study rooms are available for student booking
  - Accessible workstations, and sit-stand desks
  - Computers and dual monitor workstations

## **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.



## New Graduate 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 graduate 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.

|                                                                                                                                                                       |                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| <b>Full name of proposed program (as it will appear on the student's transcript):</b><br>(e.g., Master of Arts in Education; Master of Science in Applied Bioscience) | Graduate Diploma in Smart Grid Engineering                                 |
| <b>Degree designation and short form:</b><br>(e.g., Master of Arts, M.A.; Master of Science, M.Sc.)                                                                   | GDip                                                                       |
| <b>Cost recovery program:</b>                                                                                                                                         | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No        |
| <b>Professional program:</b>                                                                                                                                          | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No        |
| <b>For graduate diplomas:</b>                                                                                                                                         | <input type="checkbox"/> Type 2 <input checked="" type="checkbox"/> Type 3 |
| <b>Faculty offering the program:</b><br>(i.e., where the program will be housed/site of academic authority)                                                           | Faculty of Engineering and Applied Science                                 |
| <b>Collaborating Faculty(ies) (if applicable):</b>                                                                                                                    | N/A                                                                        |
| <b>Collaborating institution(s) (if applicable):</b>                                                                                                                  | N/A                                                                        |
| <b>Program delivery location:</b>                                                                                                                                     | Ontario Tech North Campus and Hybrid                                       |
| <b>Proposed program start date (please change as needed):</b>                                                                                                         | Fall 2027                                                                  |
| <b>Program proponent/contact:</b>                                                                                                                                     | Akramul Azim                                                               |
| <b>Version date (please change as you edit this proposal):</b>                                                                                                        | May 14, 2026                                                               |
| <b>Date of Academic Council Approval:</b>                                                                                                                             |                                                                            |

***Brief* description of the proposed program<sup>1</sup>:** (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 Smart Grid Engineering Graduate Diploma incorporates smart power systems learning through practical, project-driven coursework centered on the development of Smart Grid systems. Throughout the program, students engage directly with contemporary Smart Grid engineering tools, platforms, and methodologies as they work on a range of engineering-focused use cases. All assignments and projects are integrated into the existing suite of graduate courses, leveraging current infrastructure and resources within the Faculty of Engineering and Applied Science. No additional facilities are required, ensuring a streamlined and sustainable delivery model. This learning structure not only strengthens students' technical proficiency in designing, implementing, and evaluating Smart Grid-based systems, but also enhances their professional skills in collaborative problem-solving, project management, and responsible technology development. Through existing courses, the diploma aligns closely with Ontario Tech University's strategic focus on energy systems, preparing graduates to contribute effectively to emerging AI-driven industries and research initiatives.

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<sup>1</sup> 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 \(oucqa.ca\)](#))

# New Graduate Program Proposal

## Graduate Diploma in Smart Grid Engineering Faculty of Engineering and Applied Science

### 1 Program Abstract

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*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 Smart Grid Engineering Graduate Diploma incorporates smart power systems learning through practical, project-driven coursework centered on the development of Smart Grid systems. Throughout the program, students engage directly with contemporary Smart Grid engineering tools, platforms, and methodologies as they work on a range of engineering-focused use cases. All assignments and projects are integrated into the existing suite of graduate courses, leveraging current infrastructure and resources within the Faculty of Engineering and Applied Science. No additional facilities are required, ensuring a streamlined and sustainable delivery model. This learning structure not only strengthens students' technical proficiency in designing, implementing, and evaluating Smart Grid-based systems, but also enhances their professional skills in collaborative problem-solving, project management, and responsible technology development. Through existing courses, the diploma aligns closely with Ontario Tech University's strategic focus on energy systems, preparing graduates to contribute effectively to emerging AI-driven industries and research initiatives.

## 2 Academic Rationale

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- *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*
- *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*

The proposed GDip in Smart Grid Engineering has been designed for engineers in industry and recent engineering graduates who wish to pursue a career in the energy sector. The program structure for the GDip will be hybrid and is comprised of four (4) graduate-level courses (12 credit hours) from the following:

- ENGR 5675G AI-Enabled Smart Grid Systems Engineering
- ENGR 5960G Power Sys. Oper., Anal & Plan.
- ENGR 5965G Digital Devices and Techniques for Smart Grid Automation and Protection
- ENGR 5970G Advanced Power Electronics
- ENGR 5975G Elect. Power Distribution Syst
- ENGR 5997G Modelling and Control of Power Converters
- ENGR 5005G – Special Topics\*

\*Registration in Special Topics course(s) are subject to approval by the Graduate Program Director, must be relevant to the GDip program scope, and must be confirmed as enabling the student to meet the program learning outcomes and degree-level expectations for the graduate diploma.

The program name and nomenclature accurately reflect the program's scope and objectives. It signals a focused, graduate-level credential that builds on an engineering foundation while specializing in energy systems.

Innovative features of the program include integration with an established graduate program for resource efficiency and academic continuity, graduate-level assignments emphasizing applied research and industry-relevant problem-solving and a curriculum aligned with high-impact practices, fostering expertise in a sector vital to Canada's economic and environmental goals.

The Graduate Diploma in Smart Grid Engineering addresses a critical skills gap in a discipline undergoing rapid transformation due to sustainability goals, technological innovation, and infrastructure modernization.

*[Optional] Describe any fields and/or any pathways from related programs. (Graduate programs are not required to have fields in order to highlight an area of strength or specialization within a program, nor are they required to provide specific pathways from programs at the college, bachelor, or other level.)*

N/A

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

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- *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 Smart Grid Engineering Graduate Diploma is fully consistent with the academic and research-oriented mandate of the university sector in Ontario. As a graduate-level program, it combines strong theoretical foundations in electrical power systems with applied, project-based learning that reflects the expectations of university education. The curriculum emphasizes advanced topics such as power system analysis, renewable energy integration, intelligent grid control, and energy data analytics, while fostering critical thinking, research-informed design, and innovation.

The program aligns closely with key areas of strength and growth identified in Ontario Tech University's Strategic Mandate Agreement (SMA), particularly in clean energy, advanced manufacturing, and digital technologies. Smart grid systems are central to the modernization of energy infrastructure and the transition to sustainable energy systems—areas in which Ontario Tech has established expertise.

## 4 Need, Demand, and Duplication

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*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*

Ontario labour-market data point to a growing need for graduates in smart-grid engineering as the province modernizes its electrical infrastructure and responds to rising electricity demand. Government of Canada labour tools show positive near-term prospects for power-system and electrical-engineering occupations, while national projections estimate nearly 15,000 openings over the next decade—suggesting several thousand opportunities in Ontario when scaled proportionally. Regional insights from the Durham Workforce Authority further highlight shortages in energy, digital infrastructure, and technical engineering skills. Together, these trends indicate strong and sustained demand over the next 5–10 years for engineers with expertise in power systems, grid modernization, protection and control, renewable integration, and energy-storage technologies.

- *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 GDip in Smart Grid engineering is distinct from other programs at Ontario Tech. Although the Smart Grid specialization courses exist for the ECE undergraduate programs, the GDip is designed for those who did not have the opportunity to take the Smart Grid Engineering Specialization during their undergraduate studies.

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

The GDip builds upon the already existing graduate electrical engineering courses, so it is not a new area of study. However, it is a further step into expanding Ontario Tech's offerings that contribute to the training needs of the energy sector.

- *Identify similar or complementary programs offered by other universities with specific reference to Ontario and Canadian examples.*
- *Provide additional overall comment on the justification for any duplication*

Graduate Programs (Master's / Diplomas) Related to Smart Grid in Ontario:

1. Toronto Metropolitan University (TMU) — Professional Master's Diploma in Energy & Innovation
  - This is a *graduate-level diploma* (PMDip) that *explicitly includes smart grid concepts*. [Toronto Metropolitan University \(TMU\)+2Toronto Metropolitan University \(TMU\)+2](#)
  - Core courses include “Smart Grids – Electricity, Petroleum and Infrastructure”, demand management, energy storage, electricity

- markets, plus a final project. [Toronto Metropolitan University \(TMU\)+2](#)
- o Part-time, designed for working professionals. [Toronto Metropolitan University \(TMU\)](#)
  - o Students have access to TMU's Schneider Electric Smart Grid Laboratory. [Toronto Metropolitan University \(TMU\)+1](#)
2. University of Toronto — MEng in Electrical & Computer Engineering
    - o U of T's MEng program includes a *Smart Grid Case Studies* course (ECE1092H). [Electrical & Computer Engineering](#)
    - o This is a course-based master's (full-time, part-time) suitable for engineers looking to specialize. [Electrical & Computer Engineering](#)
  3. University of Western Ontario (Western) — Graduate Program in Electrical & Computer Engineering (Power Systems)
    - o Western's ECE department offers an MEng (and a Graduate Diploma + master options) with access to power systems simulators and distributed control systems. [Western Engineering](#)
    - o Their power systems research includes smart grid-relevant topics.
  4. University of Waterloo — Power & Energy Systems (MAsc, MEng, Online MEng)
    - o Waterloo's ECE department has a *Power and Energy Systems Group* that includes smart grid research. [University of Waterloo](#)
    - o They offer an online MEng in Electric Power Engineering, plus MAsc and PhD in power / smart grid-relevant areas. [University of Waterloo](#)

## 5 Enrolment Information

- Please complete Table 1 and provide, in paragraph form, information regarding enrolment projections
- Please determine the academic year when the program enrollment 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 Enrollment by Academic and Program Year**

|                  | Academic Year |           |           |           |           |           |
|------------------|---------------|-----------|-----------|-----------|-----------|-----------|
|                  | 2026-2027     | 2027-2028 | 2028-2029 | 2029-2030 | 2030-2031 | 2031-2032 |
| Level of Study   |               |           |           |           |           |           |
| Diploma year 1   | 10            | 10        | 20*       | 20        | 20        | 20        |
| Total Enrollment | 10            | 10        | 20        | 20        | 20        | 20        |

Projected enrollment would initially be around 10-15 students per year. The planned steady-state is 20 students per year. Note these directed offerings may be offered in alternate formats other than the traditional 12-week semester.

## 6 Admission Requirements

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

Minimum Academic Requirements for Graduate Diploma Programs:

- Hold a four-year honours degree or its equivalent from a recognized institution in the area of graduate study or a closely related subject.
  - A minimum B-minus average (GPA: 2.7 on a 4.3 scale).
  - Applicants that have a degree in subject areas outside of engineering or those who do not meet the minimum GPA requirements, but have relevant engineering experience will be evaluated on an individual case-by-case basis.
- 
- *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*

Graduates from any Canadian accredited undergraduate engineering program (or its equivalent) will be eligible to enrol in the GDip, including: Electrical Engineering, Software Engineering, Energy Engineering, Industrial Engineering and Mechatronics Engineering.

To provide applicants looking to re-skill for the power sector the potential opportunity to do the GDip in Smart Grid Engineering, applicants from non-engineering programs or those who do not meet the minimum GPA requirements will be considered on a case-by-case basis.

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

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*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 A 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; for researched-focused graduate programs, provide a clear indication of the nature and suitability of the major research requirements for degree completion; for professional graduate programs, 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*

Students complete four (4) graduate-level courses (12 credit hours total) from the list below, providing both theoretical understanding and practical training in Smart Grid-based engineering:

- ENGR 5675G AI-Enabled Smart Grid Systems Engineering
- ENGR 5960G Power Sys. Oper., Anal & Plan.
- ENGR 5965G Digital Devices and Techniques for Smart Grid Automation and Protection
- ENGR 5970G Advanced Power Electronics
- ENGR 5975G Elect. Power Distribution Syst
- ENGR 5997G Modelling and Control of Power Converters
- ENGR 5005G – Special Topics\*

\*Registration in Special Topics course(s) are subject to approval by the Graduate Program Director, must be relevant to the GDip program scope, and must be confirmed as enabling the student to meet the program learning outcomes and degree-level expectations for the graduate diploma.

Delivery mode for the courses will be hybrid. In addition to the traditional 12-week semester delivery.

The courses available in the program cover the state-of-the-art in Smart Grid engineering and are taught by instructors with subject matter expertise.

The diploma can be completed on a part-time or full-time basis and it provides a flexible pathway for professionals seeking to upskill in Smart Grid Engineering or transition into leadership roles in smart-industry settings.

All course deliverables will be designed to ensure that the students are meeting the program learning outcomes and support the achievement of Graduate Degree Level Expectations. Assessments will not only measure content knowledge but also foster advanced competencies expected at the graduate level.

*Provide evidence that each graduate student is required to take a minimum of two-thirds of the course requirements from among graduate-level courses*

All courses that are required for the GDip are graduate level.

*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 Faculty of Engineering and Applied Science (FEAS) is fully committed to Equity, Diversity, and Inclusion (EDI), including in all its courses and all its research activities. The material covered in this program considers the development of AI software and systems that serve the public, so it is critical that EDI considerations are incorporated into the development of these systems, in particular ensuring these systems are accessible for all users. The courses, where appropriate, will cover these issues to ensure that students understand the importance of designing accessible systems.

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? [Insert Date Here]

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

N/A

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.*

N/A

## 8 Assessment of Teaching and Learning

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*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 be used to inform continuous program improvement*

The learning outcomes for the program are achieved through a combination of graduate-level course work, including assignments, exams, projects, and presentations.

Learning activities and materials in graduate courses will be carefully designed to ensure that learners are deliberately exposed to study, the majority of which is at, or informed by, the forefront of engineering theory and practice.

The courses have been designed to give students key knowledge in Smart Grid engineering as well as an opportunity for advanced development of generic skills such as communication and teamwork. In addition, there will be scholarly activities of independent investigation, report writing, and presentations.

Throughout the curriculum, learning activities are planned, and student progress will be monitored to ensure that safety, professional guidelines, and ethical responsibilities relevant to engineering are modelled, developed, and evaluated.

Student feedback surveys will be completed at the end of each course delivery to gather feedback. As well student performance in each course will be monitored yearly. The Graduate Program Director responsible for the program will review both the student feedback surveys and the student performance to ensure that the program is meeting its goals. In addition, the Industrial Advisory Committee will also provide feedback on the program delivery. Insights from these surveys and reviews will be documented and used to identify specific areas for improvement, inform curriculum adjustments, and guide enhancements to teaching and learning strategies.

Any required changes to curriculum, assessment methods, delivery, or administration are implemented as appropriate and feasible at the discretion of the Faculty Dean. Curricular changes are then submitted and documented through appropriate Faculty and University committees consistent with standard curricular change policies and procedures as identified in the IQAP.

To ensure sustained quality, program effectiveness will be assessed and monitored through the cyclical review process, providing actionable insights for continuous improvement. In addition to the external review every eight years, Ontario Tech's Academic Resource Committee (ARC) requires a brief report at program launch and a full report one-year after the launch of a new program. The one-year report will ask the program to review enrollment data, admission averages, and provide an analysis of successes and challenges encountered in the first year. If there are areas of concern and it is deemed necessary, ARC will make recommendations to enhance program effectiveness and student success and may request a subsequent report. If required, the subsequent 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 ARC's review, further documentation may be required of the program for ongoing monitoring.

## 9 Calendar Copy and Program Map(s)

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- *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*
- *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 B for the Calendar Copy for the program and Appendix C for the List of Program Courses and Descriptions.

## 10 Consultation

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- *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 Graduate Diploma in Smart Grid Engineering is designed to complement, rather than compete with, existing programs within the Faculty and across the University. By leveraging shared lectures with the Graduate ECE course offerings, the GDip enhances resource efficiency without diminishing the quality of graduate offerings.

The Office of the Registrar and the School of Graduate and Postdoctoral Studies were also consulted in the development of this program. No issues were raised.

Several discussions were held at the various levels of department and faculty.

As noted above, there will be no impact on other programs offered at Ontario Tech.

## 11 Resource Requirements

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### **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.*

As the program is leveraging the existing graduate ECE courses, it is anticipated there will be no major resource requirements. By leveraging existing graduate course offerings, the GDip enhances resource efficiency without diminishing the quality of graduate offerings.

***The resource requirements outlined in Section 11 have been reviewed by the Academic Resource Committee (ARC): 9 December 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?*

*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.*

The program will be delivered by existing ECSE faculty members.

Please see Appendix D Faculty Information for a table detailing the list of faculty committed to the program and separate file for Curriculum Vitae (provided to the Quality Council for review).

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 the faculty hire be required, and are there additional criteria associated with the hiring requirement (e.g. enrolment levels, program growth, University or Faculty priorities)?

Since the course delivery will leverage the graduate ECE course offerings, no additional human resources will be required, unless the number of students enrolled reaches the point where more than one section of a given course needs to be offered. Details and timing of proposed hirings are coordinated and confirmed with the Provost's Office through regular operational conversations.

N/A

### **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.*

No TAs will be required unless the enrolment is large enough to warrant it.

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'.*

The program will leverage existing institutional resources and targeted supports, including access to modern facilities, technology-enabled classrooms, and research infrastructure. Dedicated student services, academic advising, and wellness initiatives will promote student well-being and resiliency, ensuring a supportive and inclusive learning environment.

Please see Appendix E 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.*

The institution provides robust information technology resources to support high-quality scholarship and research activities for graduate students. These include access to modern computing facilities, high-speed networks, secure data storage, and discipline-specific software to enhance teaching and learning. Existing spaces are equipped with technology-enabled classrooms and research infrastructure ensuring the program can be successfully implemented and sustained.

Please see Appendix F 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)?*

The program will leverage existing University IT infrastructure. Ontario Tech is a laptop university where students bring their own laptop devices and are provided access to a software portal where they can download any necessary software required for their courses, including a variety of engineering specific packages such as Python, Git, MATLAB, and other AI tools as required.

The hybrid delivery of the courses will make use of Ontario Tech's flexible hybrid classrooms that allow for synchronous delivery with active participation from students both in room and online and the ability for all students to see all other students.

## **11.4 Financial Support for Graduate Students**

*Provide evidence that financial assistance for students, including TA-ships where applicable, will be sufficient to ensure adequate quality and numbers of students.*

No financial assistance will be provided as this is a professional program.

## **11.5 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?*

The hybrid delivery of the courses and the leveraging with the current graduate course delivery will have minimal impact on classroom requirements.

No additional space requirements are required.

## 11.6 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 ([cique@ontariotechu.ca](mailto:cique@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 program does not impact any existing agreements Ontario Tech has with institutional and external partners. In addition, there are no inter-Faculty implications.

## 12 Closing Statements Regarding Program Quality

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- *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 GDip in Smart Grid Engineering has been designed to meet the demands of this rapidly growing sector. The Faculty has several professors (with also outside faculty members with graduate faculty status) with energy/power expertise who can deliver courses as needed. The program has been designed to meet the needs of the energy sector. The Faculty has a history of quality program delivery that will serve as a model for the delivery of this new program.

## Appendices

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*Please include at minimum the below. Additional Appendices may be added, as appropriate. Appendices should ultimately be listed below, attached as separate documents, and clearly labelled (A, B, C, etc.) in the order in which they are first mentioned in the document.*

Appendix A: Program Learning Outcome Alignment Map to DLEs, Courses, and Assessments

Appendix B: Calendar Copy

Appendix C: List of Program Courses and Descriptions for Existing Courses

Appendix D: Faculty Information

Appendix E: Learning Resources

Appendix F: Information Technology Resources

### **Items to be separate documents sent to CIQE:**

New Program Funding and Tuition form (for CIQE use only)

Budget Spreadsheet (for ARC use only)

Curriculum Vitae (for Quality Council use only)

**Graduate Diploma – Smart Grid Engineering**

| <b>PLO #</b> | <b>Program Learning Outcomes</b>                                                                                                                                                                          |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>PLO 1</b> | <b>Apply advanced concepts, principles, and theories in the field of Smart Grid engineering to analyze and solve complex engineering problems and practices.</b>                                          |
| <b>PLO 2</b> | <b>Utilize analytical, numerical, experimental, and interpretive skills in conducting research projects in the field of Smart Grid Engineering.</b>                                                       |
| <b>PLO 3</b> | <b>Design and conduct engineering experiments to identify problems and opportunities for system analysis, design, improvement, and computational optimization in the field of Smart Grid engineering.</b> |
| <b>PLO 4</b> | <b>Describe the complexity of Smart Grid and exhibit comprehensive knowledge of fundamental principles and methodologies.</b>                                                                             |
| <b>PLO 5</b> | <b>Evaluate the social, professional, and ethical implications inherent in the advancement of applications within the field of Smart Grid engineering.</b>                                                |
| <b>PLO 6</b> | <b>Demonstrate effective skills for oral and written communication, project management, and teamwork in the field of Smart Grid engineering..</b>                                                         |
| <b>PLO 7</b> | <b>Develop strategies for continuous education and lifelong learning in the field of Smart Grid engineering.</b>                                                                                          |

Graduate Diploma – Smart Grid Engineering

|                           | Degree Level Expectation                                     | Depth and Breadth of Knowledge                                                                                                               |                            | Research and Scholarship                                       |                                                       | Application of Knowledge   | Professional Capacity and Autonomy                                      | Awareness of Limits of the Institution | Communication Skills                                              |                                  |
|---------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------------------------------------------------------------|-------------------------------------------------------|----------------------------|-------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------|----------------------------------|
|                           | DLE Description                                              | A systematic understanding of knowledge, including, where                                                                                    |                            | A conceptual understanding and methodological competence that: |                                                       | Competence in the research | a) The qualities and transferable skills necessary for employment       | Cognizance of the complexity           | The ability to communicate ideas, issues and conclusions clearly. |                                  |
|                           | Program Learning Outcomes                                    | PLO1                                                                                                                                         | PLO4                       | PLO2                                                           | PLO3                                                  | PLO1                       | PLO5                                                                    | PLO6                                   | PLO5                                                              | PLO7                             |
|                           | PLO Description                                              | Apply advanced concepts,                                                                                                                     | Describe the complexity of | Utilize analytical, numerical,                                 | Design and conduct scientific experiments to identify | Apply advanced concepts,   | Evaluate the social, professional, and ethical implications inherent in | Develop strategies for                 | Evaluate the social,                                              | Demonstrate effective skills for |
| Course No.                | Course Title                                                 |                                                                                                                                              |                            |                                                                |                                                       |                            |                                                                         |                                        |                                                                   |                                  |
| ENGR 5960G                | Power System Operations, Analysis and Planning               | 2, 4                                                                                                                                         | 2, 4                       | 2, 4                                                           | 2, 4                                                  | 4                          | 4,7,3                                                                   |                                        | 4,7,3                                                             | 3                                |
| ENGR 5970G                | Advanced Power Electronics                                   | 4,7,3                                                                                                                                        | 4,7,3                      | 4,7,3                                                          | 4,7,3                                                 | 4,7,3                      | 4,7,3                                                                   | 4,7,3                                  | 4,7,3                                                             | 4,7,3                            |
| ENGR 5975G                | Electrical Power Distribution Systems                        | 2, 4                                                                                                                                         | 2, 4                       | 2, 4                                                           | 2, 4                                                  | 4                          | 4,7,3                                                                   |                                        | 4,7,3                                                             | 3                                |
| ENGR 5965G                | Digital Devices and Techniques for Smart Grid Automation and | 4,7,3                                                                                                                                        | 4,7,3                      | 4,7,3                                                          | 4,7,3                                                 | 4,7,3                      | 4,7,3                                                                   | 4,7,3                                  | 4,7,3                                                             | 4,7,3                            |
| ENGR 5675G                | Modelling and Control of Power Converters                    | 2, 4                                                                                                                                         | 2, 4                       | 2, 4                                                           | 2, 4                                                  | 4, 7                       | 4,7,3                                                                   |                                        | 4,7,3                                                             | 3                                |
| ENGR 5997G                | AI-Enabled Smart Grid Systems Engineering                    | 7,3                                                                                                                                          | 7,3                        | 7,3                                                            | 7,3                                                   | 7,3                        | 7,3                                                                     | 7,3                                    | 7,3                                                               | 7,3                              |
| Degree of Implementation: |                                                              | Assessments - Identify types of relevant assessments and number them (do not have to be in rank order); those listed below are only examples |                            |                                                                |                                                       |                            |                                                                         |                                        |                                                                   |                                  |
|                           | Introduced                                                   | 1 - Test                                                                                                                                     |                            | 4 - Assignment                                                 |                                                       | 7 - Group project          |                                                                         |                                        |                                                                   |                                  |
|                           | Reinforced                                                   | 2 - Exam                                                                                                                                     |                            | 5 - Essay                                                      |                                                       |                            |                                                                         |                                        |                                                                   |                                  |
|                           | Mastered                                                     | 3 - Presentation                                                                                                                             |                            | 6 -Thesis                                                      |                                                       |                            |                                                                         |                                        |                                                                   |                                  |

## Smart Grid Engineering, Graduate Diploma

### General Information

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The Graduate Diploma (GDip) in Smart Grid Engineering incorporates smart power systems learning through practical, project-driven coursework centered on the development of Smart Grid systems. Throughout the program, students engage directly with contemporary Smart Grid engineering tools, platforms, and methodologies as they work on a range of engineering-focused use cases. All assignments and projects are integrated into the existing suite of graduate courses, leveraging current infrastructure and resources within the Faculty of Engineering and Applied Science. No additional facilities are required, ensuring a streamlined and sustainable delivery model. This learning structure not only strengthens students' technical proficiency in designing, implementing, and evaluating Smart Grid-based systems, but also enhances their professional skills in collaborative problem-solving, project management, and responsible technology development. Through existing courses, the diploma aligns closely with Ontario Tech University's strategic focus on energy systems, preparing graduates to contribute effectively to emerging AI-driven industries and research initiatives.

### Admission Requirements

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In addition to the general admission requirements for graduate studies, applicants must meet the following program-specific requirements:

Minimum Academic Requirements for Graduate Diploma Programs:

- Hold a four-year honours degree or its equivalent from a recognized institution in the area of engineering or a closely related subject.
- A minimum B-minus average (GPA: 2.7 on a 4.3 scale).
- Applicants that have a degree in subject areas outside of engineering or those who do not meet the minimum GPA requirements, but have relevant engineering experience will be evaluated on an individual case-by-case basis.

Graduates from any Canadian accredited undergraduate engineering program (or its equivalent) will be eligible to enrol in the GDip, including: Electrical Engineering, Software Engineering, Energy Engineering, Industrial Engineering and Mechatronics Engineering.

Note, the consideration of applicants from non-engineering programs or those who do not meet the minimum GPA requirements is to provide applicants looking to re-skill for the power sector the potential opportunity to do the GDip in Smart Grid Engineering.

## **Part-time studies**

To facilitate access to all potential students, part-time studies are permitted. In particular, engineers in industry may wish to pursue a graduate diploma program through part-time studies.

## **Graduate diploma requirements**

For the graduate diploma, students must complete the four courses below for a total of 12 credits.

**Note:** Graduate diploma students are not permitted to take courses outside of their home program course listings for program credit. In addition, they may not take any senior fourth-year undergraduate courses from the Faculty of Engineering and Applied Science in lieu of a graduate course.

## **Course listings**

- ENGR 5005G Special Topics\*
- ENGR 5960G Power Sys. Oper., Anal & Plan.
- ENGR 5970G Advanced Power Electronics
- ENGR 5975G Elect. Power Distribution Syst
- ENGR 5965G Digital Devices and Techniques for Smart Grid Automation and Protection
- ENGR 5675G AI-Enabled Smart Grid Systems Engineering
- ENGR 5997G Modelling and Control of Power Converters

\*upon approval by Graduate Program Director and relevant to the scope.

## **Program learning outcomes**

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

Program Learning Outcomes – Smart Grid Engineering, Graduate Diploma

## Appendix C - List of Program Courses and Course Descriptions

### List of Program Courses

The program consists of four graduate-level courses (12 credits total), selected from the following:

| Course Code | Course Name                                                             |                                               |
|-------------|-------------------------------------------------------------------------|-----------------------------------------------|
| ENGR 5675G  | AI-Enabled Smart Grid Systems Engineering                               | Existing Course - course description enclosed |
| ENGR 5960G  | Power System Operations, Analysis and Planning                          | Existing Course - course description enclosed |
| ENGR 5965G  | Digital Devices and Techniques for Smart Grid Automation and Protection | Existing Course - course description enclosed |
| ENGR 5970G  | Advanced Power Electronics                                              | Existing Course - course description enclosed |
| ENGR 5975G  | Electrical Power Distribution Systems                                   | Existing Course - course description enclosed |
| ENGR 5997G  | Modelling and Control of Power Converters                               | Existing Course - course description enclosed |
| ENGR 5005G  | Special Topics                                                          | Existing Course - course description enclosed |

#### **ENGR 5675G - AI-Enabled Smart Grid Systems Engineering**

This course focuses on highlighting different artificial intelligence techniques and their applications in smart grid systems. The purpose of this course is to explore the use of artificial intelligence techniques to address problems in power and energy systems considering the smart grid operation. Topics include the applications of artificial intelligence techniques such as fuzzy systems, neural networks, machine learning, deep learning, reinforcement learning and optimization in renewable energy integration/operation, smart grid stability, power quality, energy management systems, electric vehicles, smart grid forecast and dispatch applications.

#### **ENGR 5960G - Power System Operations, Analysis and Planning**

This course covers resistance, inductance and capacitance of transmission lines; steady state transmission capacity; network compensation; voltage management; load flow simulation; transient stability simulation; system security; system planning; and symmetric operation of power systems.

#### **ENGR 5965G - Digital Devices and Techniques for Smart Grid Automation and Protection**

This course explores digital devices and technologies essential for smart grids, with a focus on both hardware and software aspects of protective relays and automation systems. Topics include digital algorithms for phasor estimation and the protection of critical components such as lines, transformers, generators, and motors. Advanced concepts, including synchronized phasor measurements, adaptive relaying, relay testing, and integrated protection and control systems, will be examined alongside associated communication challenges. The course also introduces IEC 61850, the latest standard for substation protection and automation.

**ENGR 5970G - Advanced Power Electronics**

This course covers fundamentals of power conversion techniques: single-phase and three-phase rectifier and inverter circuits; switch mode converters and power supplies; resonant converters with zero-voltage switching and zero-current switching; multilevel converters; and application of converters to adjustable speed motor drives and other industrial applications.

**ENGR 5975G - Electrical Power Distribution Systems**

This course covers the following topics in electric power distribution system engineering: Load characteristics; distribution transformer loading; feeder load; distribution system modeling; distribution feeder analysis; distribution system automation; calculation of voltage drops in lateral distribution systems; calculation of power losses in distribution systems; application of capacitors to distribution systems; distribution system voltage regulation; solar photovoltaic and wind-based distributed generation; energy storage systems for electric utility systems; the concept of smart distribution system in electric grid and its applications; and electric power quality including monitoring, detection and analysis of variations and events.

**ENGR 5997G - Modeling and Control of Power Converters**

This course covers the modeling and control techniques for switching power converters. Switching power converters are non-linear and time-varying systems. Small signal models and large signal models are needed to design an optimal closed loop system. Stability issues will be discussed for a power system composed of several non-linear power electronic circuits. Control methods play a very important role in achieving optimal dynamic performance. Different control techniques for switching power converters will be studied. In addition to the conventional analogue control method, (such as direct duty cycle control, peak current programmed control, average current mode control, etc.), digital control (such as fuzzy logic control, sliding mode like control, etc.) will also be analyzed. The course will also analyze digital control techniques for AC-to-DC power converters to achieve power factor correction. It is expected that each student will do a design project using one or more of the techniques covered in the course.

**ENGR 5005G - Special Topics**

Presents material in an emerging field or one not covered in regular offerings. This course may be taken more than once, provided the subject matter is substantially different.

## Appendix D – Faculty Information

Please include here only those currently at the institution and affiliated with the program. Examples in purple to be removed. Where available, link each faculty name to their Research or Profile page on the website.

| Name and Faculty Status/Rank | Terminal Degree | Home Faculty/Unit                          | Areas of Expertise                                                                                                                                                                                                                                                                                                               |
|------------------------------|-----------------|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Professor</b>             |                 |                                            |                                                                                                                                                                                                                                                                                                                                  |
| Walid Morsi Ibrahim          | PhD             | Faculty of Engineering and Applied Science | <ul style="list-style-type: none"> <li>• Smart Grid: Design, analysis, operation management and control</li> <li>• Signal Processing and data analytics of power systems</li> <li>• Automation, protection and management of power systems</li> </ul>                                                                            |
| Tarlochan Sidhu              | PhD             | Faculty of Engineering and Applied Science | <ul style="list-style-type: none"> <li>• Power system protection, monitoring, automation and control</li> <li>• Smart grid</li> <li>• AI and signal processing applications in power systems</li> <li>• Integration of renewable energy sources into grid</li> <li>• Cybersecurity in power systems</li> </ul>                   |
| Sheldon Williamson           | PhD             | Faculty of Engineering and Applied Science | <ul style="list-style-type: none"> <li>• Autonomous Mobility/Transportation</li> <li>• Batteries</li> <li>• Charging, Electric Energy Storage Systems</li> <li>• Electric Machines</li> <li>• Motor Drives</li> <li>• Power Electronics</li> <li>• Renewable Energy Systems</li> <li>• Transportation Electrification</li> </ul> |
| Mohamed Youssef              | PhD             | Faculty of Engineering and Applied Science | <ul style="list-style-type: none"> <li>• Propulsion Systems for the Automotive and Innovative Technologies like Hyperloop</li> <li>• Power Train for New Drives like Water Pumps</li> </ul>                                                                                                                                      |

|  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--|--|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  |  |  | <ul style="list-style-type: none"> <li>• Railway Electromagnetic Compatibility (EMC)</li> <li>• Railways Traction Substation Design Planning, and Commissioning</li> <li>• Power Electronics Applications for the Information Technology (IoT)</li> <li>• Power Electronics Applications in the Innovative Renewable Energy Resources</li> <li>• Power Supply Design for the Oil/Gas</li> <li>• Power Systems Operation and Stability</li> </ul> |
|--|--|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## **Existing Non-Financial Student Support Services**

### **School of Graduate and Post-Doctoral Studies**

Quality graduate and postdoctoral education combines teaching, research, professional development, disciplinary community involvement and personal growth. It is by nature a shared responsibility between students, faculty members, the programs and a large number of support units, with overarching administration being provided by the School of Graduate and Postdoctoral Studies.

The School of Graduate and Postdoctoral Studies (SGPS) furthers the scholarly mission of the university by providing academic and administrative support to the university's postgraduate educational, research, innovation and international activities. Our responsibilities include graduate program development, graduate enrolment management, oversight of academic and quality standards, and the implementation of policies and practices that enhance graduate/postdoctoral scholarly success, career readiness and personal growth. SGPS supports prospective, new and current graduate students through many administrative services including, but not limited to, recruitment, admission, registration, funding and scholarships, orientation, professional development workshops and events, and processing of final theses, projects and papers. SGPS is a single-point-of-contact, multifunctional administrative unit tailored to the complete "life-cycle" of graduate students, providing coordinated support to students and all other stakeholders.

### **Student Life**

Ontario Tech University, as a relatively small campus community, has a centralized delivery model for many 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/>.

### **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.

## **Campus Libraries**

The Campus Libraries support teaching, learning, and research at Ontario Tech University with facilities, collections, and programming.

Library Collections:

- The Library's total collections budget is \$1.7 million.
- Collections include books, e-books, databases, journals, data and statistics, and multimedia materials

Support for teaching and learning:

- A dedicated librarian for each program who provides instruction, research consultations, and collection development
- Research guides for each of Ontario Tech's programs, as well as general guides for citation, copyright, and other broad topics
- Workshops and classes: custom in-class sessions, and general instruction sessions

- Three (3) online modules in Ontario Tech's learning management system, which professors can integrate seamlessly into their course shells

#### Research supports:

- Research consultations with subject librarians
- Extended support via the Library's virtual reference service
- Support for generative artificial intelligence: citation, copyright, and allowable use of library resources

#### Scholarly publishing supports:

- Research data management
- Publishing compliance with Tri-Council and other funders
- Support finding and creating open educational resources (OERs)
- Copyright advice and compliance information
- Support for authors, including reviewing author agreements
- Administration of APC waivers for faculty publishing in open access

#### Facilities:

- The Campus Libraries include the North Oshawa Library, which is the campus' main branch, and the Social Sciences, Humanities, and Education Library, which is located in downtown Oshawa
- The Library's locations include:
  - Extended library hours are available during peak season
  - Groups study rooms are available for student booking
  - Accessible workstations, and sit-stand desks
  - Computers and dual monitor workstations

## **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.

## ACADEMIC COUNCIL REPORT

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**SESSION:**

Public  
Non-Public

☒  
☐**ACTION REQUESTED:**

Decision  
Discussion/Direction  
Information

☒  
☐  
☐

**TO:** Academic Council

**DATE:** September 22, 2026

**PRESENTED BY:** Lori Livingston, Provost and Vice-President Academic

**FROM:** Governance & Nominations Committee (GNC)

**SUBJECT:** Academic Council Vice-Chair

---

**EXECUTIVE SUMMARY:**

- One of GNC's responsibilities is to oversee the recruitment, selection, and election process of new members to Academic Council and its committees, and, recommend appointments for approval by Academic Council.
- GNC is recommending Academic Council approve the appointment of the Academic Council Vice-Chair.

**MOTION FOR CONSIDERATION:**

*That, pursuant to the Governance & Nominations Committee's recommendation, Academic Council hereby approves the following appointment as the Vice-Chair of Academic Council for the specified term:*

❖ *Jessica Hogue for the term of October 1, 2026 to August 31, 2027*

**KEY CONSIDERATIONS:**

- The Vice-Chair is appointed annually from among the Elected Steering Committee Members and will serve a one year term with eligibility for reappointment to a maximum of two consecutive terms.
- An expression of interest call was issued to the 2026-2027 elected Steering Committee members and ran from August 7 to August 21.
- Expressions of interest were received and GNC is now presenting its appointment recommendation to Academic Council.

**NEXT STEPS:**

- None.

## ACADEMIC COUNCIL REPORT

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**SESSION:**

Public  
Non-Public

☒  
☐**ACTION REQUESTED:**

Decision  
Discussion/Direction  
Information

☒  
☐  
☐

**TO:** Academic Council

**DATE:** September 22, 2026

**PRESENTED BY:** Lori Livingston, Provost and Vice-President Academic

**FROM:** Governance & Nominations Committee (GNC)

**SUBJECT:** Academic Council Board of Governors Liaison

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**EXECUTIVE SUMMARY:**

- One of GNC's responsibilities is to oversee the recruitment, selection, and election process of new members to Academic Council and its committees, and, recommend appointments for approval by Academic Council.
- GNC is recommending Academic Council approve the appointment of the Academic Council Board of Governors Liaison.

**MOTION FOR CONSIDERATION:**

*That, pursuant to the Governance & Nominations Committee's recommendation, Academic Council hereby approves the following appointment as the Academic Council Board of Governors Liaison for the specified term:*

❖ *Jessica Hogue for the term of October 1, 2026 to August 31, 2027.*

**KEY CONSIDERATIONS:**

- The AC Board of Governors Liaison will usually serve a term of two years, with eligibility for reappointment to a maximum of two consecutive terms.
- An expression of interest call was issued to the 2026-2027 elected Academic Council members and ran from August 7 to August 21.
- Expressions of interest were received and GNC is now presenting its appointment recommendation to Academic Council.

**NEXT STEPS:**

- None.

## ACADEMIC COUNCIL REPORT

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**SESSION:**

Public  
Non-Public

☒  
☐**ACTION REQUESTED:**

Decision  
Discussion/Direction  
Information

☒  
☐  
☐

**TO:** Academic Council

**DATE:** September 22, 2026

**PRESENTED BY:** Lori Livingston, Provost and Vice-President Academic

**FROM:** Governance & Nominations Committee (GNC)

**SUBJECT:** 2026-2027 Research Committee Appointments

---

**EXECUTIVE SUMMARY:**

- One of GNC's responsibilities is to oversee the recruitment, selection, and election process of new members to Academic Council and its committees, and, recommend appointments for approval by Academic Council.
- GNC is recommending Academic Council approve two (2) appointments to the Research Committee.

**MOTION FOR CONSIDERATION:**

*That, pursuant to the Governance & Nominations Committee's recommendation, Academic Council hereby approves the appointment of the following faculty members to the Research Committee for the term September 1, 2026 until August 31, 2028:*

- ❖ *Jeremy Bradbury, Faculty of Science*
- ❖ *Karla Dhungana Sainju, Faculty of Social Science and Humanities*

**KEY CONSIDERATIONS:**

- Since June 2026:
  - ❖ Jeremy Bradbury has accepted the Associate Dean, Research and Graduate Studies role and so is replacing Andrea Kirkwood on the Research Committee as of 2026-2027.
  - ❖ Karla Dhungana Sainju has accepted the Associate Dean, Research, Innovation and Graduate Studies role and so is replacing Amy Leach on the Research Committee as of 2026-2027.

**NEXT STEPS:**

- None.

## Academic Council Report

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**TO:** Academic Council

**DATE:** September 22, 2026

**PRESENTED BY:** Brad MacIsaac, Vice-President, Administration

**SUBJECT:** Policy Consultation: Procurement of Goods and Services  
Procedures

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### **ACADEMIC COUNCIL MANDATE:**

Under the Policy Framework, policy owners consult Academic Council on amendments to Legal Compliance and Governance policies and procedures.

We are submitting this report and draft policy amendment to Academic Council to request discussion and comments on draft amendments to the Procurement of Goods and Services Procedures.

### **BACKGROUND/CONTEXT & RATIONALE:**

On April 13, 2026 the Buy Ontario Procurement Directive (BOPD) was put into force by the Ontario Government and is mandatory for all publicly-funded institutions. The BOPD requires changes to our existing Procurement of Goods and Services Procedure.

The BOPD does not replace the existing Broader Public Sector Procurement Directive (BPSPD). Instead, it operates on top of current procurement rules, adding new requirements focused on prioritizing Ontario and Canadian suppliers, goods, and services. Compliance is required and non-compliance may result in provincial funding penalties.

Strong executive support and institution-wide alignment are essential to ensure compliance, manage risk, and support sustainable implementation.

### **What's changed:**

The BOPD brings together several government initiatives into a single procurement framework, including:

- Building Ontario Businesses Initiative (effective April 1, 2024)
- Procurement Restriction Policy (U.S. businesses) (effective March 4, 2025)
- Strategic Categories
  - Fleet vehicles (effective April 13, 2026)
  - Capital infrastructure (effective April 13, 2026)

Collectively, these changes introduce a level of procurement complexity not seen since the introduction of the BPSPD in 2010.

## **OVERVIEW:**

The Procurement Procedure is being amended to comply with the requirements of the BOPD, and to account for potential changes to BPS procurement directives. The BOPD includes updated threshold values to determine the means of procurement, and updated thresholds to determine whether Ontario or Canadian businesses should be preferred.

Section 7 of the Procedure has been amended to reflect the new threshold value(s) and the preference to Ontario or Canadian businesses. The threshold value for an Open Competitive Process has been changed from \$121,200 to \$139,000.

Section 7 will be updated through editorial amendments to ensure that it stays up to date with current BPS procurement law, regulation, or binding procurement directive.

Amendments to the names of applicable legislation, regulations, etc. have also been made as necessary.

## **COMPLIANCE WITH POLICY/LEGISLATION:**

The proposed procedures comply the Ontario Broader Public Sector Procurement Directive and the new requirements of the BOPD.

## **CONSULTATION AND NEXT STEPS:**

The Procurement Procedure will undergo the following consultation and approval path:

- Policy Advisory Committee (Policy Assessment)
- Online Consultation (Written Consultation)
- Academic Council (Face to Face Consultation)
- Senior Leadership Team (Deliberation)
- Audit & Finance Committee (Approval)

## **SUPPORTING REFERENCE MATERIALS:**

- Appendix 1: Draft Procurement of Goods and Services Procedures



|                       |                                                                                                                                                                                                    |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Classification Number | LCG 1131.01                                                                                                                                                                                        |
| Parent Policy         | Procurement of Goods and Services Policy                                                                                                                                                           |
| Framework Category    | Legal, Compliance and Governance                                                                                                                                                                   |
| Approving Authority   | Audit and Finance Committee                                                                                                                                                                        |
| Policy Owner          | Vice-President, Administration                                                                                                                                                                     |
| Approval Date         | DRAFT FOR CONSULTATION                                                                                                                                                                             |
| Review Date           | March 2028                                                                                                                                                                                         |
| Supersedes            | Substantive Amendment: February 23, 2022; Editorial Amendments, February 18, 2020; March 27, 2017; Minor Amendment, s. 6.1, s 9; Major Amendment November 2012; Purchasing Procedures (March 2009) |

## Procurement of Goods and Services Procedures

### PURPOSE

1. The purpose of these Procedures is to complement the Procurement of Goods and Services Policy by serving to define and guide individuals in fulfilling their responsibilities and obligations throughout each phase of the procurement process. These procedures are consistent with the Broader Public Sector Procurement Directive, Supply Chain Code of Ethics, Building Ontario Businesses Initiative Act, Bill S-211, Canadian Free Trade Agreement, Canada-European Union Comprehensive Economic and Trade Agreement, and have been developed to ensure that all goods and services are acquired by the University through a process that is open, fair and transparent.

### DEFINITIONS

2. For the purposes of these Procedures the following definitions apply:

**“Accessibility”** means the degree of ease that something (e.g. goods, service, facilities) can be used and enjoyed by persons with a disability. The term implies conscious planning, design and/or effort to ensure it is barrier-free to persons with a disability.

**“Accessible Procurement”** means determining what is required for a product or service to be accessible, and either consulting with persons with disabilities, finding ways to procure something that meets those requirements or, documenting why this is not possible and what will be done if an accessible alternative is requested.

**“Budgeting”** means the process of determining whether there are sufficient funds available to commit the University to the purchase.

**“Buy Ontario Requirements”** means the Buy Ontario Act (Public Sector Procurement), 2025 and the directives issued thereunder, including the Buy Ontario Procurement Directive, which establish mandatory procurement requirements for public sector entities, including measures to

**Commented [NO1]:** Definitions were moved into alphabetical order. Highlighted definitions were added or modified in this draft.

prioritize Ontario and Canadian businesses in procurements of goods and services, in accordance with applicable thresholds, evaluation criteria, and other requirements, as may be amended.

“**CETA**” means Canadian European Trade Agreement.

“**CFTA**” means Canadian Free Trade Agreement.

“**Commitment**” means the act of formally binding the University to a purchasing agreement.

“**Consulting Services**” is limited to the provision of expertise or strategic advice that is presented for consideration and decision-making. This does not include contractors who are performing work on a fee for service basis and who are NOT providing strategic/decision-making advice (e.g. police officers, specialists for disabilities, sign language interpreters, etc.). Consulting services are subject to different procurement practices than all other goods and services. A working list of common services procured by universities that would be deemed consulting services is provided in Appendix A.

“**Contract**” means any document, or other evidence, of an intention to establish a binding legal relationship between the University and one or more third parties.

“**Forced and Child Labour in Canadian Supply Chains**” (Bill S-211) means that the University must ensure that when purchasing goods & services that exploitative practices are addressed and eradicated from the supply chain.

“**Goods**” means moveable property, as well as the costs of installing, operating, maintaining or manufacturing such moveable property which are purchased, rented or leased by the University, including raw materials, products, equipment and other physical objects of every kind and description whether in solid, liquid, gaseous or electronic form, unless they are procured as part of a general construction contract. It includes capital items, such as furniture, research equipment, telecommunications and computers, peripheral equipment and acquisitioned software where there is a one-time license fee and other items that have a useful life greater than one year.

“**Limited Tendering**” means a procurement method whereby the procuring entity contacts a supplier or suppliers of its choice.

“**Open Procurement**” means a competitive procurement process open to all qualified and interested bidders.

“**Payment**” means the processing of payment and transfer of funds from the University to the vendor, supplier or contractor.

“**Procurement by Invitation**” means the request of a bid, quote or proposal by the purchaser or Procurement Department.

“**Purchase Order**” means a written offer made by a purchaser to a vendor that formally sets out the terms and conditions of the proposed transaction.

“**Purchaser**” means the Ontario Tech Department that is initiating the purchase.

“**Receipt**” means the physical receipt of the purchased goods or services by University personnel.

**“Regulated and Restricted Goods”** means certain goods and services that require additional technical and/or regulatory approval or other review from a designated approving department to ensure they comply with internal university standards, licenses and regulatory requirements.

**“Requisition”** means the process of initiating documentation for the applicable Means of Procurement.

**“Risk”** means the uncertainty of outcomes against the achievement of planned objectives. This concept can be applied to strategic objectives as well as all operational activities within the University. While the application of the definition may change with different University Members, the concept should not change.

**“Services”** means any intangible product that does not have a physical presence. No transfer of possession or ownership takes place when services are sold, and they (1) cannot be stored or transported, (2) are instantly perishable, and (3) come into existence at the time they are bought and consumed. This includes construction related services.

Goods also include materials and equipment used for research purposes, such as controlled goods, animals, biohazardous, radioactive and other hazardous materials and equipment. The acquisition of these materials requires additional procurement procedures as outlined in Appendix B.

#### SCOPE AND AUTHORITY

3. These Procedures apply to all purchases of Goods, Services or Consulting Services at the University.
4. These Procedures do not apply to payments related to employment or honoraria.
5. The Vice President Administration, or successor thereof, is the Policy Owner and is responsible for overseeing the implementation, administration and interpretation of these Procedures.

#### POLICY

##### 6. Procurement Principles

###### 6.1. Segregation of Duties

The University requires that at least three of the following five functional procurement roles are segregated between different departments or, at a minimum, between different individuals:

- a) Requisition
- b) Budgeting
- c) Commitment
- d) Receipt
- e) Payment

###### 6.2. Signing Authority and Approval

All Goods and Services purchased at the University must be approved at the outset by the appropriate authority signing authority. Requirements for procurement are determined by the type of Good or Service to be purchased, as well as the financial (pre-tax) threshold of the expenditure. If the amount of a purchase is amended or increased after the order has been authorized, the revised total expenditure (original amount plus increase) will be used to determine approval authority.

**6.3. Types of Purchase**

The procurement process to be followed is determined by the type of purchase to be made: (a) Goods and Services, or (b) Consulting Services.

**6.4. Sustainable and Socially Responsible Procurement**

- a) Sustainable Procurement: The Sustainable Procurement framework supports activities that create positive environmental, social, and economic impacts, maintaining an open, fair, and transparent process. The University will identify and integrate environmental sustainability requirements within procurement opportunities.
- b) Social Value Considerations: Prioritizes the procurement of goods and services that demonstrate value for money, considering business needs, timing, lifecycle costs, supply, and procurement methods with fairness, transparency, and accountability as guiding principles.

**7. Threshold Values and Means of Procurement**

- 7.1. The means by which goods and services are procured is determined by the total value in Canadian dollars. The University will conduct an open competitive procurement process if the estimated value of procurement of goods or services exceeds the competitive procurement threshold established by law, regulation, or by a binding procurement directive issued by the Ontario Government.
- 7.2. The University will, without compromising overall best value, give preference to businesses as required by law, regulation, or by a binding procurement directive issued by the Ontario Government.
- 7.3. The following table sets out requirements of binding procurement directives issued by the Ontario Government, including the means of procurement, the type of procurement process and the preference required based on the total value in Canadian dollars of the procurement, before tax. The total cost will include the cost of associated warranties, maintenance and service agreements.

| MEANS OF PROCUREMENT                                                                   | REQUIREMENTS                                                                   | THRESHOLDS              |
|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-------------------------|
| <b>CONSULTING SERVICES</b>                                                             |                                                                                |                         |
| Purchase Order                                                                         | Three written quotations (by invitation); from an Ontario based business (BOA) | \$0-\$138,999.99        |
| Purchase Order                                                                         | Open competitive process                                                       | \$139,000 or more       |
| <b>GOODS AND SERVICES (NON-CONSULTING)</b>                                             |                                                                                |                         |
| Purchase Order, Purchasing Card or approved invoice processed through Accounts Payable | One written quotation (by invitation); from an Ontario based business (BOA)    | \$0 - \$9,999.99        |
| Purchase Order                                                                         | Two written quotations (by invitation); from an Ontario based business (BOA)   | \$10,000 - \$24,999.99  |
| Purchase Order                                                                         | Three written quotations (by invitation); from an Ontario based business (BOA) | \$25,000 - \$138,999.99 |
| Purchase Order                                                                         | Open competitive process; from a Canadian business                             | \$139,000 or more       |

- 7.4.** Any attempt to circumvent or otherwise manipulate the thresholds used to determine the means of procurement (e.g., dividing a single procurement into multiple procurements) is strictly prohibited, and will result in delay of the purchase as the individual undertaking the requisition will be required to obtain additional quotes.
- 7.5.** The Vice-President, Administration will make editorial updates to ensure the table in section 7.2 remains in alignment with established requirements, as amended. Established requirements may be found on the [Government of Ontario Website](#).
- 7.6.** Under special circumstances, Limited Tendering may be used to have the quotation requirement waived.

## **8. Competitive Procurement**

- 8.1.** All Goods and Services valued greater than \$10,000 will be procured by an invitational or open competitive procurement process. An open competitive procurement process may be used, regardless of value, due to the high-profile nature of the requirement, at the discretion of the Procurement Department, or where required by an external organization. If an existing Vendor of Record (VOR) contract is in place that satisfies the conditions of the Broader Public Sector (BPS) and other relevant trade agreements, you may select this vendor without obtaining additional quotes. However, if multiple vendors are listed under the Vendor of

Record, it is encouraged to obtain multiple quotes to ensure competitive pricing and service options.

**9. Open Competitive Procurement**

- 9.1.** All Goods and Services that are valued at greater than \$138,999 must be procured through an Open Procurement in order to solicit and evaluate bids in a fair, impartial manner prior to the issuing of a Purchase Order.
- 9.2.** The Open Competitive Procurement process involves the following four stages:
  - a)** Development of a bid request;
  - b)** Posting and receipt of bid requests;
  - c)** Evaluation of bid requests; and
  - d)** Contract and award notification.
- 9.3.** Detailed information and guidance regarding each of the above stages is included in Appendix C.

**10. Purchase Orders**

- 10.1.** A Purchase Order must be used for all purchases of Consulting Services regardless of value, as well as Goods and Services, as required by the Threshold Values.
- 10.2.** There are certain Goods and Services for which a Purchase Order may not be acceptable or appropriate. Such items may be procured through alternative means such as cheque requisitions, or expense reports.
- 10.3.** Items exempt from a Purchase Order include the following:
  - a)** Customs
  - b)** Courier and freight charges
  - c)** Conference or seminar fees
  - d)** Course registration fees
  - e)** Debt payments, including interest payments
  - f)** Donations
  - g)** Elevator license fees
  - h)** Insurance premiums
  - i)** Inter-institutional expenses or transfers
  - j)** Investments and related fees
  - k)** Leasehold payments
  - l)** Membership fees
  - m)** Petty cash items
  - n)** Real property charges
  - o)** Recruitment agency fees

- p) Refunds
- q) Registry fees
- r) Sponsorship fees
- s) Subscription fees
- t) Support Allowance fees
- u) Taxes and charges
- v) Travel expenses
- w) Utilities
- x) Vehicle license fees
- y) Animal Care Veterinarian Services
- z) Patent Agents

## 11. Purchase Requisitions

- 11.1. A purchase requisition is a document used as part of the accounting process to initiate a merchandise or supply purchase. A purchase requisition identifies the business need for the Goods or Services and ensures appropriate controls are in place to monitor the legitimacy of a purchase.
- 11.2. All requisitions regardless of Purchase Order type must include:
  - a) Valid Banner ID/Supplier Number
  - b) Contact information of purchaser;
  - c) Vendor contact information;
  - d) Product or quote information including quote number, item description, catalogue or order number, quantity, pricing, and unit of measure, etc.;
  - e) Date by which Goods and Services must be received;
  - f) Account information (fund, org, account);
  - g) Quotation, justification to validate the use of Limited Tendering;
  - h) Where applicable any separate agreement and a note on restricted goods as outlined in Appendix B.
- 11.3. If the supplier does not have a valid Banner ID/supplier number, the individual initiating the transaction must complete the Supplier Setup Form. The Procurement Department will then check the validity of the Supplier through the Canadian Revenue Agency website and internet search before the Supplier record is established.
- 11.4. Purchase requisitions must be created and approved using the online Web Requisition portal and accompanied by the appropriate supporting documentation. There are requisitions for two types of Purchase Orders:
  - a) **Regular Purchase Order:** Generally used for Goods and Services purchased at the time and paid for in a lump sum.

- b) **Blanket Purchase Order:** A blanket Purchase Order is an order of Goods and/or Services processed by the University with a supplier that contains multiple delivery dates scheduled over a fiscal year, sometimes at predetermined prices. It is normally used when there is a recurring need for Goods and/or Services. Accordingly, items are purchased under a single Purchase Order rather than processing a separate Purchase Order each time Goods and/or Services are needed.

**12. Equipment Standards**

- 12.1.** Purchases of IT hardware, including laptops, tablets, workstations, monitors, printers and servers, with the exception of research hardware, must be selected from the list of standard hardware models and purchased or leased through a Purchase Order from the designated preferred vendor, as established by Information Technology Services (ITS).

**13. Furniture**

- 13.1.** Requisitioners are asked to consult OCIS by phone or through a Service Desk request before purchasing office or classroom furniture to ensure that there is not existing inventory that would meet the requirements.

**14. Lab Consumable Supplies and Minor Equipment**

- 14.1.** Before purchasing Lab Supplies & Equipment please contact [centralstores@ontariotechu.ca](mailto:centralstores@ontariotechu.ca)

**15. Lab Chemicals, and regulated and restricted goods**

- 15.1.** These items cannot be purchased using a purchasing card unless exempt by the appropriate signing authority. See Appendix B for more information regarding regulated and restricted goods.
- 15.2.** All lab chemicals, and regulated and restricted goods will be purchased using a Purchase Order or through an authorized individual to ensure compliance with applicable legislation and regulations, and University policy and procedures.
- 15.3.** All Purchase Order of lab chemicals, and regulated and restricted goods must be signed off by the appropriate signing authorities: Biosafety Officer, Radiation Safety Officer, designated official (controlled goods), Health and Safety Officer (designated substances), or Animal Care Coordinator in the Office of Research Services (animal care and use).
- 15.4.** When completing a purchase requisition for any of the Restricted Items Requiring a Purchase Order, the following information must be included in the comments section of the requisition form:
- a) Researcher/ Purchaser name;
  - b) Certificate/permit approval number as assigned by the relevant research compliance committee (Animal Care Committee, Biosafety Committee or Radiation Safety Committee;
  - c) Indicate if the material is biohazardous, radioactive, animals, controlled goods, hazardous. In rare circumstances, restricted items may be purchased

using an alternative procurement method (e.g. purchasing card); however, prior approval must be sought from the Office of Research Services (Biosafety officer/Radiation Safety officer/Animal Care Coordinator).

**16. Execution of Purchase Orders and Purchasing Agreements**

- 16.1.** On receipt of an approved purchase requisition, the Procurement Department will execute a Purchase Order which includes terms and conditions prior to the provision of Goods and Services and communicate this to the Purchaser and vendor. Unless a Purchase Order is issued under a separate written purchasing agreement between the purchaser and the vendor, the Purchase Order and any attachments are the sole agreement between the parties.
- 16.2.** All purchasing agreements will include:
- a)** Cancellation or termination clauses, as appropriate. When conducting complex procurements, the university may consider the use of contract clauses that permit cancellation or termination at critical project life-cycle stages.
  - b)** The specific term of the agreement and any options to extend the agreement. Any change or amendment to the term of a purchasing agreement will be made in accordance with the Signing Authority Registry and Approval Procedures and requires review by the Procurement Manager.

**17. Receipt of Goods**

- 17.1.** All Goods are to be delivered to Shipping/Receiving, unless otherwise specified in the purchase requisition. Goods must be accompanied by a packing slip that indicates the Purchase Order number.
- 17.2.** Shipping/Receiving will contact the Purchaser to indicate arrival of the order. The Purchaser or designate is responsible for signing the packing slip to validate that the Goods received are in accordance with the Purchase Order.
- 17.3.** If Goods received are not in accordance with the Purchase Order, the Purchaser is responsible for following up with the vendor, in consultation with the Procurement Department.

**18. Payment of Invoices**

- 18.1.** Payment through Accounts Payable would be through remitting the invoice, along with other required documentation (e.g. a cheque requisition), to Accounts Payable.
- 18.2.** All invoices must be sent directly to Accounts Payable by the vendor. Invoices will be forwarded by Accounts Payable to the purchaser for approval prior to payment. All invoices for Goods submitted by the Purchaser for payment must be accompanied by a signed packing slip and sent to Accounts Payable.

**19. Return of Goods**

- 19.1.** For any Good that needs to be replaced or returned, it is the responsibility of the Purchaser to contact the vendor and make the appropriate arrangements in consultation with the Procurement Department. Where the replacement or return

requires a change to the terms of the original Purchase Order, the purchaser will contact the Procurement Department to initiate the change.

## **20. Trade Agreements**

### **20.1. General**

The University will ensure the provisions of both the CFTA and CETA are considered during procurement activities and throughout the competitive tendering process. Both trade agreements are similar; however, CFTA is triggered first since that treaty has far lower thresholds for publicly tendering.

### **20.2. CFTA**

CFTA will apply for the procurement thresholds listed on <https://www.cfta-alec.ca/procurement/covered-procurement-thresholds/>

\*Rates are in CDN currency and subject to inflation adjustment.

### **20.3. CETA**

CETA will apply for the procurement thresholds listed on: <https://www.canada.ca/en/treasury-board-secretariat/services/policy-notice/contracting-policy-notice-2019-4-trade-agreements-thresholds-update.html>

\* Amounts are in CDN currency and subject to inflation adjustment

### **20.4. Valuation**

In estimating the value of a procurement for the purpose of ascertaining whether it is a covered procurement, a procuring entity will include the estimated maximum total value of the procurement over its entire duration, whether awarded to one or more suppliers, taking into account all forms of remuneration, including premiums, fees, commissions and interest; and if the procurement provides for the possibility of options, the total value of such options.

## **21. Limited Tendering**

**21.1.** Limited Tendering represents a departure from the required number of quotes, as set out above, and must be accompanied by a waiver setting out the rationale for limited tendering. Limited tendering must be approved in advance of the purchase by the following:

- a) Purchases \$10,000 - \$25,000: the waiver must be approved by the Procurement Manager and Director of Financial Operations.
- b) Purchases over \$25,000 the waiver must be approved by the Procurement Manager and the Vice President Administration.
- c) Purchases of consulting services requires the waiver to be approved by the Procurement Manager, the Vice President Administration, and the President.

**21.2.** All such requests for using Limited Tendering must be approved in advance before the procurement process begins. If the Limited Tender is not approved in advance it runs the risk of not being approved and the vendor not being paid.

### **21.3. Requests for Limited Tendering**

In order to obtain approval for Limited Tendering, the purchaser must make a formal request to the Procurement Department with a written explanation as to why it would be impracticable or otherwise inappropriate to put the Good or Service out for competitive procurement. Such requests should include specific requirements of the Good or Service, evidence that an objective market analysis has been undertaken and that the cost charged by the vendor is fair and reasonable. If the Good or Service is being purchased through a distributor of the manufacturer, a letter from the manufacturer should be obtained indicating a sole source distributor relationship exists between the parties.

### **21.4. Granting Use for Limited Tendering**

- a) The use of Limited Tendering may be granted in the following special, limited circumstances:
- b) If no tenders were submitted or no suppliers requested participation or if no tenders conformed to the essential requirements of the tender documentation or no suppliers satisfied the conditions for participation or if the submitted tenders were collusive (provided that the requirements of the tender documentation are not substantially modified);
  - If the goods or services can be supplied only by a particular supplier and no reasonable alternative or substitute goods or services exist for any of the following reasons:
    - the requirement is for a work of art;
    - the protection of patents, copyrights, or other exclusive rights;
    - due to an absence of competition for technical reasons;
    - the supply of goods or services is controlled by a supplier that is a statutory monopoly;
    - to ensure compatibility with existing goods or to maintain specialized goods that must be maintained by the manufacturer of those goods or its representative;
    - work is to be performed on property by a contractor according to provisions of a warranty or guarantee held in respect of the property or the original work;
    - work is to be performed on a leased building or related property, or portions thereof, that may be performed only: by the lessor; or
    - the procurement is for subscriptions to newspapers, magazines, or other periodicals;
- c) For additional deliveries by the original supplier of goods or services that were not included in the initial procurement, if a change of supplier for such additional goods or services: (i) cannot be made for economic or technical

reasons such as requirements of interchangeability or interoperability with existing equipment, software, services, or installations procured under the initial procurement; and (ii) would cause significant inconvenience or substantial duplication of costs for the procuring entity;

- d) If strictly necessary, and for reasons of urgency brought about by events unforeseeable by the University, the goods or services could not be obtained in time using open tendering;
- e) For goods purchased on a commodity market;
- f) If a procuring entity procures a prototype or a first good or service that is developed in the course of, and for, a particular contract for research, experiment, study, or original development. Original development of a first good or service may include limited production or supply in order to incorporate the results of field testing and to demonstrate that the good or service is suitable for production or supply in quantity to acceptable quality standards, but does not include quantity production or supply to establish commercial viability or to recover research and development costs;
- g) For purchases made under exceptionally advantageous conditions that only arise in the very short term in the case of unusual disposals such as those arising from liquidation, receivership, or bankruptcy, but not for routine purchases from regular suppliers;
- h) If a contract is awarded to a winner of a design contest provided that: (i) the contest has been organized in a manner that is consistent with the principles of Chapter 5 of CFTA, in particular relating to the publication of a tender notice; and (ii) the participants are judged by an independent jury with a view to a design contract being awarded to a winner;
- i) If goods or consulting services regarding matters of a confidential or privileged nature are to be purchased and the disclosure of those matters through an open tendering process could reasonably be expected to compromise government confidentiality, result in the waiver of privilege, cause economic disruption, or otherwise be contrary to the public interest.

#### **21.5. Preferred Vendors**

- a) Preferred vendors are established via a contract or agreement with the University following a competitive procurement process. Agreements for preferred vendors have set terms, conditions and/or pricing over a fixed period of time in order to maximize its ability to achieve the best economic value for its expenditures. A current list of preferred vendors is available through the Procurement Department.

**21.6.** Where the University has established such contracts or agreements, Goods and Services should be purchased against these contracts from these preferred vendors.

**21.7.** If an existing Vendor of Record (VOR) contract is in place that satisfies the conditions of the Broader Public Sector (BPS) and other relevant trade agreements, you may select this vendor without obtaining additional quotes. However, if multiple vendors

are listed under the Vendor of Record, it is encouraged to obtain multiple quotes to ensure competitive pricing and service options.

#### **MONITORING AND REVIEW**

22. These Procedures will be reviewed as necessary and at least every three years. The Procurement Manager, or successor thereof, is responsible to monitor and review these Procedures.

#### **RELEVANT LEGISLATION**

23. Broader Public Sector Financial Accountability Act  
Buy Ontario Act (Public Sector Procurement), 2025  
Canadian Free Trade Agreement  
Canada-European Union Comprehensive Economic and Trade Agreement

#### **RELATED POLICIES, PROCEDURES & DOCUMENTS**

24. Accessibility Policy  
Procurement of Goods and Services Policy  
Conflict of Interest in Research Policy  
Gift Acceptance Policy  
Designated Substance Permit  
Health and Safety Policy  
Radiation Safety Manual  
Biosafety Manual  
Policy on the Care and Use of Animals in Research and Teaching  
Statement of Investment Policy and Procedures  
Procedures for the Determination of Contractor Status  
Risk Management Policy  
Supply Chain Code of Ethics  
Expenses Policy  
Expenses Procedures  
Safe Disclosure Policy  
Safe Disclosure Procedures  
Contract Management and Signing Authority Policy  
Signing Authority and Approval of Expenditures Procedure

Legal Review of Contracts Procedures  
Supply Chain Code of Ethics

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## APPENDIX A: NON-CONSULTING AND CONSULTING SERVICES

The following is a list of services that are commonly used by universities and that would be deemed to be "Services", and not "Consulting Services" as defined in the Procurement Directive under the Broader Public Sector Financial Accountability Act (Bill 122).

| 1 - NON-CONSULTING SERVICES                              |                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>REVIEWS</b><br>(predominantly subject matter experts) | Academic departmental/peer reviews<br>Faculty/decanal review<br>Division reviews<br>Endowed chair reviews<br>Dean initiated reviews<br>Reviewers for chair selection processes<br>Governance reviews<br>Research/scientific reviews                                                                                                                                                                        | Research/curriculum development/expertise<br>Accreditation reviews<br>Undergraduate and graduate program reviews<br>Clinical program reviews/clinical trial reviews<br>Thesis defense and reviews<br>Independent review of a student's evaluation<br>Evaluation specialists or performance measurement specialists                                                             |
| <b>SPEAKERS</b>                                          | Invited Facilitators for retreats (sometimes working on strategic plans) and workshops                                                                                                                                                                                                                                                                                                                     | Invited Speakers – for lectures, research seminars, endowed lecture series, continuing educational series programs, continuing professional development series                                                                                                                                                                                                                 |
| <b>TRAINING</b>                                          | Training sessions                                                                                                                                                                                                                                                                                                                                                                                          | ITS course trainers                                                                                                                                                                                                                                                                                                                                                            |
| <b>TECHNICAL SERVICES</b>                                | Design and print agencies<br>Program brochure design/printing/mailling<br>Annual report / newsletter design services/printing<br>Technical writers, copy and writing editors or case writers – speech and article writers<br>Business plan writing<br>Consultants to write analytical summaries of specific government conferences<br>Project management<br>Business development<br>Web design/maintenance | Event planning or management services<br>TSSA – Technical Safety Standards Association<br>ESA – Electrical Safety Association<br>BI&I – insurance company, that does inspections<br>DJ services<br>Couriers<br>Sports game officials<br>Translation services/transcription services<br>English language training provided by Applied Language Associates<br>Onsite ergonomists |

|                                     |                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                     | <p>Graphic services</p> <p>Videotaping and production for teaching support materials</p> <p>Photographers</p> <p>AV support/recording of continuing education programs</p> <p>Audio support/equipment rental for convocation and outdoors</p>                                                                                                                                | <p>Implementation services for proprietary equipment (usually through an RFP)</p> <p>Security services</p> <p>Police officers<sup>1</sup></p> <p>Specialists for disabilities<sup>1</sup></p> <p>Sign language interpreters<sup>1</sup></p> <p>Musicians<sup>1</sup></p>                                                           |
| <b>IT SERVICES</b>                  | <p>Scheduling system maintenance</p> <p>Cable installers</p> <p>Hosting services (servers and web)</p> <p>Design analysis for ITS hardware/software/facilities</p>                                                                                                                                                                                                           | <p>Computer programmers hired to develop surveys/databases</p> <p>Service on equipment/software where service or warranty no longer applies</p>                                                                                                                                                                                    |
| <b>HR/STAFFING</b>                  | <p>Non-continuing non-employment remuneration (NCNER) compensation</p> <p>Retired faculty members paid through NCNERS</p> <p>Preceptor payments</p> <p>Psychologists</p> <p>HR counselling/coaching services</p> <p>Career advisors offering training, coaching and assistance with applications and career strategies for students</p> <p>Career transition consultants</p> | <p>Benefit provider -employee assistance program (family counselling)</p> <p>Benefit provider -mental health and addiction counselling</p> <p>Compensation and evaluation providers</p> <p>health, dental, insurance benefit plan administration services</p> <p>Mediators</p> <p>Investigators</p> <p>Recruitment specialists</p> |
| <b>FINANCIAL / MONEY MANAGEMENT</b> | <p>Moneris/PSigate</p> <p>Investment management services related to pension plans and endowments</p> <p>Custodial investment services related to pension plans and endowments</p> <p>Banking services</p> <p>Procurement and travel card providers</p> <p>Insurance brokerages</p>                                                                                           | <p>Actuarial services</p> <p>Contingency based auditors (for tax recovery)</p> <p>Consulting services related to pension plan and endowments in regards to investment managers and market trends</p> <p>Audit services related to the pension plan and endowments financial statements</p> <p>Auditing and accounting agencies</p> |

| 2 - SERVICES THAT CAN BE EITHER CONSULTING OR NON-CONSULTING SERVICES <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                   |                                                                                                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| <b>BUSINESS PLANNING</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Strategic planning consultant                                                                                                                                                     | Management services                                                                                    |
| <b>FINANCIAL MANAGEMENT BASED</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Consulting services related to pension plan communication and actuarial reporting                                                                                                 | Consulting services related to health, dental, and insurance benefit plans and administrative services |
| <b>LICENSED PROFESSIONAL SERVICES</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Legal services related to pension plans and labour issues <sup>3</sup><br>Legal fees for consultation <sup>3</sup><br>Legal advice/services related to clinical care <sup>3</sup> |                                                                                                        |
| <p>1. The Ministry of Finance has agreed these items are non-consulting services</p> <p>2. Most of these services can be either consulting or non-consulting services. The differentiating factor is whether or not the service is "thinking" or strategic versus tactical in nature. Actual consulting services must be competitively bid regardless of value or signed off by President/Board of Governors.</p> <p>3. Exempt under Canadian Free Trade Agreement (CFTA) therefore not required to be competitively bid but will require President or Board of Governors sign-off.</p> |                                                                                                                                                                                   |                                                                                                        |

#### APPENDIX B: PURCHASES OF RESTRICTED ITEMS

1. In the interest of user and public safety, the purchase, use and disposal of restricted items is subject to provincial, federal and, in some cases, international legislation and regulations, in addition to University policy and procedures. To ensure compliance with applicable legislation and regulations, and University policy and procedures, all restricted items will be purchased using a Purchase Order, and must be signed off by the appropriate signing officials: Biosafety Officer, Radiation Safety Officer, designated official (controlled goods), Health and Safety Officer (designated substances), or Animal Care Coordinator Office of Research Services (animal care and use).
2. **Restricted Items Requiring a Purchase Order**
  - 2.1. **Controlled goods** as listed in the Controlled Goods List, a schedule to the Defence Production Act. This includes military, strategic, and military-related goods and technology, as well as dual-use goods and technology as identified in Group 2 (not all items), Item 5504 and Group 6 (all items), of the Export Control List. This also includes any US-origin good or technology that is a "defence article" as defined under the ITAR or non-US origin goods that is manufactured using "technical data" of United States origin, as defined under the ITAR if the "technical data" is a "defence article".
  - 2.2. **Animals** used for research and/or teaching purposes as regulated by Canadian Council on Animal Care (CCAC) and OMAFRA Animals for Research Act.
  - 2.3. **Controlled substances or controlled drugs** used for research/teaching purposes as defined by Health Canada, Office of Controlled Substances (OCS) as any type of drug

that the federal government has categorized as having a higher-than-average potential for abuse or addiction. Controlled substances are listed in Schedules I, II, III, IV and V of the Controlled Drugs and Substances Act (CDSA) of Canada and Part G (Controlled) and Part J (Restricted) of the Food and Drug Regulations, under the Food and Drugs Act of Canada. Controlled status applies to the drugs themselves, their salts and derivatives and to diagnostic or test kits containing these drugs.

- 2.4. **Hazardous Materials**, as defined by the Ontario Occupational Health and Safety Act in its Workplace Hazardous Materials Information System (WHMIS) Regulation. These items must have WHMIS labels and be accompanied by a current Safety Data Sheet (SDS), and may also require transportation of dangerous goods (TDG) documentation.
- 2.5. **Designated Substances** as defined by the Ministry of Labour | Regulation 490 – Designated Substances
- 2.6. **Human Pathogens and Toxins and/or Biohazardous materials** used for research and/or teaching purposes, including possession, use, import and export of human pathogens and toxins as defined and regulated by the Public Health Agency Canada (PHAC) and the Canadian Food Inspection Agency (CFIA).
- 2.7. **Radioactive material or devices containing radioactive material and/or producing nuclear radiation** as defined and regulated by the Canadian Nuclear Safety Commission (CNSC).
- 2.8. **Devices emitting electromagnetic radiation, including microwaves, ultraviolet, x-ray and lasers (class 3b/4 lasers)** as regulated by the Ontario Occupational Health and Safety Act.

**Commented [BS2]:** Environmental, Health and Safety Officer corrected us on which regulation to refer to here

## APPENDIX C: OPEN COMPETITIVE PROCUREMENT

### Development of a Bid Request

#### 1. Needs Identification

- 1. To ensure that the University obtains the most appropriate goods and/or services, the needs and objectives of the anticipated purchase, including all Accessibility requirements, must be well defined and communicated to potential vendors through a bid request.
- 2. Bid requests are normally executed through a "Request for Proposal (RFP)", which requests vendors to supply solutions for the delivery of complex products or services or to provide alternative options or solutions using predefined evaluation criteria in which price is not the only factor.
- 3. Where the results of informal supplier or product research are insufficient, formal processes such as a Request for Information (RFI) or Request for Expression of Interest (RFEI) may be used if warranted, taking into consideration the time and effort required to conduct them.
  - a) A "Request for Expressions of Interest (RFEI)" is a document used to gather information on supplier interest in an opportunity or information on supplier

capabilities/qualifications and helps the organization to gain a better understanding of the capacity of the supplier community to provide the services or solutions needed.

- b) A "Request for Information (RFI)" is a document issued to potential suppliers that sets out a general or preliminary description of a problem or need and requests information or advice about how to better define the problem or need, or alternative solutions.
- 4. A response to RFI or RFEI must not be used to pre-qualify a potential supplier and must not influence the chances of the participating suppliers from becoming the successful proponent in any subsequent opportunity.
- 5. The University may also gather information about supplier capabilities and qualifications through a Request for Supplier Qualification (RFSQ). This mechanism may be used either to identify qualified candidates in advance of expected future competitions or to narrow the field for an immediate need. The terms and conditions of the RFSQ document must contain language that disclaims any obligation of the University to call on any supplier to provide goods or services as a result of pre-qualification.
  - a) Allow suppliers to apply at any time for inclusion on the pre-qualify suppliers list.
  - b) Allow all qualified suppliers to participate in a particular procurement, unless the procuring entity states in the notice of intended procurement any limitation on the number of suppliers that will be permitted to tender and the criteria for selecting the limited number of suppliers.
  - c) If the University rejects a supplier's request for participation in a procurement or application for inclusion on the pre-qualify suppliers list, ceases to recognize a supplier as qualified, or removes a supplier from a pre-qualify list, the University will promptly inform the supplier and, on request of the supplier, promptly provide the supplier with a written explanation of the reasons for its decision.
- 6. In developing bid requests, Accessible Procurement must be followed in the procurement process of the good, service or facility. Accessibility staff may be consulted to ensure a fair evaluation of Accessibility requirements. If it is determined that there are no Accessibility requirements to the goods, services or facilities being procured or that the Accessibility requirements are deemed not to be practicable, this decision and its explanation must be documented by the Procurement Department. A copy of this explanation will be made available to a member of the public upon request.

## **2. Evaluation Criteria**

- 1. The criteria that will be used to evaluate the monetary and non-monetary aspects of the anticipated purchase, and the relative weighting of each factor, must be developed and defined as part of the bid request process. The criteria will serve to facilitate the review of competing bids and ensure that the goods and/or services under consideration will meet the needs and objectives of the University.

2. The criteria to be used in evaluating potential vendors will include such monetary factors as price, quality, cost trends, lead-time, flexibility, technical capabilities and Accessibility requirements. In addition, potential vendors must also be:
  - a) Financially solvent and in good standing with the University;
  - b) In compliance with provincial, federal and international laws, regulations and trade agreements; and
  - c) In compliance with the technical requirements/deliverables of the tender document;
3. The methodology and process to be used in assessing the submissions must also be set out in advance, including the method of resolving a tie score. If the evaluation criteria is to be altered after the bid request is posted, an addendum must be made to the competitive procurement documents. Bid requests must also state that the addendum has been received, reviewed and will be complied with.
4. The University may request suppliers to provide alternative strategies or solutions as a part of their submission. Such alternative criteria must be established prior to posting of the bid request and cannot be considered unless they are explicitly requested in the competitive procurement documents.

### **3. Bid Requests**

1. Documents pertaining to bid requests will be drafted by the Procurement manager, in consultation with the purchaser. All bid requests must clearly state:
  - a) The bid submission date and closing time. Suppliers must be given a minimum response time of 15 calendar days. Procurements that are high complexity, high risk and/or procurements that meet CETA thresholds will be accorded a response time of at least 30 calendar days;
  - b) The criteria, and weighting of the criteria, that will be used to evaluate submissions, along with the methodology to be used in assessing submissions;
  - c) A statement that submissions that do not meet the minimum requirements and/or minimum technical evaluation score will be disqualified;
  - d) The proposed term of the agreement and any options to extend the agreement (extending the term of agreement beyond that set out in the competitive procurement document amounts to non-competitive procurement where the extension affects the value and/or stated deliverables of procurement);
  - e) The cancellation or termination clauses, as appropriate;
  - f) The University's standard insurance clauses;
  - g) A bid resolution clause.
2. Bid request documents regardless of value must contain a form of agreement as defined by the Office of the University Secretariat and General Counsel Documents must be reviewed and approved by that office prior to their issuance. In circumstances where an alternative procurement strategy has been used (i.e., a form of agreement was not released with the procurement document), the agreement between the University and the successful supplier must be defined formally in a signed written contract before the

provision of supplying goods or services commences. Where an immediate need exists for goods or services, and the University and the supplier are unable to finalize the form of agreement, an interim purchase order or letter of intent may be used. The justification of such decision must be documented and approved by the appropriate authority.

#### **4. Posting and Receipt of Bid Requests**

1. Communications with potential suppliers concerning the posting of bid requests, both invitational and open, and acceptance of responses will be carried out by the Procurement Department to ensure the integrity of the competitive procurement process. In addition, the following must be adhered to:
  - a) The initial communication of any proposal must be communicated to all vendors at the same time;
  - b) All vendor responses must be due at the same time;
  - c) Any changes in due dates, requirements or information pertaining to the proposal or bid request must be communicated to all vendors at the same time and through the same method;
  - d) The bid proposal should be received in accordance with the bid documentation guidelines;
  - e) Any late proposals will not be accepted and will be returned to the supplier upon request;
  - f) All proposals and bid requests and responses and any subsequent feedback must be documented.
2. Calls for open competitive bid requests by the University will be posted by the Procurement Department on the electronic tendering system that is readily accessible by all Canadian and international suppliers (i.e. Biddingo). In addition, a selected or recommended group of suppliers may be invited to respond.

#### **5. Evaluation of Bid Requests**

1. An evaluation team must be established and framework developed to provide business, legal, technical, and financial input into the review and evaluation of bid proposals. All members of the evaluation team must be aware of the restrictions related to the use and distribution of confidential and commercially sensitive information collected through the competitive procurement process. They must also refrain from engaging in activities that may create or appear to create a conflict of interest and must sign a conflict-of-interest declaration and non-disclosure of confidential information agreement.
2. Each evaluation team member must complete an evaluation matrix based on multiple, pre-defined evaluation criteria to rate each of the submissions. Records of evaluation scores must be retained in accordance with the University's Records Classification and Retention Schedule. Evaluators must ensure that everything they say or write about submissions is fair, factual, and fully defensible.
3. All qualified suppliers will be evaluated according to the same criteria and process. The submission that receives the best ranking and meets all mandatory requirements set out

in the competitive procurement document must be declared the winning bid. The University must not discriminate or exercise preferential treatment in awarding a contract to a supplier as a result of a competitive procurement process.

4. The basis for supplier selection will be the best value, which may not be the lowest bidder. Best value will be based on predetermined criteria such as (but not limited to); quality, service, added value, partnership initiatives, availability to meet delivery or service requirements, warranties, lesser ongoing operational costs, etc. The University reserves the right to conduct discussions with selected suppliers for the purpose of "purchase by negotiation" in certain circumstances such as (but not limited to): the lowest bid received substantially exceeds the estimated cost of the goods, limited or reduced project funding, change to scope unknown at time of bid request, etc.
5. Bids will not be opened publicly unless determined by the University that a public opening is deemed appropriate.

#### **6. Contract Award Notification**

1. For Open Procurement, once the agreement between the successful supplier and the University is executed, the Procurement Department will post a notification of the contract award on the electronic tendering system within 72 days after the award of the agreement between the successful supplier and the University, in the same manner as the procurement documents were posted, listing the name of the successful supplier.
2. All unsuccessful suppliers will be notified by the Procurement Department and will be informed of their entitlement to request a de-briefing within 60 calendar days.
3. Any disputes arising from the competitive procurement process, the methods employed or decisions made in the administration of a proposal, tender, or quotation must be must be dealt with in an ethical, fair, reasonable, and timely fashion.

#### **7. Tender Dispute Resolution**

1. Should a supplier wish to review the decision of the University in any respect of any material aspect of the tender process and subject to having a debriefing, the supplier will submit an appeal in writing to the Procurement Department within 10 days of such a debriefing. Any appeal in writing that is not received in a timely manner will not be considered and the supplier will be notified in writing. A protest in writing will include the following:
  - a) A specific identification of the provision and/or procurement procedure that is alleged to have been breached;
  - b) A specific description of each act alleged to have been breached in the procurement process;
  - c) A precise statement of the relevant facts;
  - d) An identification of the issues to be resolved;
  - e) The supplier's arguments and supporting documentation; and
  - f) The supplier's requested remedy.
2. The manager, Procurement will respond, in writing, to the supplier within 10 days of receiving the tender protest. Should the supplier still not agree with the University's

resolution, they can request a subsequent meeting with the CFO of the University. Should the supplier still not agree with the resolution they may bring the matter to the attention of an agreed upon mediator with no substantial interest in the outcome, to receive and consider the complaint and make appropriate findings and recommendations with respect to the complaint. Should both parties fail to agree on the identity of a mediator, or should mediation fail to bring about a resolution to the dispute, such dispute will then be transferred to a single arbitrator. The arbitrator will be appointed by agreement between the parties or, in default of agreement, such arbitrator will be appointed by a Judge of the Ontario Court of Justice (General Division) upon the application of any of the said parties.

#### **8. Contract Management**

1. The terms and conditions of any contractual agreement with vendors must be reviewed and approved by the manager of Procurement and the Office of Risk Management and if the contract is facilities related, the director, Office of Campus Infrastructure and Sustainability. The University New Contract Control Form must be signed by the appropriate individuals listed on the form before sending the contract for final, formal senior level signature in accordance with the Signing Authority Registry.
2. Payments must be made in accordance with provisions of the contract. All invoices must contain detailed information sufficient to warrant payment. Any overpayments must be recovered in a timely manner.
3. Assignments must be properly documented. Supplier performance must be managed and documented, and any performance issues must be addressed.
4. To manage disputes with suppliers throughout the life of the contract, the University should include a dispute resolution process in their contracts.
5. For Services, the University must:
  - a) Establish clear terms of reference for the assignment. The terms should include objectives, background, scope, constraints, staff responsibilities, tangible deliverables, timing, progress reporting, approval requirements, and knowledge transfer requirements.
  - b) Establish expense claim and reimbursement rules compliant with the Broader Public Sector Expenses Procedure and ensure all expenses are claimed and reimbursed in accordance with these rules.
  - c) Ensure that expenses are claimed and reimbursed only where the contract explicitly provides for reimbursement of expenses.



|                       |                                                                                                                                                                                                    |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Classification Number | LCG 1131.01                                                                                                                                                                                        |
| Parent Policy         | Procurement of Goods and Services Policy                                                                                                                                                           |
| Framework Category    | Legal, Compliance and Governance                                                                                                                                                                   |
| Approving Authority   | Audit and Finance Committee                                                                                                                                                                        |
| Policy Owner          | Vice-President, Administration                                                                                                                                                                     |
| Approval Date         | <del>February 13, 2025</del><br>DRAFT FOR CONSULTATION                                                                                                                                             |
| Review Date           | March 2028                                                                                                                                                                                         |
| Supersedes            | Substantive Amendment: February 23, 2022; Editorial Amendments, February 18, 2020; March 27, 2017; Minor Amendment, s. 6.1, s 9; Major Amendment November 2012; Purchasing Procedures (March 2009) |

## Procurement of Goods and Services Procedures

### PURPOSE

1. The purpose of these Procedures is to complement the Procurement of Goods and Services Policy by serving to define and guide individuals in fulfilling their responsibilities and obligations throughout each phase of the procurement process. These procedures are consistent with the Broader Public Sector Procurement Directive, Supply Chain Code of Ethics, Building Ontario Businesses Initiative Act, Bill S-211, Canadian Free Trade Agreement, Canada-European Union Comprehensive Economic and Trade Agreement, and have been developed to ensure that all goods and services are acquired by the University through a process that is open, fair and transparent.

### DEFINITIONS

2. For the purposes of these Procedures the following definitions apply:

“Accessibility” means the degree of ease that something (e.g. goods, service, facilities) can be used and enjoyed by persons with a disability. The term implies conscious planning, design and/or effort to ensure it is barrier-free to persons with a disability.

“Accessible Procurement” means determining what is required for a product or service to be accessible, and either consulting with persons with disabilities, finding ways to procure something that meets those requirements or, documenting why this is not possible and what will be done if an accessible alternative is requested.

“Budgeting” means the process of determining whether there are sufficient funds available to commit the University to the purchase.

“Buy Ontario Requirements” means the Buy Ontario Act (Public Sector Procurement), 2025 and the directives issued thereunder, including the Buy Ontario Procurement Directive, which

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establish mandatory procurement requirements for public sector entities, including measures to prioritize Ontario and Canadian businesses in procurements of goods and services, in accordance with applicable thresholds, evaluation criteria, and other requirements, as may be amended.

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“CETA” means Canadian European Trade Agreement.

“CFTA” means Canadian Free Trade Agreement.

“Commitment” means the act of formally binding the University to a purchasing agreement.

“Consulting Services” is limited to the provision of expertise or strategic advice that is presented for consideration and decision-making. This does not include contractors who are performing work on a fee for service basis and who are NOT providing strategic/decision-making advice (e.g. police officers, specialists for disabilities, sign language interpreters, etc.). Consulting services are subject to different procurement practices than all other goods and services. A working list of common services procured by universities that would be deemed consulting services is provided in Appendix A.

“Contract” means any document, or other evidence, of an intention to establish a binding legal relationship between the University and one or more third parties.

“Forced and Child Labour in Canadian Supply Chains” (Bill S-211) means that the University must ensure that when purchasing goods & services that exploitative practices are addressed and eradicated from the supply chain.

“Goods” means moveable property, as well as the costs of installing, operating, maintaining or manufacturing such moveable property which are purchased, rented or leased by the University, including raw materials, products, equipment and other physical objects of every kind and description whether in solid, liquid, gaseous or electronic form, unless they are procured as part of a general construction contract. It includes capital items, such as furniture, research equipment, telecommunications and computers, peripheral equipment and acquisitioned software where there is a one-time license fee and other items that have a useful life greater than one year.

“Limited Tendering” means a procurement method whereby the procuring entity contacts a supplier or suppliers of its choice.

“Open Procurement” means a competitive procurement process open to all qualified and interested bidders.

“Payment” means the processing of payment and transfer of funds from the University to the vendor, supplier or contractor.

“Procurement by Invitation” means the request of a bid, quote or proposal by the purchaser or Procurement Department.

“Purchase Order” means a written offer made by a purchaser to a vendor that formally sets out the terms and conditions of the proposed transaction.

“Purchaser” means the Ontario Tech Department that is initiating the purchase.

“Receipt” means the physical receipt of the purchased goods or services by University personnel.

**“Regulated and Restricted Goods”** means certain goods and services that require additional technical and/or regulatory approval or other review from a designated approving department to ensure they comply with internal university standards, licenses and regulatory requirements.

**“Requisition”** means the process of initiating documentation for the applicable Means of Procurement.

**“Risk”** means the uncertainty of outcomes against the achievement of planned objectives. This concept can be applied to strategic objectives as well as all operational activities within the University. While the application of the definition may change with different University Members, the concept should not change.

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**“Services”** means any intangible product that does not have a physical presence. No transfer of possession or ownership takes place when services are sold, and they (1) cannot be stored or transported, (2) are instantly perishable, and (3) come into existence at the time they are bought and consumed. This includes construction related services.

Goods also include materials and equipment used for research purposes, such as controlled goods, animals, biohazardous, radioactive and other hazardous materials and equipment. The acquisition of these materials requires additional procurement procedures as outlined in Appendix B.

**“Accessibility”** means the degree of ease that something (e.g. goods, service, facilities) can be used and enjoyed by persons with a disability. The term implies conscious planning, design and/or effort to ensure it is barrier free to persons with a disability.

**“Accessible Procurement”** means determining what is required for a product or service to be accessible, and either consulting with persons with disabilities, finding ways to procure something that meets those requirements or, documenting why this is not possible and what will be done if an accessible alternative is requested.

**“Building Ontario Businesses Initiative Act (“BOBIA”)** means the act that requires publicly funded organizations to give businesses in Ontario preference when conducting procurements for goods and services (consulting and non-consulting) under \$121,200 threshold.

**“Contract”** means any document, or other evidence, of an intention to establish a binding legal relationship between the University and one or more third parties.

**“CFTA”** means Canadian Free Trade Agreement.

**“CETA”** means Canadian European Trade Agreement.

**“Forced and Child Labour in Canadian Supply Chains”** (Bill S-211) means that the University must ensure that when purchasing goods & services that exploitative practices are addressed and eradicated from the supply chain.

**“Goods”** means moveable property, as well as the costs of installing, operating, maintaining or manufacturing such moveable property which are purchased, rented or leased by the University, including raw materials, products, equipment and other physical objects of every kind and description whether in solid, liquid, gaseous or electronic form, unless they are procured as part of a general construction contract. It includes capital items, such as furniture, research equipment, telecommunications and computers, peripheral equipment and acquisitioned software where there is a one-time license fee and other items that have a useful life greater than one year.

Goods also include materials and equipment used for research purposes, such as controlled goods, animals, biohazardous, radioactive and other hazardous materials and equipment. The acquisition of these materials requires additional procurement procedures as outlined in Appendix B.

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**“Consulting Services”** is limited to the provision of expertise or strategic advice that is presented for consideration and decision-making. This does not include contractors who are performing work on a fee for service basis and who are NOT providing strategic/decision-making advice (e.g. police officers, specialists for disabilities, sign language interpreters, etc.). Consulting services are subject to different procurement practices than all other goods and services. A working list of common services procured by universities that would be deemed consulting services is provided in Appendix A.

**“Limited Tendering”** means a procurement method whereby the procuring entity contacts a supplier or suppliers of its choice.

**“Procurement by Invitation”** means the request of a bid, quote or proposal by the purchaser or Procurement Department.

**“Purchase Order”** means a written offer made by a purchaser to a vendor that formally sets out the terms and conditions of the proposed transaction.

**“Purchaser”** means the Ontario Tech Department that is initiating the purchase.

**“Open Procurement”** means a competitive procurement process open to all qualified and interested bidders.

**“Requisition”** means the process of initiating documentation for the applicable Means of Procurement.

**“Regulated and Restricted Goods”** means certain goods and services that require additional technical and/or regulatory approval or other review from a designated approving department to ensure they comply with internal university standards, licenses and regulatory requirements.

**“Budgeting”** means the process of determining whether there are sufficient funds available to commit the University to the purchase.

**“Commitment”** means the act of formally binding the University to a purchasing agreement.

**“Receipt”** means the physical receipt of the purchased goods or services by University personnel.

**“Payment”** means the processing of payment and transfer of funds from the University to the vendor, supplier or contractor.

### SCOPE AND AUTHORITY

3. These Procedures apply to all purchases of Goods, Services or Consulting Services at the University.

4. These Procedures do not apply to payments related to employment or honoraria.
5. The Vice President Administration, or successor thereof, is the Policy Owner and is responsible for overseeing the implementation, administration and interpretation of these Procedures.

## POLICY

### 6. Procurement Principles

#### 6.1. Segregation of Duties

The University requires that at least three of the following five functional procurement roles are segregated between different departments or, at a minimum, between different individuals:

- a) Requisition
- b) Budgeting
- c) Commitment
- d) Receipt
- e) Payment

#### 6.2. Signing Authority and Approval

All Goods and Services purchased at the University must be approved at the outset by the appropriate authority signing authority. Requirements for procurement are determined by the type of Good or Service to be purchased, as well as the financial (pre-tax) threshold of the expenditure. If the amount of a purchase is amended or increased after the order has been authorized, the revised total expenditure (original amount plus increase) will be used to determine approval authority.

#### 6.3. Types of Purchase

The procurement process to be followed is determined by the type of purchase to be made: (a) Goods and Services, or (b) Consulting Services.

#### 6.4. Sustainable and Socially Responsible Procurement

- a) Sustainable Procurement: The Sustainable Procurement framework supports activities that create positive environmental, social, and economic impacts, maintaining an open, fair, and transparent process. The University will identify and integrate environmental sustainability requirements within procurement opportunities.
- b) Social Value Considerations: Prioritizes the procurement of goods and services that demonstrate value for money, considering business needs, timing, lifecycle costs, supply, and procurement methods with fairness, transparency, and accountability as guiding principles.

### 7. Threshold Values and Means of Procurement

- 7.1. The means by which goods and services are procured is determined by the total value in Canadian dollars. The University will conduct an open competitive procurement process if the estimated value of procurement of goods or services

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exceeds the competitive procurement threshold established by law, regulation, or by a binding procurement directive issued by the Ontario Government.

7.2. The University will, without compromising overall best value, give preference to businesses as required by law, regulation, or by a binding procurement directive issued by the Ontario Government.

7.3. The following table sets out requirements of binding procurement directives issued by the Ontario Government, including the means of procurement, the type of procurement process and the preference required based on the total value in Canadian dollars of the procurement, before tax. The total cost will include the cost of associated warranties, maintenance and service agreements.

7.

7.1. The means by which goods and services are procured is determined by the total value in Canadian dollars of the item(s), before tax, in accordance with the chart below and as described in the subsequent sections of this procedure. The total cost will include the cost of associated warranties, maintenance and service agreements.

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| MEANS OF PROCUREMENT                                                                   | REQUIREMENTS                                                                                     | THRESHOLDS                                    |
|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------|
| <b>CONSULTING SERVICES</b>                                                             |                                                                                                  |                                               |
| Purchase Order                                                                         | Three written quotations (by invitation); from an Ontario based business ( <del>BOBIABOA</del> ) | \$0-<br><del>\$121,138,199,999.99</del>       |
| Purchase Order                                                                         | Open competitive process                                                                         | <del>\$121,139,200-000</del> or more          |
| <b>GOODS AND SERVICES (NON-CONSULTING)</b>                                             |                                                                                                  |                                               |
| Purchase Order, Purchasing Card or approved invoice processed through Accounts Payable | One written quotation (by invitation); from an Ontario based business ( <del>BOBIABOA</del> )    | \$0 - \$9,999.99                              |
| Purchase Order                                                                         | Two written quotations (by invitation); from an Ontario based business ( <del>BOBIABOA</del> )   | \$10,000 - \$24,999.99                        |
| Purchase Order                                                                         | Three written quotations (by invitation); from an Ontario based business ( <del>BOBIABOA</del> ) | \$25,000 -<br><del>\$121,138,199,999.99</del> |
| Purchase Order                                                                         | Open competitive process; <u>from a Canadian business</u>                                        | <del>\$121,139,200-000</del> or more          |

**7.2.7.4.** Any attempt to circumvent or otherwise manipulate the thresholds used to determine the means of procurement (e.g., dividing a single procurement into multiple procurements) is strictly prohibited, and will result in delay of the purchase as the individual undertaking the requisition will be required to obtain additional quotes.

**7.5.** The Vice-President, Administration will make editorial updates to ensure the table in section 7.2 remains in alignment with established requirements, as amended. Established requirements may be found on the Government of Ontario Website.

**7.3.** Under special circumstances, Limited Tendering may be used to have the quotation requirement waived.

**7.4.7.6.** Where possible, and without compromising overall best value, purchasing preference for goods and services under \$121,200 should be sourced locally within the Province of Ontario or Canada.

## 8. Competitive Procurement

**8.1.** All Goods and Services valued greater than \$10,000 will be procured by an invitational or open competitive procurement process. An open competitive procurement process may be used, regardless of value, due to the high-profile nature of the requirement, at the discretion of the Procurement Department, or

where required by an external organization. If an existing Vendor of Record (VOR) contract is in place that satisfies the conditions of the Broader Public Sector (BPS) and other relevant trade agreements, you may select this vendor without obtaining additional quotes. However, if multiple vendors are listed under the Vendor of Record, it is encouraged to obtain multiple quotes to ensure competitive pricing and service options.

## **9. Open Competitive Procurement**

- 9.1.** All Goods and Services that are valued at greater than ~~\$121,138,200-999~~ must be procured through an Open Procurement in order to solicit and evaluate bids in a fair, impartial manner prior to the issuing of a Purchase Order.
- 9.2.** The Open Competitive Procurement process involves the following four stages:
  - a)** Development of a bid request;
  - b)** Posting and receipt of bid requests;
  - c)** Evaluation of bid requests; and
  - d)** Contract and award notification.
- 9.3.** Detailed information and guidance regarding each of the above stages is included in Appendix C.

## **10. Purchase Orders**

- 10.1.** A Purchase Order must be used for all purchases of Consulting Services regardless of value, as well as Goods and Services, as required by the Threshold Values.
- 10.2.** There are certain Goods and Services for which a Purchase Order may not be acceptable or appropriate. Such items may be procured through alternative means such as cheque requisitions, or expense reports.
- 10.3.** Items exempt from a Purchase Order include the following:
  - a)** Customs
  - b)** Courier and freight charges
  - c)** Conference or seminar fees
  - d)** Course registration fees
  - e)** Debt payments, including interest payments
  - f)** Donations
  - g)** Elevator license fees
  - h)** Insurance premiums
  - i)** Inter-institutional expenses or transfers
  - j)** Investments and related fees
  - k)** Leasehold payments
  - l)** Membership fees

- m) Petty cash items
- n) Real property charges
- o) Recruitment agency fees
- p) Refunds
- q) Registry fees
- r) Sponsorship fees
- s) Subscription fees
- t) Support Allowance fees
- u) Taxes and charges
- v) Travel expenses
- w) Utilities
- x) Vehicle license fees
- y) Animal Care Veterinarian Services
- z) Patent Agents

## **11. Purchase Requisitions**

- 11.1.** A purchase requisition is a document used as part of the accounting process to initiate a merchandise or supply purchase. A purchase requisition identifies the business need for the Goods or Services and ensures appropriate controls are in place to monitor the legitimacy of a purchase.
- 11.2.** All requisitions regardless of Purchase Order type must include:
  - a) Valid Banner ID/Supplier Number
  - b) Contact information of purchaser;
  - c) Vendor contact information;
  - d) Product or quote information including quote number, item description, catalogue or order number, quantity, pricing, and unit of measure, etc.;
  - e) Date by which Goods and Services must be received;
  - f) Account information (fund, org, account);
  - g) Quotation, justification to validate the use of Limited Tendering;
  - h) Where applicable any separate agreement and a note on restricted goods as outlined in Appendix B.
- 11.3.** If the supplier does not have a valid Banner ID/supplier number, the individual initiating the transaction must complete the Supplier Setup Form. The Procurement Department will then check the validity of the Supplier through the Canadian Revenue Agency website and internet search before the Supplier record is established.

11.4. Purchase requisitions must be created and approved using the online Web Requisition portal and accompanied by the appropriate supporting documentation. There are requisitions for two types of Purchase Orders:

- a) **Regular Purchase Order:** Generally used for Goods and Services purchased at the time and paid for in a lump sum.
- b) **Blanket Purchase Order:** A blanket Purchase Order is an order of Goods and/or Services processed by the University with a supplier that contains multiple delivery dates scheduled over a fiscal year, sometimes at predetermined prices. It is normally used when there is a recurring need for Goods and/or Services. Accordingly, items are purchased under a single Purchase Order rather than processing a separate Purchase Order each time Goods and/or Services are needed.

## 12. Equipment Standards

12.1. Purchases of IT hardware, including laptops, tablets, workstations, monitors, printers and servers, with the exception of research hardware, must be selected from the list of standard hardware models and purchased or leased through a Purchase Order from the designated preferred vendor, as established by Information Technology Services (ITS).

## 13. Furniture

13.1. Requisitioners are asked to consult OCIS by phone or through a Service Desk request before purchasing office or classroom furniture to ensure that there is not existing inventory that would meet the requirements.

## 14. Lab Consumable Supplies and Minor Equipment

14.1. Before purchasing Lab Supplies & Equipment please contact [centralstores@ontariotechu.ca](mailto:centralstores@ontariotechu.ca)

## 15. Lab Chemicals, and regulated and restricted goods

15.1. These items cannot be purchased using a purchasing card unless exempt by the appropriate signing authority. See Appendix B for more information regarding regulated and restricted goods.

15.2. All lab chemicals, and regulated and restricted goods will be purchased using a Purchase Order or through an authorized individual to ensure compliance with applicable legislation and regulations, and University policy and procedures.

15.3. All Purchase Order of lab chemicals, and regulated and restricted goods must be signed off by the appropriate signing authorities: Biosafety Officer, Radiation Safety Officer, designated official (controlled goods), Health and Safety Officer (designated substances), or Animal Care Coordinator in the Office of Research Services (animal care and use).

15.4. When completing a purchase requisition for any of the Restricted Items Requiring a Purchase Order, the following information must be included in the comments section of the requisition form:

- a) Researcher/ Purchaser name;

- b) Certificate/permit approval number as assigned by the relevant research compliance committee (Animal Care Committee, Biosafety Committee or Radiation Safety Committee);
- c) Indicate if the material is biohazardous, radioactive, animals, controlled goods, hazardous. In rare circumstances, restricted items may be purchased using an alternative procurement method (e.g. purchasing card); however, prior approval must be sought from the Office of Research Services (Biosafety officer/Radiation Safety officer/Animal Care Coordinator).

**16. Execution of Purchase Orders and Purchasing Agreements**

- 16.1.** On receipt of an approved purchase requisition, the Procurement Department will execute a Purchase Order which includes terms and conditions prior to the provision of Goods and Services and communicate this to the Purchaser and vendor. Unless a Purchase Order is issued under a separate written purchasing agreement between the purchaser and the vendor, the Purchase Order and any attachments are the sole agreement between the parties.
- 16.2.** All purchasing agreements will include:
  - a) Cancellation or termination clauses, as appropriate. When conducting complex procurements, the university may consider the use of contract clauses that permit cancellation or termination at critical project life-cycle stages.
  - b) The specific term of the agreement and any options to extend the agreement. Any change or amendment to the term of a purchasing agreement will be made in accordance with the Signing Authority Registry and Approval Procedures and requires review by the Procurement Manager.

**17. Receipt of Goods**

- 17.1.** All Goods are to be delivered to Shipping/Receiving, unless otherwise specified in the purchase requisition. Goods must be accompanied by a packing slip that indicates the Purchase Order number.
- 17.2.** Shipping/Receiving will contact the Purchaser to indicate arrival of the order. The Purchaser or designate is responsible for signing the packing slip to validate that the Goods received are in accordance with the Purchase Order.
- 17.3.** If Goods received are not in accordance with the Purchase Order, the Purchaser is responsible for following up with the vendor, in consultation with the Procurement Department.

**18. Payment of Invoices**

- 18.1.** Payment through Accounts Payable would be through remitting the invoice, along with other required documentation (e.g. a cheque requisition), to Accounts Payable.
- 18.2.** All invoices must be sent directly to Accounts Payable by the vendor. Invoices will be forwarded by Accounts Payable to the purchaser for approval prior to payment. All invoices for Goods submitted by the Purchaser for payment must be accompanied by a signed packing slip and sent to Accounts Payable.

## **19. Return of Goods**

- 19.1.** For any Good that needs to be replaced or returned, it is the responsibility of the Purchaser to contact the vendor and make the appropriate arrangements in consultation with the Procurement Department. Where the replacement or return requires a change to the terms of the original Purchase Order, the purchaser will contact the Procurement Department to initiate the change.

## **20. Trade Agreements**

### **20.1. General**

The University will ensure the provisions of both the CFTA and CETA are considered during procurement activities and throughout the competitive tendering process. Both trade agreements are similar; however, CFTA is triggered first since that treaty has far lower thresholds for publicly tendering.

### **20.2. CFTA**

CFTA will apply for the procurement thresholds listed on <https://www.cfta-alec.ca/procurement/covered-procurement-thresholds/>

\*Rates are in CDN currency and subject to inflation adjustment.

### **20.3. CETA**

CETA will apply for the procurement thresholds listed on:  
<https://www.canada.ca/en/treasury-board-secretariat/services/policy-notice/contracting-policy-notice-2019-4-trade-agreements-thresholds-update.html>

\* Amounts are in CDN currency and subject to inflation adjustment

### **20.4. Valuation**

In estimating the value of a procurement for the purpose of ascertaining whether it is a covered procurement, a procuring entity will include the estimated maximum total value of the procurement over its entire duration, whether awarded to one or more suppliers, taking into account all forms of remuneration, including premiums, fees, commissions and interest; and if the procurement provides for the possibility of options, the total value of such options.

## **21. Limited Tendering**

- 21.1.** Limited Tendering represents a departure from the required number of quotes, as set out above, and must be accompanied by a waiver setting out the rationale for limited tendering. Limited tendering must be approved in advance of the purchase by the following:

- a)** Purchases \$10,000 - \$25,000: the waiver must be approved by the Procurement Manager and Director of Financial Operations.
- b)** Purchases over \$25,000 the waiver must be approved by the Procurement Manager and the Vice President Administration.
- c)** Purchases of consulting services requires the waiver to be approved by the Procurement Manager, the Vice President Administration, and the President.

21.2. All such requests for using Limited Tendering must be approved in advance before the procurement process begins. If the Limited Tender is not approved in advance it runs the risk of not being approved and the vendor not being paid.

**21.3. Requests for Limited Tendering**

In order to obtain approval for Limited Tendering, the purchaser must make a formal request to the Procurement Department with a written explanation as to why it would be impracticable or otherwise inappropriate to put the Good or Service out for competitive procurement. Such requests should include specific requirements of the Good or Service, evidence that an objective market analysis has been undertaken and that the cost charged by the vendor is fair and reasonable. If the Good or Service is being purchased through a distributor of the manufacturer, a letter from the manufacturer should be obtained indicating a sole source distributor relationship exists between the parties.

**21.4. Granting Use for Limited Tendering**

- a) The use of Limited Tendering may be granted in the following special, limited circumstances:
- b) If no tenders were submitted or no suppliers requested participation or if no tenders conformed to the essential requirements of the tender documentation or no suppliers satisfied the conditions for participation or if the submitted tenders were collusive (provided that the requirements of the tender documentation are not substantially modified);
  - If the goods or services can be supplied only by a particular supplier and no reasonable alternative or substitute goods or services exist for any of the following reasons:
    - the requirement is for a work of art;
    - the protection of patents, copyrights, or other exclusive rights;
    - due to an absence of competition for technical reasons;
    - the supply of goods or services is controlled by a supplier that is a statutory monopoly;
    - to ensure compatibility with existing goods or to maintain specialized goods that must be maintained by the manufacturer of those goods or its representative;
    - work is to be performed on property by a contractor according to provisions of a warranty or guarantee held in respect of the property or the original work;
    - work is to be performed on a leased building or related property, or portions thereof, that may be performed only: by the lessor; or
    - the procurement is for subscriptions to newspapers, magazines, or other periodicals;

- c) For additional deliveries by the original supplier of goods or services that were not included in the initial procurement, if a change of supplier for such additional goods or services: (i) cannot be made for economic or technical reasons such as requirements of interchangeability or interoperability with existing equipment, software, services, or installations procured under the initial procurement; and (ii) would cause significant inconvenience or substantial duplication of costs for the procuring entity;
- d) If strictly necessary, and for reasons of urgency brought about by events unforeseeable by the University, the goods or services could not be obtained in time using open tendering;
- e) For goods purchased on a commodity market;
- f) If a procuring entity procures a prototype or a first good or service that is developed in the course of, and for, a particular contract for research, experiment, study, or original development. Original development of a first good or service may include limited production or supply in order to incorporate the results of field testing and to demonstrate that the good or service is suitable for production or supply in quantity to acceptable quality standards, but does not include quantity production or supply to establish commercial viability or to recover research and development costs;
- g) For purchases made under exceptionally advantageous conditions that only arise in the very short term in the case of unusual disposals such as those arising from liquidation, receivership, or bankruptcy, but not for routine purchases from regular suppliers;
- h) If a contract is awarded to a winner of a design contest provided that: (i) the contest has been organized in a manner that is consistent with the principles of Chapter 5 of CFTA, in particular relating to the publication of a tender notice; and (ii) the participants are judged by an independent jury with a view to a design contract being awarded to a winner;
- i) If goods or consulting services regarding matters of a confidential or privileged nature are to be purchased and the disclosure of those matters through an open tendering process could reasonably be expected to compromise government confidentiality, result in the waiver of privilege, cause economic disruption, or otherwise be contrary to the public interest.

#### **21.5. Preferred Vendors**

- a) Preferred vendors are established via a contract or agreement with the University following a competitive procurement process. Agreements for preferred vendors have set terms, conditions and/or pricing over a fixed period of time in order to maximize its ability to achieve the best economic value for its expenditures. A current list of preferred vendors is available through the Procurement Department.

#### **21.6. Where the University has established such contracts or agreements, Goods and Services should be purchased against these contracts from these preferred vendors.**

- 21.7. If an existing Vendor of Record (VOR) contract is in place that satisfies the conditions of the Broader Public Sector (BPS) and other relevant trade agreements, you may select this vendor without obtaining additional quotes. However, if multiple vendors are listed under the Vendor of Record, it is encouraged to obtain multiple quotes to ensure competitive pricing and service options.

#### **MONITORING AND REVIEW**

22. These Procedures will be reviewed as necessary and at least every three years. The Procurement Manager, or successor thereof, is responsible to monitor and review these Procedures.

#### **RELEVANT LEGISLATION**

23. Broader Public Sector Financial Accountability Act  
[Buy Ontario Act \(Public Sector Procurement\), 2025](#)  
Canadian Free Trade Agreement  
Canada-European Union Comprehensive Economic and Trade Agreement

#### **RELATED POLICIES, PROCEDURES & DOCUMENTS**

24. Accessibility Policy  
Procurement of Goods and Services Policy  
Conflict of Interest in Research Policy  
Gift Acceptance Policy  
Designated Substance Permit  
Health and Safety Policy  
Radiation Safety Manual  
Biosafety Manual  
Policy on the Care and Use of Animals in Research and Teaching  
Statement of Investment Policy and Procedures  
Procedures for the Determination of Contractor Status  
Risk Management Policy  
Supply Chain Code of Ethics  
Expenses Policy  
Expenses Procedures  
Safe Disclosure Policy  
Safe Disclosure Procedures

|

Contract Management and Signing Authority Policy  
Signing Authority and Approval of Expenditures Procedure  
Legal Review of Contracts Procedures  
Supply Chain Code of Ethics

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## APPENDIX A: NON-CONSULTING AND CONSULTING SERVICES

The following is a list of services that are commonly used by universities and that would be deemed to be "Services", and not "Consulting Services" as defined in the Procurement Directive under the Broader Public Sector Financial Accountability Act (Bill 122).

| 1 - NON-CONSULTING SERVICES                              |                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>REVIEWS</b><br>(predominantly subject matter experts) | Academic departmental/peer reviews<br>Faculty/decanal review<br>Division reviews<br>Endowed chair reviews<br>Dean initiated reviews<br>Reviewers for chair selection processes<br>Governance reviews<br>Research/scientific reviews                                                                                                                                                                        | Research/curriculum development/expertise<br>Accreditation reviews<br>Undergraduate and graduate program reviews<br>Clinical program reviews/clinical trial reviews<br>Thesis defense and reviews<br>Independent review of a student's evaluation<br>Evaluation specialists or performance measurement specialists                                                             |
| <b>SPEAKERS</b>                                          | Invited Facilitators for retreats (sometimes working on strategic plans) and workshops                                                                                                                                                                                                                                                                                                                     | Invited Speakers – for lectures, research seminars, endowed lecture series, continuing educational series programs, continuing professional development series                                                                                                                                                                                                                 |
| <b>TRAINING</b>                                          | Training sessions                                                                                                                                                                                                                                                                                                                                                                                          | ITS course trainers                                                                                                                                                                                                                                                                                                                                                            |
| <b>TECHNICAL SERVICES</b>                                | Design and print agencies<br>Program brochure design/printing/mailling<br>Annual report / newsletter design services/printing<br>Technical writers, copy and writing editors or case writers – speech and article writers<br>Business plan writing<br>Consultants to write analytical summaries of specific government conferences<br>Project management<br>Business development<br>Web design/maintenance | Event planning or management services<br>TSSA – Technical Safety Standards Association<br>ESA – Electrical Safety Association<br>BI&I – insurance company, that does inspections<br>DJ services<br>Couriers<br>Sports game officials<br>Translation services/transcription services<br>English language training provided by Applied Language Associates<br>Onsite ergonomists |

|                                     |                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                     | <p>Graphic services</p> <p>Videotaping and production for teaching support materials</p> <p>Photographers</p> <p>AV support/recording of continuing education programs</p> <p>Audio support/equipment rental for convocation and outdoors</p>                                                                                                                                | <p>Implementation services for proprietary equipment (usually through an RFP)</p> <p>Security services</p> <p>Police officers<sup>1</sup></p> <p>Specialists for disabilities<sup>1</sup></p> <p>Sign language interpreters<sup>1</sup></p> <p>Musicians<sup>1</sup></p>                                                           |
| <b>IT SERVICES</b>                  | <p>Scheduling system maintenance</p> <p>Cable installers</p> <p>Hosting services (servers and web)</p> <p>Design analysis for ITS hardware/software/facilities</p>                                                                                                                                                                                                           | <p>Computer programmers hired to develop surveys/databases</p> <p>Service on equipment/software where service or warranty no longer applies</p>                                                                                                                                                                                    |
| <b>HR/STAFFING</b>                  | <p>Non-continuing non-employment remuneration (NCNER) compensation</p> <p>Retired faculty members paid through NCNERS</p> <p>Preceptor payments</p> <p>Psychologists</p> <p>HR counselling/coaching services</p> <p>Career advisors offering training, coaching and assistance with applications and career strategies for students</p> <p>Career transition consultants</p> | <p>Benefit provider -employee assistance program (family counselling)</p> <p>Benefit provider -mental health and addiction counselling</p> <p>Compensation and evaluation providers</p> <p>health, dental, insurance benefit plan administration services</p> <p>Mediators</p> <p>Investigators</p> <p>Recruitment specialists</p> |
| <b>FINANCIAL / MONEY MANAGEMENT</b> | <p>Moneris/PSigate</p> <p>Investment management services related to pension plans and endowments</p> <p>Custodial investment services related to pension plans and endowments</p> <p>Banking services</p> <p>Procurement and travel card providers</p> <p>Insurance brokerages</p>                                                                                           | <p>Actuarial services</p> <p>Contingency based auditors (for tax recovery)</p> <p>Consulting services related to pension plan and endowments in regards to investment managers and market trends</p> <p>Audit services related to the pension plan and endowments financial statements</p> <p>Auditing and accounting agencies</p> |

| 2 - SERVICES THAT CAN BE EITHER CONSULTING OR NON-CONSULTING SERVICES <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                   |                                                                                                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| <b>BUSINESS PLANNING</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Strategic planning consultant                                                                                                                                                     | Management services                                                                                    |
| <b>FINANCIAL MANAGEMENT BASED</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Consulting services related to pension plan communication and actuarial reporting                                                                                                 | Consulting services related to health, dental, and insurance benefit plans and administrative services |
| <b>LICENSED PROFESSIONAL SERVICES</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Legal services related to pension plans and labour issues <sup>3</sup><br>Legal fees for consultation <sup>3</sup><br>Legal advice/services related to clinical care <sup>3</sup> |                                                                                                        |
| <p>1. The Ministry of Finance has agreed these items are non-consulting services</p> <p>2. Most of these services can be either consulting or non-consulting services. The differentiating factor is whether or not the service is "thinking" or strategic versus tactical in nature. Actual consulting services must be competitively bid regardless of value or signed off by President/Board of Governors.</p> <p>3. Exempt under Canadian Free Trade Agreement (CFTA) therefore not required to be competitively bid but will require President or Board of Governors sign-off.</p> |                                                                                                                                                                                   |                                                                                                        |

#### APPENDIX B: PURCHASES OF RESTRICTED ITEMS

1. In the interest of user and public safety, the purchase, use and disposal of restricted items is subject to provincial, federal and, in some cases, international legislation and regulations, in addition to University policy and procedures. To ensure compliance with applicable legislation and regulations, and University policy and procedures, all restricted items will be purchased using a Purchase Order, and must be signed off by the appropriate signing officials: Biosafety Officer, Radiation Safety Officer, designated official (controlled goods), Health and Safety Officer (designated substances), or Animal Care Coordinator Office of Research Services (animal care and use).
2. **Restricted Items Requiring a Purchase Order**
  - 2.1. **Controlled goods** as listed in the Controlled Goods List, a schedule to the Defence Production Act. This includes military, strategic, and military-related goods and technology, as well as dual-use goods and technology as identified in Group 2 (not all items), Item 5504 and Group 6 (all items), of the Export Control List. This also includes any US-origin good or technology that is a "defence article" as defined under the ITAR or non-US origin goods that is manufactured using "technical data" of United States origin, as defined under the ITAR if the "technical data" is a "defence article".
  - 2.2. **Animals** used for research and/or teaching purposes as regulated by Canadian Council on Animal Care (CCAC) and OMAFRA Animals for Research Act.
  - 2.3. **Controlled substances or controlled drugs** used for research/teaching purposes as defined by Health Canada, Office of Controlled Substances (OCS) as any type of drug

that the federal government has categorized as having a higher-than-average potential for abuse or addiction. Controlled substances are listed in Schedules I, II, III, IV and V of the Controlled Drugs and Substances Act (CDSA) of Canada and Part G (Controlled) and Part J (Restricted) of the Food and Drug Regulations, under the Food and Drugs Act of Canada. Controlled status applies to the drugs themselves, their salts and derivatives and to diagnostic or test kits containing these drugs.

- 2.4. Hazardous Materials**, as defined by the Ontario Occupational Health and Safety Act in its Workplace Hazardous Materials Information System (WHMIS) Regulation. These items must have WHMIS labels and be accompanied by a current Safety Data Sheet (SDS), and may also require transportation of dangerous goods (TDG) documentation.

- 2.5. Designated Substances** as defined by the Ministry of Labour | [Regulation 490 – Designated Substances](#)

- ~~**2.5. Regulation 833 – Control of Exposure to Biological or Chemical Agents.**~~

**Commented [BS2]:** Environmental, Health and Safety Officer corrected us on which regulation to refer to here

- 2.6. Human Pathogens and Toxins and/or Biohazardous materials** used for research and/or teaching purposes, including possession, use, import and export of human pathogens and toxins as defined and regulated by the Public Health Agency Canada (PHAC) and the Canadian Food Inspection Agency (CFIA).
- 2.7. Radioactive material or devices containing radioactive material and/or producing nuclear radiation** as defined and regulated by the Canadian Nuclear Safety Commission (CNSC).
- 2.8. Devices emitting electromagnetic radiation, including microwaves, ultraviolet, x-ray and lasers (class 3b/4 lasers)** as regulated by the Ontario Occupational Health and Safety Act.

## APPENDIX C: OPEN COMPETITIVE PROCUREMENT

### Development of a Bid Request

#### 1. Needs Identification

1. To ensure that the University obtains the most appropriate goods and/or services, the needs and objectives of the anticipated purchase, including all Accessibility requirements, must be well defined and communicated to potential vendors through a bid request.
2. Bid requests are normally executed through a "Request for Proposal (RFP)", which requests vendors to supply solutions for the delivery of complex products or services or to provide alternative options or solutions using predefined evaluation criteria in which price is not the only factor.
3. Where the results of informal supplier or product research are insufficient, formal processes such as a Request for Information (RFI) or Request for Expression of Interest (RFEI) may be used if warranted, taking into consideration the time and effort required to conduct them.

- a) A "Request for Expressions of Interest (RFEI)" is a document used to gather information on supplier interest in an opportunity or information on supplier capabilities/qualifications and helps the organization to gain a better understanding of the capacity of the supplier community to provide the services or solutions needed.
  - b) A "Request for Information (RFI)" is a document issued to potential suppliers that sets out a general or preliminary description of a problem or need and requests information or advice about how to better define the problem or need, or alternative solutions.
4. A response to RFI or RFEI must not be used to pre-qualify a potential supplier and must not influence the chances of the participating suppliers from becoming the successful proponent in any subsequent opportunity.
5. The University may also gather information about supplier capabilities and qualifications through a Request for Supplier Qualification (RFSQ). This mechanism may be used either to identify qualified candidates in advance of expected future competitions or to narrow the field for an immediate need. The terms and conditions of the RFSQ document must contain language that disclaims any obligation of the University to call on any supplier to provide goods or services as a result of pre-qualification.
- a) Allow suppliers to apply at any time for inclusion on the pre-qualify suppliers list.
  - b) Allow all qualified suppliers to participate in a particular procurement, unless the procuring entity states in the notice of intended procurement any limitation on the number of suppliers that will be permitted to tender and the criteria for selecting the limited number of suppliers.
  - c) If the University rejects a supplier's request for participation in a procurement or application for inclusion on the pre-qualify suppliers list, ceases to recognize a supplier as qualified, or removes a supplier from a pre-qualify list, the University will promptly inform the supplier and, on request of the supplier, promptly provide the supplier with a written explanation of the reasons for its decision.
6. In developing bid requests, Accessible Procurement must be followed in the procurement process of the good, service or facility. Accessibility staff may be consulted to ensure a fair evaluation of Accessibility requirements. If it is determined that there are no Accessibility requirements to the goods, services or facilities being procured or that the Accessibility requirements are deemed not to be practicable, this decision and its explanation must be documented by the Procurement Department. A copy of this explanation will be made available to a member of the public upon request.

## **2. Evaluation Criteria**

1. The criteria that will be used to evaluate the monetary and non-monetary aspects of the anticipated purchase, and the relative weighting of each factor, must be developed and defined as part of the bid request process. The criteria will serve to facilitate the review of competing bids and ensure that the goods and/or services under consideration will meet the needs and objectives of the University.

2. The criteria to be used in evaluating potential vendors will include such monetary factors as price, quality, cost trends, lead-time, flexibility, technical capabilities and Accessibility requirements. In addition, potential vendors must also be:
  - a) Financially solvent and in good standing with the University;
  - b) In compliance with provincial, federal and international laws, regulations and trade agreements; and
  - c) In compliance with the technical requirements/deliverables of the tender document;
3. The methodology and process to be used in assessing the submissions must also be set out in advance, including the method of resolving a tie score. If the evaluation criteria is to be altered after the bid request is posted, an addendum must be made to the competitive procurement documents. Bid requests must also state that the addendum has been received, reviewed and will be complied with.
4. The University may request suppliers to provide alternative strategies or solutions as a part of their submission. Such alternative criteria must be established prior to posting of the bid request and cannot be considered unless they are explicitly requested in the competitive procurement documents.

### **3. Bid Requests**

1. Documents pertaining to bid requests will be drafted by the Procurement manager, in consultation with the purchaser. All bid requests must clearly state:
  - a) The bid submission date and closing time. Suppliers must be given a minimum response time of 15 calendar days. Procurements that are high complexity, high risk and/or procurements that meet CETA thresholds will be accorded a response time of at least 30 calendar days;
  - b) The criteria, and weighting of the criteria, that will be used to evaluate submissions, along with the methodology to be used in assessing submissions;
  - c) A statement that submissions that do not meet the minimum requirements and/or minimum technical evaluation score will be disqualified;
  - d) The proposed term of the agreement and any options to extend the agreement (extending the term of agreement beyond that set out in the competitive procurement document amounts to non-competitive procurement where the extension affects the value and/or stated deliverables of procurement);
  - e) The cancellation or termination clauses, as appropriate;
  - f) The University's standard insurance clauses;
  - g) A bid resolution clause.
2. Bid request documents regardless of value must contain a form of agreement as defined by the Office of the University Secretariat and General Counsel Documents must be reviewed and approved by that office prior to their issuance. In circumstances where an alternative procurement strategy has been used (i.e., a form of agreement was not released with the procurement document), the agreement between the University and the successful supplier must be defined formally in a signed written contract before the

provision of supplying goods or services commences. Where an immediate need exists for goods or services, and the University and the supplier are unable to finalize the form of agreement, an interim purchase order or letter of intent may be used. The justification of such decision must be documented and approved by the appropriate authority.

#### **4. Posting and Receipt of Bid Requests**

1. Communications with potential suppliers concerning the posting of bid requests, both invitational and open, and acceptance of responses will be carried out by the Procurement Department to ensure the integrity of the competitive procurement process. In addition, the following must be adhered to:
  - a) The initial communication of any proposal must be communicated to all vendors at the same time;
  - b) All vendor responses must be due at the same time;
  - c) Any changes in due dates, requirements or information pertaining to the proposal or bid request must be communicated to all vendors at the same time and through the same method;
  - d) The bid proposal should be received in accordance with the bid documentation guidelines;
  - e) Any late proposals will not be accepted and will be returned to the supplier upon request;
  - f) All proposals and bid requests and responses and any subsequent feedback must be documented.
2. Calls for open competitive bid requests by the University will be posted by the Procurement Department on the electronic tendering system that is readily accessible by all Canadian and international suppliers (i.e. Biddingo). In addition, a selected or recommended group of suppliers may be invited to respond.

#### **5. Evaluation of Bid Requests**

1. An evaluation team must be established and framework developed to provide business, legal, technical, and financial input into the review and evaluation of bid proposals. All members of the evaluation team must be aware of the restrictions related to the use and distribution of confidential and commercially sensitive information collected through the competitive procurement process. They must also refrain from engaging in activities that may create or appear to create a conflict of interest and must sign a conflict-of-interest declaration and non-disclosure of confidential information agreement.
2. Each evaluation team member must complete an evaluation matrix based on multiple, pre-defined evaluation criteria to rate each of the submissions. Records of evaluation scores must be retained in accordance with the University's Records Classification and Retention Schedule. Evaluators must ensure that everything they say or write about submissions is fair, factual, and fully defensible.
3. All qualified suppliers will be evaluated according to the same criteria and process. The submission that receives the best ranking and meets all mandatory requirements set out

in the competitive procurement document must be declared the winning bid. The University must not discriminate or exercise preferential treatment in awarding a contract to a supplier as a result of a competitive procurement process.

4. The basis for supplier selection will be the best value, which may not be the lowest bidder. Best value will be based on predetermined criteria such as (but not limited to); quality, service, added value, partnership initiatives, availability to meet delivery or service requirements, warranties, lesser ongoing operational costs, etc. The University reserves the right to conduct discussions with selected suppliers for the purpose of "purchase by negotiation" in certain circumstances such as (but not limited to): the lowest bid received substantially exceeds the estimated cost of the goods, limited or reduced project funding, change to scope unknown at time of bid request, etc.
5. Bids will not be opened publicly unless determined by the University that a public opening is deemed appropriate.

#### **6. Contract Award Notification**

1. For Open Procurement, once the agreement between the successful supplier and the University is executed, the Procurement Department will post a notification of the contract award on the electronic tendering system within 72 days after the award of the agreement between the successful supplier and the University, in the same manner as the procurement documents were posted, listing the name of the successful supplier.
2. All unsuccessful suppliers will be notified by the Procurement Department and will be informed of their entitlement to request a de-briefing within 60 calendar days.
3. Any disputes arising from the competitive procurement process, the methods employed or decisions made in the administration of a proposal, tender, or quotation must be must be dealt with in an ethical, fair, reasonable, and timely fashion.

#### **7. Tender Dispute Resolution**

1. Should a supplier wish to review the decision of the University in any respect of any material aspect of the tender process and subject to having a debriefing, the supplier will submit an appeal in writing to the Procurement Department within 10 days of such a debriefing. Any appeal in writing that is not received in a timely manner will not be considered and the supplier will be notified in writing. A protest in writing will include the following:
  - a) A specific identification of the provision and/or procurement procedure that is alleged to have been breached;
  - b) A specific description of each act alleged to have been breached in the procurement process;
  - c) A precise statement of the relevant facts;
  - d) An identification of the issues to be resolved;
  - e) The supplier's arguments and supporting documentation; and
  - f) The supplier's requested remedy.
2. The manager, Procurement will respond, in writing, to the supplier within 10 days of receiving the tender protest. Should the supplier still not agree with the University's

resolution, they can request a subsequent meeting with the CFO of the University. Should the supplier still not agree with the resolution they may bring the matter to the attention of an agreed upon mediator with no substantial interest in the outcome, to receive and consider the complaint and make appropriate findings and recommendations with respect to the complaint. Should both parties fail to agree on the identity of a mediator, or should mediation fail to bring about a resolution to the dispute, such dispute will then be transferred to a single arbitrator. The arbitrator will be appointed by agreement between the parties or, in default of agreement, such arbitrator will be appointed by a Judge of the Ontario Court of Justice (General Division) upon the application of any of the said parties.

#### 8. Contract Management

1. The terms and conditions of any contractual agreement with vendors must be reviewed and approved by the manager of Procurement and the [Office of Risk Management Director, Risk Management and Insurance](#) and if the contract is facilities related, the director, Office of Campus Infrastructure and Sustainability. The University New Contract Control Form must be signed by the appropriate individuals listed on the form before sending the contract for final, formal senior level signature in accordance with the Signing Authority Registry.
2. Payments must be made in accordance with provisions of the contract. All invoices must contain detailed information sufficient to warrant payment. Any overpayments must be recovered in a timely manner.
3. Assignments must be properly documented. Supplier performance must be managed and documented, and any performance issues must be addressed.
4. To manage disputes with suppliers throughout the life of the contract, the University should include a dispute resolution process in their contracts.
5. For Services, the University must:
  - a) Establish clear terms of reference for the assignment. The terms should include objectives, background, scope, constraints, staff responsibilities, tangible deliverables, timing, progress reporting, approval requirements, and knowledge transfer requirements.
  - b) Establish expense claim and reimbursement rules compliant with the Broader Public Sector Expenses Procedure and ensure all expenses are claimed and reimbursed in accordance with these rules.
  - c) Ensure that expenses are claimed and reimbursed only where the contract explicitly provides for reimbursement of expenses.

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## Academic Council Report

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**SESSION:****Public**☒**Non-Public**☐**ACTION REQUESTED:****Decision**☐**Discussion/Direction  
Information**☒☐**TO:****Academic Council****DATE:****September 22, 2026****PRESENTED BY: Mary Bluechardt, Deputy Provost****SUBJECT:****Policy Consultation:  
Procedure for the Use of Service Animals on Campus**

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**ACADEMIC COUNCIL MANDATE:**

Under the Policy Framework, policy owners consult Academic Council on amendments to Legal Compliance and Governance policies and procedures.

We are submitting this report and draft policy amendment to Academic Council to request discussion and comments on draft amendments to the Procedure for the Use of Service Animals on Campus.

**BACKGROUND/CONTEXT & RATIONALE:**

The Procedure for the Use of Service Animals on Campus has undergone a comprehensive review to ensure alignment with current legislative requirements, institutional accessibility practices, and the University's obligations under the Accessibility for Ontarians with Disabilities Act (AODA) and the Ontario Human Rights Code.

The review was initiated to modernize the existing Procedure, address operational gaps identified through the administration of Service Animal accommodations, and improve clarity for students, employees, visitors, and University partners. Recent amendments to the AODA Customer Service Standard also provided an opportunity to strengthen alignment with current legislation and best practices.

The revised Procedure supports the University's commitment to providing an accessible, inclusive, and equitable learning and working environment while balancing accessibility, health and safety, and operational requirements.

## **What's Changed:**

The proposed amendments:

- Align the Procedure with current AODA Customer Service Standards and the Ontario Human Rights Code;
- Clarify the respective roles of Student Accessibility Services and Human Resources in administering Service Animal accommodations;
- Strengthen language regarding individualized accommodation assessments;
- Clarify documentation requirements and accommodation review processes;
- Provide guidance for competing accommodation needs and high-risk environments;
- Clarify responsibilities of Handlers, University Members and operational departments;
- Clarify processes for visitors, specialized learning environments, and high-risk areas;
- Improve readability and consistency throughout the Procedure.

## **OVERVIEW:**

The Procedure for the Use of Service Animals on Campus has been revised to align with the Accessibility for Ontarians with Disabilities Act (AODA), the Ontario Human Rights Code, and current institutional practices. The revisions clarify roles and responsibilities, strengthen guidance related to individualized accommodation assessments, documentation requirements, and Service Animal access, while improving consistency across Student Accessibility Services, Human Resources, and other University partners. The review also provided an opportunity to modernize the Procedure, ensuring it reflects current accommodation practices and supports a clear, consistent, and transparent approach to Service Animal accommodations across the University.

## **COMPLIANCE WITH POLICY/LEGISLATION:**

The revised Procedure aligns with:

- Accessibility for Ontarians with Disabilities Act (AODA)
- Integrated Accessibility Standards Regulation
- Ontario Human Rights Code
- Ontario Tech University's Accessibility Policy

## **CONSULTATION AND NEXT STEPS:**

The revised Procedure has undergone consultation with:

- Policy Advisory Committee (Policy Assessment)
- Deputy Provost
- Legal Counsel
- Human Resources
- Office of Human Rights, Equity, Diversity and Inclusion

- Office of Risk Management
- Student Accessibility Services
- Research Ethics Services
- Animal Care Committee

Following incorporation of feedback received through the Policy Advisory Committee, Legal Counsel, Human Resources, Research Ethics Services, and the Animal Care Committee, the revised Procedure will proceed through the University's formal consultation and approval process, including:

- Online Consultation (Written Consultation): September 1 - September 15, 2026
- Academic Council (Face to Face Consultation): September 22, 2026
- Senior Leadership Team (Deliberation): TBD
- Audit & Finance Committee (Approval): November 19, 2026

#### **SUPPORTING REFERENCE MATERIALS:**

- Draft Procedure for the Use of Service/Emotional Support Animals on Campus (tracked changes)
- Draft Procedure for the Use of Service/Emotional Support Animals on Campus (tracked changes) (clean copy)
- [Accessibility Policy](#)
- [Accessibility for Ontarians with Disabilities Act \(AODA\)](#)
- [Ontario Human Rights Code](#)



|                              |                                                                                                                 |
|------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Classification <u>Number</u> | LCG 1103.02                                                                                                     |
| Parent Policy                | Accessibility <del>policy</del> Policy                                                                          |
| Framework Category           | Legal, Compliance and Governance                                                                                |
| Approving Authority          | Audit <del>and</del> Finance Committee                                                                          |
| Policy Owner                 | Deputy Provost                                                                                                  |
| Approval Date                | <del>November 20, 2019</del> DRAFT FOR REVIEW                                                                   |
| Review Date                  | <del>November 20, 2022</del> September 2020                                                                     |
| Last Updated                 | <del>November 20, 2019</del> ; Editorial Amendment, October 14, 2025<br>Editorial Amendments, February 18, 2020 |
| Supersedes                   | September 5, 2017                                                                                               |



## PROCEDURE FOR THE USE OF ~~A~~ SERVICE ANIMAL ~~BY STUDENTS WITH DISABILITIES~~ ANIMALS ON CAMPUS

### PURPOSE

- The purpose of this procedure is to set out conditions for the use of Service Animals on ~~the University of Ontario Institute of Technology (Ontario Tech) property owned or leased~~ ("University property") Campus, to identify their presence, and to ensure the ongoing safety of all ~~members of the campus community~~ University Members. This ~~procedure~~ Procedure was developed under the scope of the Accessibility for ~~Ontarian's~~ Ontarians with Disabilities Act ~~(and associated regulations ("AODA"))~~ and the Ontario Human Rights Code in a manner consistent with the Accessibility Policy and its commitment to creating a campus community that is inclusive of all individuals.

### DEFINITIONS

- For the purposes of these Procedures the following definitions apply:

~~"Authority"~~ means the University office responsible for receiving, reviewing and administering requests for Service Animal ~~"means an animal that is required for accommodations."~~

~~"Campus"~~ means all property owned, leased or operated by Ontario Tech University, including the North Oshawa campus location, Downtown Oshawa campus location, residence buildings and any other University-owned or leased facilities.

~~"Employee"~~ means an individual performing services on behalf of the University, including administrative staff members, faculty, contract employees, volunteers and job applicants. Students employed by the University are considered employees for the purposes of these Procedures only while engaged in employment-related activities.

**“Handler” means a person** with a disability ~~that is either:~~

- ~~a) Readily identified as one that is being used by the person for reasons relating to the person’s disability, as a result of visual indicators such as the vest or harness worn by the animal; or~~
- ~~b) Requires the person with a disability to provide documentation from one of the following regulated health professionals confirming that the person requires the animal for reasons relating to the disability:~~
  - ~~• A member of the College of Audiologists and Speech-Language Pathologists of Ontario.~~
  - ~~• A member of the College of Chiropractors of Ontario.~~
  - ~~• A member of the College of Nurses of Ontario.~~
  - ~~• A member of the College of Occupational Therapists of Ontario.~~
  - ~~• A member of the College of Optometrists of Ontario.~~
  - ~~• A member of the College of Physicians and Surgeons of Ontario.~~
  - ~~• A member of the College of Physiotherapists of Ontario.~~
  - ~~• A member of the College of Psychologists of Ontario.~~
  - ~~• A member of the College of Registered Psychotherapists and Registered Mental Health Therapists of Ontario. O. Reg. 165/16, s. 16.~~

~~The disability can be visible or invisible. The Service Animal is readily identifiable with visual indicators such as a vest or harness. Please refer to section 10.1 for further clarification and definition of the functions of a Service Animal.~~

**“Handler” means an individual who, as a result of a disability,** requires the assistance of a Service Animal and has charge of the Service Animal is responsible for the care, supervision and control of the animal while on Campus.

~~“Emotional Support Animal” means an animal that maybe used as part of a medical treatment plan, but has no specialized training or function with respect to fulfilling a person’s disability-related needs. The University is not required to provide accommodations for Emotional Support Animals as it is for Service Animals.~~

~~“Authority” means the functional area that is responsible for validating documentation, approving, registering and managing the use of Service Animals on University Property by University Members and visitors.~~

**“High-Risk Area” means a location where legislative, regulatory; health or safety requirements may limit or prohibit the presence of animals. Examples include, but are not limited to, food preparation areas, wet laboratories, research laboratories containing hazardous materials, or other specialized environments identified through a risk assessment.**

**“Requester” means an individual requesting the ongoing use of a Service Animal on Campus.**

**“Service Animal” has the meaning set out in the AODA and its regulations.**

**“University Member”- means any individual who is:—;**

- ~~• Employed by the University~~
  - ~~• Registered is an Employee;~~

- ~~is registered~~ as a student, in accordance with the University's academic regulations ~~of the University; ("Student")~~;
- ~~Holding an~~ holds a paid, unpaid or honorary appointment with the University, ~~including paid, unpaid and/or honorific appointments; and/;~~ or
- ~~Otherwise is~~ otherwise subject to University policies ~~by virtue of~~ through the requirements of a specific policy (e.g. Booking and Use of University Space) ~~and/or the terms of a policy,~~ agreement or contract.

## SCOPE AND AUTHORITY

~~3. These Procedures apply to Service Animals on University property.~~

3. These Procedures apply to all University Members ~~or,~~ visitors and Service Animals on Campus.

~~1.4.~~ Students living in residence may be held to additional requirements as articulated in the Residence Community Living Standards.

~~2.~~ Visitors attending University property with a Service Animal are governed by the University's Accessible Customer Service Policy. While on Campus, visitors are expected to comply with the applicable health and safety requirements and operational expectations outlined in these Procedures.

~~4.5.~~ University property.

~~5.6.~~ The Deputy Provost, or successor thereof, is the Policy Owner and is responsible for overseeing the implementation, administration and interpretation of these Procedures.

~~6. Student Accessibility Services (SAS) is the Authority responsible for administering the procedures for students who require Service Animals on University property.~~

~~7. Human Resources (HR) is the Authority responsible for administering the procedures for employees or those holding appointments with the University who require Service Animals on University property.~~

## PROCEDURES

~~8. In order to provide an accessible learning and working environment, the University is committed to the development and implementation of procedures that enable the University community to understand and support the Handler and their Service Animal while on campus. It is also important that both the Handler and University Members understand their rights and responsibilities in this regard.~~

~~9. Where Service Animals are not permitted on or in a particular campus location or building due to health and safety laws or requirements, the University will provide alternate support to~~

permit access to goods and services, or provide reasonable accommodation for the University Member.

#### **10. Distinction between Service Animals and Emotional Support Animals:**

**10.1.**—Service Animals are animals that are:

- a)**—Readily identified as a Service Animal that is being used by the person for reasons relating to the person's disability through the use of visual indicators such as a vest or harness worn by the animal; and
- b)**—Specifically trained to perform tasks for a person with a disability such as, but not limited to:
  - Guiding people who are blind or visually impaired;
  - Alerting people who are deaf or hearing impaired;
  - Pulling wheelchairs for those with limited mobility;
  - Alerting and protecting a person who is having a seizure;
  - Performing other specialized tasks (diabetic, medical, severe allergy alert);
  - Reminding a person to take their medication;
  - Providing comfort and reducing symptoms related to a person's disability in certain situations

**11.** Service Animals are working animals.

**12.** In instances where an Emotional Support Animal, meets the criteria for Service Animal as described in section 10.1, the University will strive to provide accommodation for the animal on University property.

#### **13. Process for Service Animal Approval and Notification**

**13.1.**—Any University Member having a Service Animal on University property should be directed to the appropriate Authority.

**13.2.**—In order to bring a Service Animal on University Property on an ongoing basis, the University Member is required to submit satisfactory supporting documentation to the appropriate Authority demonstrating their requirement for a Service Animal to assist with their disability related needs.

#### **7. \_\_\_\_\_ University members requiring the use Making a Request**

**7.1.** Accommodation requests will be submitted to the applicable Authority and will include appropriate documentation as described in section 10 and required by the University's accommodation procedures.

- a)** Student Accessibility Services (SAS) is the Authority for Students and will process requests in accordance with the accommodation procedures for Students.

b) Human Resources (HR) is the Authority for Employees and will process requests in accordance with the accommodation procedures for Employees

7.2. Requests should be submitted as early as reasonably possible to allow sufficient time for review, consultation, and implementation of appropriate accommodations.

## 8. Individualized Assessment Process

8.1. The Authority will assess the request on an individualized basis, taking into consideration:

- a) the individual's disability-related needs;
- b) the essential requirements of the academic, employment or campus environment;
- c) applicable health and safety requirements;
- d) High Risk Areas that may be a part of a Service Animal will need to register with the Requester's academic or employment requirements.
- e) competing accommodation needs where applicable; and
- f) the University's duty to accommodate under the Ontario Human Rights Code.

8.2. The Authority may consult with relevant University departments, academic units, health and safety personnel, or other stakeholders as necessary to determine appropriate Authority and update any documentation that has an expiry date. They will not need to obtain new documentation year over year unless their accommodations, support measures, and health and safety requirements.

13.3.8.3. Once approved, registration will remain valid until: i) the Handler's disability related needs change and; ii) an alternative means of support is required; iii) and/or where the animal who provides services changes such that their record with the appropriate Authority no longer matches.

### High Risk Areas

8.4. Requests involving the use of Service Animals in High-Risk Areas will be assessed by the Authority on a case-by-case basis in consultation with the Office of Risk Management, the applicable academic unit, any external partners and subject matter experts as appropriate.

8.5. Access may be limited where legislative requirements, health and safety considerations or the essential requirements of an academic or workplace environment cannot be reasonably accommodated.

- a) Examples of High-Risk Areas include, but are not limited to, food preparation areas, clinical placements, laboratories, and other specialized environments.

8.6. Handlers who have permission to bring their Service Animal into a High-Risk Area are responsible for the health and safety of the Service Animal, including the procurement of any protective equipment that the Service Animal may require.

8.7. Approval to use a Service Animal on University property may not provide unrestricted access to all Campus spaces. Where restrictions are necessary, the University will work collaboratively with the individual to identify reasonable alternative accommodations.

## 9. Process for Notification

~~13.4.~~ The Authority will validate the submitted documentation and make reasonable efforts to may notify relevant University Members ~~who may be affected by~~ of the presence of a Service Animal ~~before approval~~.

9.1. The University understands that where the presence of certain Service Animals Animal may affect other University Members due give rise to competing accommodation requirements arising from environmental sensitivities, allergies, phobias or other concerns. ~~For this reason, the Handler will be requested to consent to having of individuals who~~

~~13.5.9.2.~~ Notifications will work with or attend class with a Service Animal notified of their presence, and such consent shall not to be unreasonably withheld. This notification be limited to the information necessary to support accommodation implementation and will not contain any disclose confidential information about regarding the nature of the Handler's Handler's disability. Notifications will include information directing questions or concerns to the appropriate Authority rather than the Handler.

## 10. Process to Address University Member Concerns about

10.1. University Members with concerns related to the effect presence of a Service Animal on a University Member must be directed to (for example, allergies, environmental sensitivities or phobias) may contact the Authority for resolution, not the Handler directly.

~~13.6.10.2.~~ The Authority will assess the impact on the University Member on a case-by-case basis and consider the following principles and obligations when balancing the conflicting interests:

- a) The legal obligation permitting the use of Service Animals under the AODA;
- b) The duty to accommodate under the Ontario Human Rights Code ~~(OHRC);~~ and
- c) The approach outlined in OHRC's Ontario Human Rights Commission's Policy on Competing Human Rights as applied to all parties.

~~13.7.10.3.~~ The means for resolving concerns may include creating distance between the Service Animal and the individual with a concern, changes in scheduling or altered cleaning regimens due to the presence of a Service Animal, or other such accommodations ~~as may be~~ appropriate to the circumstances.-

## 14.11. Supporting Documentation

~~14.1.~~ Supporting medical documentation ~~for a Service Animal must meet all of the following requirements:~~

~~a)~~ Ontario Tech's Service Animal Recommendation form ~~must~~will be completed by ~~one of the following practitioners: physician, occupational therapist, ophthalmologist, audiologist, psychologist, or psychiatrist.~~

~~11.1.~~ an appropriate regulated health professional authorized to provide disability-related documentation in accordance with applicable legislation and University requirements. Documentation must be dated and will include:

~~a)~~ A description of the disability-related need for the Service Animal and explain how the animal assists the individual in accessing the University's learning, working or living environment.

~~b)~~ The date documentation was completed.

~~b)c)~~ The practitioner's credentials, contact information and signature.

~~c)~~ The practitioner must provide a detailed explanation of the need for the Service Animal as it relates specifically to the functional impairment caused by University Member's disability, and indicate the specific tasks or functions that the Service Animal performs.

~~d)11.2.~~ DocumentationThe Requester must also provide documentation showing that the Service Animal has been vaccinated and is properly licensed as required by Ontario law and/or city by-law. In addition to any Ontario law or city by-law requirements, Dogs, cats and ferrets also require rabies vaccinations.

~~a)~~ Additional documents maybe requested in instances where the Authority has reasonable doubt regarding the Service Animals capacity to be in public spaces

## **15. Service Animal Behaviour**

~~16.~~ For University Members who have a concern about the effect of a Service Animal on a University Member, the supporting documentation, supporting documentation will be requested as deemed necessary.

~~16.1.~~ The Handler is responsible at all times for all aspects of behaviour and management of the Service Animal on all University property including:

~~e)~~ Any cleaning as well as any costs associated with cleaning that may result from the Service Animal.

~~f)~~ Ensuring that any feces is cleaned up immediately and disposed of in an appropriate receptacle.

~~g)~~ The Service Animal must demonstrate positive and pro-social behaviour at all times while on University property.

## 17. Care of Service Animals

~~17.1.~~—The Handler is responsible for the following:

- ~~h)~~—Maintaining the crate or cage of the Service Animal, if it is to be crated or caged. The crate/cage must be the appropriate size, secure, in good repair and well ventilated. The health and welfare of the Service Animal and for providing food, water, bathroom and exercise breaks in a timely manner
- ~~i)~~—Keeping the Service Animal clean and groomed at all times.
- ~~j)~~—Cleaning up and disposing of any animal waste in a timely manner.

## 18. Animals on Campus

~~18.1.~~—Service Animals will:

- ~~a)~~—Be accompanied by the Handler at all times
- ~~b)~~—Remain in close proximity to the Handler, and restrained on a leash, in a cage, or under the physical control of the Handler; unless being unrestrained is necessary to perform their tasks or functions.
- ~~c)~~—Registered with Campus ID and their identification number will link them to the banner number of their handler. The following nomenclature will be used:  
“SAXXXXXXXXX.”

~~18.2.~~—If at any time any Animal becomes aggressive or is deemed by the appropriate Authority to pose an unmanageable threat to the health and safety of University Members or visitors, the Authority will require the Handler to remove the Animal from University property or impose conditions on the Animal's continued presence.

~~18.3.~~—There are some University locations where Animals are prohibited by law (i.e., food service preparation spaces, wet labs). These spaces will be navigated on a case-by-case basis in discussion with lab coordinators, supervisors and the appropriate Authority.

~~18.4.~~—There are some extensions of the learning environment where it may not be possible to allow a Service Animal such as clinical placements in a health care setting. These situations will be navigated on case-by-case basis in discussion with placement supervisors and the appropriate Authority.

11.3. Supporting documentation must be submitted using the University's approved documentation process or forms, as determined by the applicable Authority.

11.4. The Authority reserves the right to verify documentation where there is reason to question its authenticity or completeness. Any verification will be conducted in a manner that respects the privacy and dignity of the individual requesting

accommodation. Where the individual has not provided the documentation reasonably required to support the accommodation request, the Authority may request additional information or clarification related to the disability-related need, the functions performed by the Service Animal, or other relevant considerations.

## **19.12. Responsibilities**

### **12.1. All University Members will:**

- a) Respect approved Service Animal accommodations.
- b) Refrain from distracting, feeding, petting or otherwise interfering with a Service Animal without the Handler's permission.
- c) Respect the working role of Service Animals.
- d) Raise questions or concerns regarding Service Animals with the appropriate Authority rather than the Handler.
- e) Contribute to an accessible, respectful and inclusive learning and working environment.

### **12.2. The Authority will:**

- a) Maintain documentation and accommodation records relating to approved Service Animal requests.
- b) Review supporting documentation and conduct individualized accommodation assessments in accordance with applicable legislation and University procedures.
- c) Consult with Environmental Health and Safety/Office of Risk Management and other applicable departments in the event of a health and safety concern to assess the risk and identify mitigations before developing an individual accommodation plan.
- d) Provide consultation and guidance to supervisors, managers, directors and Faculty administrators are faculty members, Human Resources, the Office of Campus Safety and other University stakeholders regarding the implementation of approved accommodations.
- e) Determine appropriate accommodation measures and coordinate implementation of approved Service Animal accommodations.
- f) Coordinate appropriate notification where necessary to facilitate accommodation or manage competing accommodation needs while protecting personal privacy.
- g) Respond to concerns, accommodation issues and competing accommodation needs related to Service Animals.
- h) Protect the confidentiality of personal information collected during the accommodation process in accordance with applicable privacy legislation and University policy.

- i) Review accommodations periodically or where circumstances materially change to ensure the accommodation continues to meet the Handler's disability-related needs.

**12.3. Student Accessibility Services** is the designated Authority for Students with Service Animal requests.

**12.4. Human Resources** is the designated Authority for Employees with Service Animal requests.

**19.1.12.5. The Handler will be responsible for the enforcement of this procedure and compliance within their work units behavior, management and care of their Service Animal at all times. The Handler will:**

- a) Keep the Service Animal is restrained on a leash, in a crate , or under the physical control of the Handler (unless being unrestrained is necessary to perform their tasks or functions).
- b) Accompany the Service Animal at all times and ensure that it remains in close proximity to the Handler.
- c) Maintain the Service Animal's crate or cage (if it is to be crated or caged) to ensure it is the appropriate size, secure, in good repair and well ventilated.
- d) Maintain the health and welfare of the Service Animal is maintained and food, water, bathroom and exercise breaks are provided in a timely manner.
- e) Keep the Service Animal clean and groomed at all times. Clean up and dispose of any animal waste in a timely manner. Handlers who are not physically able to pick up and dispose of waste are responsible for making all necessary arrangements for assistance;
- f) Ensuring the Service Animal maintains up-to-date vaccinations as required, and to provide proof of vaccination records if requested by the Authority.
- g) Ensure that the Service Animal demonstrates positive and pro-social behaviour at all times while on Campus. Although formal training is not a legislative requirement, it is in the best interests of the Handler to ensure that their Service Animal has been trained by a reputable organization where appropriate for the species. The Campus environment has many opportunities for unique situations for Handlers and their Service Animals to encounter. Training can teach the animal how to respond to various situations on Campus that can give rise to problematic behaviour which can be very distressing for their Handlers.

**12.6. Instructors/Faculty will**

- a) Provide an inclusive environment for those being accompanied by Service Animals.
- b) Refrain from providing assistance or otherwise interfering with the Service Animal unless expressly requested by the Handler.

c) In the event of a health and safety concern, in consultation with Student Accessibility Services or the Office of Human Rights, may direct a Handler to control or temporarily remove their animal from the classroom. When there is a question as to whether a Service Animal is allowed in a specific space, the Authority will assess on a case-by-case basis in accordance with the process for High Risk Areas.

~~19.2.d)~~ Support implementation of approved accommodations and identifying concerns requiring further review. Faculty members are responsible for the enforcement of this procedure in their classrooms and laboratories. For students with disabilities, faculty members will consult with SAS if a student is non-compliant with this policy. SAS will determine if the student is permitted to use or continue to use a Service Animal on campus.

~~19.3.~~ Campus Security is responsible for the enforcement of this procedure on all University property and will assist managers, directors and faculty members with the enforcement of this procedure as necessary.

~~19.4.~~ Human Resources and Student Accessibility Services are the Authority for employees and students respectively. The Authority is responsible for:

12.7. Maintaining documentation authorizing Office of Risk Management

- a) Supports risk assessments for High-Risk Areas.
- b) Consults with SAS, HR and relevant academic or operational units.
- c) Develops recommendations to mitigate identified risks.
- d) Provides guidance regarding legislative or operational restrictions.

12.8. Office of Campus Safety

- a) Responds to immediate safety concerns involving Service Animals.
- b) Providing notificationAssists with addressing disruptive or threatening behaviour where necessary.
- c) Documents and communicates incidents to the appropriate Authority.
- d) Supports implementation of safety measures identified through the accommodation process.

12.9. University Members whoSupervisors, Managers, Directors, and Faculty Administrators

- a) Support implementation of approved accommodations within their work units.
- b) Collaborate with SAS or HR regarding accommodation planning.
- c) Participate in risk assessments where appropriate.
- d) Address operational issues in consultation with the appropriate Authority.

### **13. Circumstances Where Access May Be Restricted**

- ~~b)~~ **13.1.** In most circumstances, approved Service Animals will be permitted on Campus. An individualized assessment to consider restrictions may be impacted by required where: i) municipal, provincial or federal legislation prohibits the presence of certain animal species; and/or ii) where the presence of a Service Animal poses a demonstrable health or safety risk that cannot be reasonably mitigated;
- ~~c)~~ Advising supervisors, managers, directors, Faculty administrators, faculty members and Campus Security and assisting them in ensuring compliance with and enforcement of this procedure.
- ~~d)~~ Approving the use of Service Animals on University property by means of validating documentation and processing accommodation request.
- ~~e)~~ Assessing and resolving any complaints or issues related to the use of Service Animals on University property.
- 13.2.** Where a Service Animal is repeatedly disruptive, aggressive, or otherwise poses a significant risk to the learning, working or living environment, the appropriate Authority will work with the Handler to address the concerns. If the concerns cannot be reasonably resolved, the University may impose conditions on the Service Animal's continued presence or require that it be removed from Campus.
- 13.3.** A decision to limit or restrict access will not be based on assumptions, stereotypes or generalized concerns about Service Animals. All decisions will be based on objective evidence, the specific circumstances of the request, and the University's obligations under the Ontario Human Rights Code and applicable legislation.

### **14. Review of Decisions**

- 14.1.** Individuals who disagree with a decision regarding a Service Animal accommodation may request a review through the applicable accommodation process administered by Student Accessibility Services or Human Resources, as appropriate.

### **20.15. Protection of Privacy**

- 20.1.15.1.** The University is committed to protecting the privacy of all University Members, including students with disabilities. At the same time, the University needs sufficient information to reasonably evaluate and respond to a student's request for accommodation. For this reason, students are required to provide to Student Accessibility Services information concerning the nature of their disability-related needs. Students requiring accommodations, in accordance with commitments in its Procedures to accommodate Employees and Students.

**20.2.** At times the accommodation process may require that a student disclose such information to staff and faculty outside of Student Accessibility Services on the basis that they "need to know" this information to perform their duties under the policies and procedures at the University. All personal

~~information disclosed to such staff or faculty will be governed by the University's Access to Information and Protection of Privacy Policy.~~

## **MONITORING AND REVIEW**

~~16.~~ These Procedures will be reviewed as necessary and at least every three years. The Deputy Provost, or successor thereof, is responsible to monitor and review these Procedures.

~~21.~~

## **RELEVANT LEGISLATION**

~~22.~~17. Ontario Human Rights Code, R.S.O. 1990, Chapter H.19

Ontario Human Rights Commission Policy on Guidelines on accessible education (2004)

Freedom of Information and Protection of Privacy Act, R.S.O. 1990

Ontario Occupational Health and Safety Act, R.S.O. 1990, Chapter O.1.

Accessibility for Ontarians with Disabilities Act, 2005, S.O. 2005

Integrated Accessibility Standards Regulation, O. Reg. 191/11

## **RELATED POLICIES, PROCEDURES & DOCUMENTS**

~~23.~~18. Accessibility Policy

[Accommodation Policy](#)

[Respectful Campus Policy](#)

[Accessible Customer Service Policy](#)

Procedures for Academic Accommodation for Students with Disabilities

[Procedures for Accommodating Employees and Job Applicants with Disabilities](#)

Academic Regulations, Undergraduate Academic Calendar

Policy on the Care and Use of Animals in Research and Teaching

Booking and Use of University Space Policy

Booking and Use of University Space Procedure

Service Animal Request Form

|                       |                                                          |
|-----------------------|----------------------------------------------------------|
| Classification Number | LCG 1103.02                                              |
| Parent Policy         | Accessibility Policy                                     |
| Framework Category    | Legal, Compliance and Governance                         |
| Approving Authority   | Audit & Finance Committee                                |
| Policy Owner          | Deputy Provost                                           |
| Approval Date         | DRAFT FOR REVIEW                                         |
| Review Date           | September 2020                                           |
| Last Updated          | November 20, 2019; Editorial Amendment, October 14, 2025 |

## PROCEDURE FOR THE USE OF SERVICE ANIMALS ON CAMPUS

### PURPOSE

1. The purpose of this procedure is to set out conditions for the use of Service Animals on Campus, to identify their presence, and to ensure the ongoing safety of all University Members. This Procedure was developed under the scope of the Accessibility for Ontarians with Disabilities Act and associated regulations (“AODA”) and the Ontario Human Rights Code in a manner consistent with the Accessibility Policy and its commitment to creating a campus community that is inclusive of all individuals.

### DEFINITIONS

2. For the purposes of these Procedures the following definitions apply:

**“Authority”** means the University office responsible for receiving, reviewing and administering requests for Service Animal accommodations.

**“Campus”** means all property owned, leased or operated by Ontario Tech University, including the North Oshawa campus location, Downtown Oshawa campus location, residence buildings and any other University-owned or leased facilities.

**“Employee”** means an individual performing services on behalf of the University, including administrative staff members, faculty, contract employees, volunteers and job applicants. Students employed by the University are considered employees for the purposes of these Procedures only while engaged in employment-related activities.

**“Handler”** means a **person** with a disability who requires the assistance of a Service Animal and is responsible for the care, supervision and control of the animal while on Campus.

**“High-Risk Area”** means a location where legislative, regulatory; health or safety requirements may limit or prohibit the presence of animals. Examples include, but are not limited to, food preparation areas, wet laboratories, research laboratories containing hazardous materials, or other specialized environments identified through a risk assessment.

**“Requester”** means an individual requesting the ongoing use of a Service Animal on Campus.

**“Service Animal”** has the meaning set out in the AODA and its regulations.

**“University Member”** means any individual who:

- is an Employee;

- is registered as a student in accordance with the University's academic regulations ("Student");
- holds a paid, unpaid or honorary appointment with the University; or
- is otherwise subject to University policies through the requirements of a University policy, agreement or contract.

## **SCOPE AND AUTHORITY**

3. These Procedures apply to all University Members, visitors and Service Animals on Campus.
4. Students living in residence may be held to additional requirements as articulated in the Residence Community Living Standards.
5. Visitors attending University property with a Service Animal are governed by the University's Accessible Customer Service Policy. While on Campus, visitors are expected to comply with the applicable health and safety requirements and operational expectations outlined in these Procedures.
6. The Deputy Provost, or successor thereof, is the Policy Owner and is responsible for overseeing the implementation, administration and interpretation of these Procedures.

## **PROCEDURES**

### **7. Making a Request**

- 7.1. Accommodation requests will be submitted to the applicable Authority and will include appropriate documentation as described in section 10 and required by the University's accommodation procedures.
  - a) Student Accessibility Services (SAS) is the Authority for Students and will process requests in accordance with the accommodation procedures for Students.
  - b) Human Resources (HR) is the Authority for Employees and will process requests in accordance with the accommodation procedures for Employees
- 7.2. Requests should be submitted as early as reasonably possible to allow sufficient time for review, consultation, and implementation of appropriate accommodations.

### **8. Individualized Assessment Process**

- 8.1. The Authority will assess the request on an individualized basis, taking into consideration:
  - a) the individual's disability-related needs;
  - b) the essential requirements of the academic, employment or campus environment;
  - c) applicable health and safety requirements;

- d) High Risk Areas that may be a part of Requester's academic or employment requirements.
  - e) competing accommodation needs where applicable; and
  - f) the University's duty to accommodate under the Ontario Human Rights Code.
- 8.2. The Authority may consult with relevant University departments, academic units, health and safety personnel, or other stakeholders as necessary to determine appropriate accommodations, support measures, and health and safety requirements.
- 8.3. Once approved, registration will remain valid until: i) the Handler's disability related needs change; ii) an alternative means of support is required; iii) and/or the animal who provides services changes such that their record with the appropriate Authority no longer matches.

#### **High Risk Areas**

- 8.4. Requests involving the use of Service Animals in High-Risk Areas will be assessed by the Authority on a case-by-case basis in consultation with the Office of Risk Management, the applicable academic unit, any external partners and subject matter experts as appropriate.
- 8.5. Access may be limited where legislative requirements, health and safety considerations or the essential requirements of an academic or workplace environment cannot be reasonably accommodated.
  - a) Examples of High-Risk Areas include, but are not limited to, food preparation areas, clinical placements, laboratories, and other specialized environments.
- 8.6. Handlers who have permission to bring their Service Animal into a High-Risk Area are responsible for the health and safety of the Service Animal, including the procurement of any protective equipment that the Service Animal may require.
- 8.7. Approval to use a Service Animal on University property may not provide unrestricted access to all Campus spaces. Where restrictions are necessary, the University will work collaboratively with the individual to identify reasonable alternative accommodations.

#### **9. Process for Notification**

- 9.1. The Authority may notify relevant University Members of the presence of a Service Animal where the presence of a Service Animal may give rise to competing accommodation requirements arising from environmental sensitivities, allergies, phobias or other concerns.
- 9.2. Notifications will be limited to the information necessary to support accommodation implementation and will not disclose confidential information regarding the Handler's disability. Notifications will include information directing questions or concerns to the appropriate Authority rather than the Handler.

## **10. Process to Address University Member Concerns**

- 10.1.** University Members with concerns related to the presence of a Service Animal (for example, allergies, environmental sensitivities or phobias) may contact the Authority.
- 10.2.** The Authority will assess the impact on the University Member on a case-by-case basis and consider the following principles and obligations when balancing the conflicting interests:
  - a)** The legal obligation permitting the use of Service Animals under the AODA.
  - b)** The duty to accommodate under the Ontario Human Rights Code; and
  - c)** The approach outlined in Ontario Human Rights Commission's Policy on Competing Human Rights as applied to all parties.
- 10.3.** The means for resolving concerns may include creating distance between the Service Animal and the individual with a concern, changes in scheduling or altered cleaning regimens due to the presence of a Service Animal, or other such accommodations appropriate to the circumstances.

## **11. Supporting Documentation**

- 11.1.** Supporting medical documentation will be completed by an appropriate regulated health professional authorized to provide disability-related documentation in accordance with applicable legislation and University requirements. Documentation will include:
  - a)** A description of the disability-related need for the Service Animal and explain how the animal assists the individual in accessing the University's learning, working or living environment.
  - b)** The date documentation was completed.
  - c)** The practitioner's credentials, contact information and signature.
- 11.2.** The Requester must also provide documentation showing that the Service Animal has been vaccinated and is properly licensed as required by Ontario law and/or city by-law. In addition to any Ontario law or city by-law requirements, Dogs, cats and ferrets also require rabies vaccinations.
- 11.3.** Supporting documentation must be submitted using the University's approved documentation process or forms, as determined by the applicable Authority.
- 11.4.** The Authority reserves the right to verify documentation where there is reason to question its authenticity or completeness. Any verification will be conducted in a manner that respects the privacy and dignity of the individual requesting accommodation. Where the individual has not provided the documentation reasonably required to support the accommodation request, the Authority may request additional information or clarification related to the disability-related need, the functions performed by the Service Animal, or other relevant considerations.

## **12. Responsibilities**

### **12.1. All University Members will:**

- a)** Respect approved Service Animal accommodations.
- b)** Refrain from distracting, feeding, petting or otherwise interfering with a Service Animal without the Handler's permission.
- c)** Respect the working role of Service Animals.
- d)** Raise questions or concerns regarding Service Animals with the appropriate Authority rather than the Handler.
- e)** Contribute to an accessible, respectful and inclusive learning and working environment.

### **12.2. The Authority will:**

- a)** Maintain documentation and accommodation records relating to approved Service Animal requests.
- b)** Review supporting documentation and conduct individualized accommodation assessments in accordance with applicable legislation and University procedures.
- c)** Consult with Environmental Health and Safety/Office of Risk Management and other applicable departments in the event of a health and safety concern to assess the risk and identify mitigations before developing an individual accommodation plan.
- d)** Provide consultation and guidance to supervisors, managers, faculty members, Human Resources, the Office of Campus Safety and other University stakeholders regarding the implementation of approved accommodations.
- e)** Determine appropriate accommodation measures and coordinate implementation of approved Service Animal accommodations.
- f)** Coordinate appropriate notification where necessary to facilitate accommodation or manage competing accommodation needs while protecting personal privacy.
- g)** Respond to concerns, accommodation issues and competing accommodation needs related to Service Animals.
- h)** Protect the confidentiality of personal information collected during the accommodation process in accordance with applicable privacy legislation and University policy.
- i)** Review accommodations periodically or where circumstances materially change to ensure the accommodation continues to meet the Handler's disability-related needs.

**12.3. Student Accessibility Services** is the designated Authority for Students with Service Animal requests.

**12.4. Human Resources** is the designated Authority for Employees with Service Animal requests.

**12.5. The Handler** will be responsible for the behavior, management and care of their Service Animal at all times. The Handler will:

- a) Keep the Service Animal is restrained on a leash, in a crate , or under the physical control of the Handler (unless being unrestrained is necessary to perform their tasks or functions.
- b) Accompany the Service Animal at all times and ensure that it remains in close proximity to the Handler.
- c) Maintain the Service Animal's crate or cage (if it is to be crated or caged) to ensure it is the appropriate size, secure, in good repair and well ventilated.
- d) Maintain the health and welfare of the Service Animal is maintained and food, water, bathroom and exercise breaks are provided in a timely manner.
- e) Keep the Service Animal clean and groomed at all times. Clean up and dispose of any animal waste in a timely manner. Handlers who are not physically able to pick up and dispose of waste are responsible for making all necessary arrangements for assistance;
- f) Ensuring the Service Animal maintains up-to-date vaccinations as required, and to provide proof of vaccination records if requested by the Authority.
- g) Ensure that the Service Animal demonstrates positive and pro-social behaviour at all times while on Campus. Although formal training is not a legislative requirement, it is in the best interests of the Handler to ensure that their Service Animal has been trained by a reputable organization where appropriate for the species. The Campus environment has many opportunities for unique situations for Handlers and their Service Animals to encounter. Training can teach the animal how to respond to various situations on Campus that can give rise to problematic behaviour which can be very distressing for their Handlers.

**12.6. Instructors/Faculty will**

- a) Provide an inclusive environment for those being accompanied by Service Animals.
- b) Refrain from providing assistance or otherwise interfering with the Service Animal unless expressly requested by the Handler.
- c) In the event of a health and safety concern, in consultation with Student Accessibility Services or the Office of Human Rights, may direct a Handler to control or temporarily remove their animal from the classroom. When there is a question as to whether a Service Animal is allowed in a specific space, the

Authority will assess on a case-by-case basis in accordance with the process for High Risk Areas.

- d) Support implementation of approved accommodations and identifying concerns requiring further review. Faculty members will consult with SAS if a Student is non-compliant with this Procedure and SAS will determine if the student is permitted to use or continue to use a Service Animal on Campus.

**12.7. Office of Risk Management**

- a) Supports risk assessments for High-Risk Areas.
- b) Consults with SAS, HR and relevant academic or operational units.
- c) Develops recommendations to mitigate identified risks.
- d) Provides guidance regarding legislative or operational restrictions.

**12.8. Office of Campus Safety**

- a) Responds to immediate safety concerns involving Service Animals.
- b) Assists with addressing disruptive or threatening behaviour where necessary.
- c) Documents and communicates incidents to the appropriate Authority.
- d) Supports implementation of safety measures identified through the accommodation process.

**12.9. University Supervisors, Managers, Directors, and Faculty Administrators**

- a) Support implementation of approved accommodations within their work units.
- b) Collaborate with SAS or HR regarding accommodation planning.
- c) Participate in risk assessments where appropriate.
- d) Address operational issues in consultation with the appropriate Authority.

**13. Circumstances Where Access May Be Restricted**

- 13.1.** In most circumstances, approved Service Animals will be permitted on Campus. An individualized assessment to consider restrictions may be required where: i) municipal, provincial or federal legislation prohibits the presence of certain animal species; and/or ii) where the presence of a Service Animal poses a demonstrable health or safety risk that cannot be reasonably mitigated;
- 13.2.** Where a Service Animal is repeatedly disruptive, aggressive, or otherwise poses a significant risk to the learning, working or living environment, the appropriate Authority will work with the Handler to address the concerns. If the concerns cannot be reasonably resolved, the University may impose conditions on the Service Animal's continued presence or require that it be removed from Campus.
- 13.3.** A decision to limit or restrict access will not be based on assumptions, stereotypes or generalized concerns about Service Animals. All decisions will be based on

objective evidence, the specific circumstances of the request, and the University's obligations under the Ontario Human Rights Code and applicable legislation.

**14. Review of Decisions**

- 14.1.** Individuals who disagree with a decision regarding a Service Animal accommodation may request a review through the applicable accommodation process administered by Student Accessibility Services or Human Resources, as appropriate.

**15. Protection of Privacy**

- 15.1.** The University is committed to protecting the privacy of all University Members, including Students requiring accommodations, in accordance with commitments in its Procedures to accommodate Employees and Students.

**MONITORING AND REVIEW**

- 16.** These Procedures will be reviewed as necessary and at least every three years. The Deputy Provost, or successor thereof, is responsible to monitor and review these Procedures.

**RELEVANT LEGISLATION**

- 17.** Ontario Human Rights Code, R.S.O. 1990, Chapter H.19  
Ontario Human Rights Commission Policy on Guidelines on accessible education (2004)  
Freedom of Information and Protection of Privacy Act, R.S.O. 1990  
Ontario Occupational Health and Safety Act, R.S.O. 1990, Chapter O.1.  
Accessibility for Ontarians with Disabilities Act, 2005, S.O. 2005  
Integrated Accessibility Standards Regulation, O. Reg. 191/11

**RELATED POLICIES, PROCEDURES & DOCUMENTS**

- 18.** Accessibility Policy  
Accommodation Policy  
Respectful Campus Policy  
Accessible Customer Service Policy  
Procedures for Academic Accommodation for Students with Disabilities  
Procedures for Accommodating Employees and Job Applicants with Disabilities  
Academic Regulations, Undergraduate Academic Calendar  
Policy on the Care and Use of Animals in Research and Teaching  
Booking and Use of University Space Policy  
Booking and Use of University Space Procedure

Service Animal Request Form

DRAFT

## ACADEMIC COUNCIL

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**Minutes of the Public Session of the June 23, 2026, Meeting  
In Person  
Bordessa Hall  
55 Bond St. E, Oshawa ON – DTB 524  
2:30 p.m. - 4:25 p.m.**

**Academic Council Committee Agendas, Materials and Minutes 2025-2026**

**Present:**

Steven Murphy (Chair)  
JoAnne Arcand  
Ahmad Barari  
Mihai Beligan  
Mary Bluechardt  
Toba Bryant  
Amanda Cooper  
Catherine Davidson  
Mikael Eklund  
Shanti Fernando  
Shahram Heydari

Jessica Hogue  
Mehdi Hossein-Nejad  
Sayyed Ali Hosseini  
Les Jacobs  
Hossam Kishawy  
Lori Livingston  
Janet McCabe  
Carolyn McGregor  
Thomas McMorow  
Pejman Mirza-Babaei  
Scott Nokleby

Gabby Resch  
Carol Rodgers  
Denina Simmons  
Gillian Slade  
Joe Stokes  
Jemma Tam  
Dwight Thompson  
Shannon Vettor  
Ken Wilson

**Regrets:**

Asifa Aamir  
Scott Aquanno  
Rachel Ariss  
Laura Banks  
Rupinder Brar

Krystina Clarke  
Ana Duff  
Mitch Frazer  
Brenda Jacobs  
Venuga Kariharan

Fedor Naumkin  
Aliza Rizwan  
Robyn Ruttenberg-Rozen  
Wendy Barber

**Staff and Guests:**

Kirstie Ayotte  
Jamie Bruno  
Nicola Crow

Sandra Grouette  
(Secretary)  
Krista Hester  
Jennifer MacInnis

Brad MacIsaac  
Sarah Thrush

**1. Call to Order and Land Acknowledgement**

The Chair called the Public Session of the Academic Council (AC) Meeting to order at 2:30 p.m. and J. Tam provided their personal Land Acknowledgement.

**2. Agenda (M)**

Upon a request from a Member, Agenda item 11.5 was removed from the Consent Agenda for discussion.

*Upon a motion duly made by S. Nokleby and seconded by H. Kishawy, the Agenda was approved as amended, including approving and receiving the Consent Agenda and its contents as amended.*

### **3. Chair's Remarks**

The President thanked Members for their continued leadership and service and congratulated the University's graduates while acknowledging the contributions of faculty, staff, and volunteers at the recent successful Convocation. The President also recognized Pride Month and National Indigenous History Month.

The University's continued enrollment momentum was highlighted by the President, reflecting growing public confidence in Ontario Tech. The President also emphasized the importance of sustaining strategic growth while maintaining academic excellence and a high-quality student experience.

Responding to questions, the President provided an update on the Provost search process and confirmed that the recently announced \$91.9 M funding was Ontario Tech's four-year allocation of the \$1.7-billion investment the province was making in the post secondary sector to increase enrolment in programs STEM, health care, education and other rapidly growing sectors..

### **4. Inquiries and Communications**

None received.

### **5. Provost's Remarks**

#### **5.1. Senior Academic Administrator Search Update (I)**

The Provost thanked faculty, staff, students, and volunteers for their contributions to a successful Convocation. She also provided an update on the Faculty of Social Science and Humanities decanal search, advising that on the posting period conclusion the Search Advisory Committee has begun reviewing candidates in accordance with the established recruitment timeline. She also confirmed that the position was posted internally and externally and explained the process for internal postings of this nature.

### **6. Annual Integrated Academic-Research Plan, Institutional and SMA Metrics Report\* (D)**

L. Livingston introduced the Annual Integrated Academic-Research Plan (IARP), Institutional and SMA Metrics Report, noting that this is an annual assessment of the University's performance, which also supports evidence-informed decision making, continuous improvement initiatives, and ongoing monitoring of institutional performance.

S. Thrush highlighted progress, including across academic innovation, experiential learning, student supports, and administrative initiatives. She also outlined key external and internal challenges facing the University and noted that all performance metrics under the current SMA were exceeded.

S. Thrush explained, in response to questions, that the student-to-faculty ratios, student satisfaction, and online learning metrics and targets are reviewed regularly, informed by sector benchmarks where appropriate, and considered alongside broader measures of educational quality and institutional priorities. She also noted that the data support ongoing planning and continuous improvement efforts at both the institutional and faculty levels.

## **7. Undergraduate Studies Committee**

M. Bluechardt shared that the May 19, 2026 Undergraduate Studies Committee (USC) meeting focused on future-focused program development and policy enhancements framed to support a more responsive and efficient process and framework that benefit students, faculty and staff. She reported that key actions included recommending amendments to the Registration and Course Selection Policy, approving three IQAP procedures following significant discussions at both USC's April and May meetings, recommending approval of a new FEAS program proposal which was presented at AC's May meeting, and approving a Minor Program Adjustment.

### **7.1. Major Program Modification: Frazer Faculty of Education: Bachelor of Education (Primary/Junior and Intermediate/Senior)\* (M)**

M. Bluechardt advised that the revised B.Ed. program structure will meet the newly announced provincial requirement that all B.Ed. programs transition to a 12-month format by May 2027. She shared that the proposal, developed through extensive consultation, maintains the programs' distinctive strengths. She extended kudos to everyone involved in fast-tracking these changes and all the hard work that was undertaken to achieve this.

*Upon a motion duly made by M. Bluechardt and seconded by A. Cooper, that pursuant to the recommendation of the Undergraduate Studies Committee, Academic Council hereby approves the Major Program Modification to the Bachelor of Education programs to revise the program structure from four (4) accelerated semesters to three (3) accelerated semesters in order to align with provincial legislation mandating all Bachelor of Education programs in the province to move from a two-year model to a 12-month format.*

## **8. Graduate Studies Committee**

P. Mirza-Babaei reported on the May 26, 2026 Graduate Studies Committee (GSC) Meeting which focused on expanding graduate student opportunities through enhanced program flexibility, new specializations, and extended graduate student financial and professional supports. He advised that key actions included recommending and approving policy instruments – some of which were also reported by USC, recommending Major Program Modifications, and approving Minor Program Adjustments and a Cyclical Program Review Follow-up Report. P. Mirza-Babaei also highlighted and outlined new graduate scholarships, awards, and fellowships approved by GSC. He further noted that GSC was also informed about the appointment of Dr. Adam Dubrowski as Associate Dean, SGPS Academic Affairs.

### **8.1. Major Program Modification: Faculty of Engineering and Applied Science: Master of Engineering Management\* (M)**

P. Mirza-Babaei advised that this change introduces multi-modal delivery options for the program. He reported that this is intended to improve accessibility, flexibility, and enrollment opportunities while leveraging the Faculty's existing experience in delivering hybrid courses.

*Upon a motion duly made by S. Nokleby and seconded by H. Kishawy, that pursuant to the recommendation of the Graduate Studies Committee, Academic Council hereby approves the Major Program Modification to the Master of Engineering Management program to expand mode of delivery for the program to include a hybrid and online options in addition to the existing in-person option.*

## **8.2. Major Program Modification: Faculty of Health Sciences: Master of Health Sciences\* (M)**

P. Mirza-Babaei reported that the proposal establishes a new Medical Laboratory Sciences field within the Master of Health Sciences program, building on the University's leadership in this area while expanding graduate specialization opportunities and responding to growing national workforce demand.

*Upon a motion duly made by P. Mirza-Babaei and seconded by K. Wilson, that pursuant to the recommendation of the Graduate Studies Committee, Academic Council hereby approves the Major Program Modification to the Master of Health Sciences program to establish a new Field in Medical Laboratory Science and to add new elective offerings to the program.*

## **8.3. Major Program Modification: Faculty of Health Sciences: Master of Science in Nursing\* (M)**

P. Mirza-Babaei shared that this change will better align the program with the Master of Health Sciences framework following the conclusion of the Trent University partnership, while enhancing program admission flexibility, the curriculum, expanded elective options, and increased enrollment capacity to meet evolving student and faculty needs.

*Upon a motion duly made by P. Mirza-Babaei and seconded by G. Resch, that pursuant to the recommendation of the Graduate Studies Committee, Academic Council hereby approves the Major Program Modification to the Master of Science in Nursing program to update program curriculum and requirements prompted by the dissolution of the partnership with Trent University through which the program was previously offered.*

## **9. Governance & Nominations Committee**

L. Livingston reported on the June 17, 2026 Governance & Nominations Committee (GNC) Meeting and highlighted the upcoming 2026-2027 Academic Council Experience Survey, encouraging departing Members to complete this survey to help improve the AC membership experience. N. Crow also explained that this survey was a precursor to exploring a broader annual assessment survey similar to the one undertaken by the Board of Governors.

### **9.1. Academic Council Meeting Schedule\* (M)**

L. Livingston advised that GNC is recommending changes to the AC meeting schedule as of 2026-2027, along with associated changes to its standing committees' meeting schedules. She outlined that the intent is to strengthen collegial governance by creating more opportunities for meaningful dialogue, participation and member engagement while enabling AC to enhance its focus on strategic and substantive academic matters within its purview. She further noted that the proposed changes also value members' time, expertise and contributions by fostering a more collaborative and inclusive environment that supports informed discussion, effective decision-making, relationship building and thoughtful contributions to the University's academic mission.

J. McCabe left the meeting.

Members discussed the proposed changes in detail, considering their potential impacts on academic governance practices, decision-making processes, governance pathways, meeting frequency, and overall workload. Members broadly supported the opportunity for increased strategic dialogue through dedicated sessions, while acknowledging questions related to

implementation and scheduling. Members also noted that the new approach will be monitored and reviewed after its first year.

*Upon a motion duly made by S. Nokleby and seconded by H. Kishawy, that, pursuant to the recommendation of the Governance & Nominations Committee, Academic Council hereby approves the revisions to the Academic Council governance meeting schedule effective for the 2026-2027 academic year, including:*

- a. the scheduling of six (6) regular meetings of Academic Council annually;*
- b. the introduction of four (4) Academic Council information sessions annually, including an orientation session and sessions on matters of broad academic interest within Academic Council's mandate;*
- c. associated revisions to the meeting schedules of Academic Council's standing committees; and*
- d. a review of the revised academic governance schedule following the 2026-2027 academic year*

Seven (7) Opposed.

### **9.2. 2026-2027 Academic Council – Expressions of Interest and Appointments\* (M)**

The Chair introduced an omnibus motion rather than individual motions for the various AC-related appointments. It was also noted that those included in the recommended appointments will abstain from voting.

*Upon a motion duly made by S. Nokleby and seconded by A. Cooper, that, pursuant to the recommendation of the Governance & Nominations Committee, Academic Council, hereby approves the following appointments to Academic Council, its Committees and specified positions for the specified terms:*

*Student positions on Academic Council for the term of September 1, 2026 to August 31, 2027, renewable for an additional year:*

- ❖ *Noah Bagshaw (undergraduate);*
- ❖ *Greatness Okhani (undergraduate);*
- ❖ *Alexis Ramcharan (undergraduate);*
- ❖ *Joshua Zino (undergraduate);*
- ❖ *Fatemeh Hajikhani Roudsari (graduate); and*
- ❖ *Kailey Haskell (graduate)*

AND

*Student positions on the Academic Appeals Committee for the term of July 1, 2026 to June 30, 2027, renewable for an additional year:*

- ❖ *Areeba Azhar (undergraduate);*
- ❖ *Greatness Okhani (undergraduate); and*
- ❖ *Joshua Zino (undergraduate)*

AND

*Student positions on the Undergraduate Studies Committee for the term of September 1, 2026 to August 31, 2027, renewable for an additional year:*

- ❖ *Samantha Ng (undergraduate); and*
- ❖ *Ryelle Quiazon (undergraduate)*

AND

*Academic Council Student member position on the Governance & Nominations Committee for the term of September 1, 2026 to August 31, 2027, renewable for an additional year:*

- ❖ *Kailey Haskell*

AND

*Academic Council Teaching Staff member position on the Governance & Nominations Committee for the term of September 1, 2026 to August 31, 2029:*

- ❖ *Shannon Vettor, from the Faculty of Social Science and Humanities*

AND

*Elected faculty members of Academic Council positions on the Undergraduate Studies Committee:*

- ❖ *Laura Banks for the term September 1, 2026 to August 31, 2028; and*
- ❖ *Ana Duff for the term September 1, 2026 to August 31, 2027*

AND

*Academic Appeals Committee Chair for the term of September 1, 2026 to August 31, 2028:*

- ❖ *Brent MacRae*

AND

- ❖ *Council of Ontario Universities Academic Colleague for the term July 1, 2026 to June 30, 2029 – Pariss Garramone; and*
- ❖ *Council of Ontario Universities Alternate Academic Colleague for the term July 1, 2026 to June 30, 2029 – Joelle Rodway*

AND

*Elected representatives on Academic Council positions on the Steering Committee:*

- ❖ *Andrew Hogue, Academic Council Teaching Staff appointment for the term September 1, 2026 to August 31, 2029*
- ❖ *Denina Simmons, Academic Council Teaching Staff appointment for the term September 1, 2026 to August 31, 2029; and*
- ❖ *Noah Bagshaw, Academic Council Student appointment for the term September 1, 2026 to August 31, 2027, renewable*

AND

*The following ending of appointment term as outlined below:*

- ❖ *Josh Lowe, Academic Appeals Committee Teaching Staff Member with a three year term ending August 31, 2026*

Three (3) Abstentions.

J. McCabe returned to the meeting during this motion process.

N. Crow confirmed the process for GNC receiving expressions of interest at its recent meeting and noted that, with the conclusion of the 2026 Academic Council Election process, there are no plans to fill the remaining vacancies, as they do not affect quorum.

### **9.3.2026-2027 Academic Council – Research Committee Appointments\* (M)**

L. Livingston presented the Research Committee appointment recommendations.

#### ***Motion 1:***

*Upon a motion duly made by H. Kishawy and seconded by L. Livingston, that, pursuant to the recommendation of the Governance & Nominations Committee, Academic Council hereby approves the appointment of the following faculty members to the Research Committee for the term September 1, 2026 until August 31, 2029:*

- ❖ *Dr. Atef Mohany, Faculty of Engineering and Applied Science; and*
- ❖ *Dr. Peter Lewis, Faculty of Business and Information Technology*

#### ***Motion 2:***

*Upon a motion duly made by K. Wilson and seconded by C. McGregor, that, pursuant to the recommendation of the Governance & Nominations Committee, Academic Council hereby approves the appointment of the following elected Academic Council Faculty Members to the Research Committee for the following terms:*

- ❖ *Denina Simmons for the term September 1, 2026 to August 31, 2029; and*
- ❖ *Ginny Brunton for the term September 1, 2026 to August 31, 2029*

One (1) Abstention.

## **10. Policy Instruments**

### **10.1. Registration and Course Selection Policy Amendments\* (M)**

P. Mirza-Babaei advised that the minor amendments will align the existing policy with current graduate student registration processes.

*Upon a motion duly made by P. Mirza-Babaei and seconded by L. Livingston, that Academic Council hereby approves the amended Registration and Course Selection Policy.*

### **10.2. Cotutelle Policy and Procedure Amendments\* (M)**

P. Mirza-Babaei shared the updates to the Cotutelle Policy and Procedures to expand research collaboration opportunities, enhance flexibility for graduate students, and improve alignment with the University's academic policies and processes, noting the Procedure revisions were approved by GSC.

*Upon a motion duly made by S. Nokleby and seconded by A. Cooper, that pursuant to the recommendation of the Graduate Studies Committee, Academic Council hereby approves the updated Cotutelle Policy.*

### **10.3. Graduate Experiential Learning Policy\* (M)**

P. Mirza-Babaei outlined the new Graduate Experiential Learning Policy, which establishes a consistent institutional framework for experiential learning opportunities while recognizing that program-specific requirements remain governed at the program level.

*Upon a motion duly made by M. Hossein-Nejad and seconded by H. Kishawy, that pursuant to the recommendation of the Graduate Studies Committee, Academic Council hereby approves the Graduate Experiential Learning Policy.*

### **10.4. Academic Integrity Policy Review Process\* (D)**

J. MacInnis and N. Crow introduced and outlined the planned review of four (4) key academic integrity and related policy instruments and sought feedback from Members on the review's range, consultation process, timelines, key stakeholders, and proposed stakeholder engagement strategies. It was acknowledged that aside from the four (4) policy instruments under review, there were other intersecting policies and procedures that would also subsequently require consideration. Members supported the review, including highlighting the need to prioritize policies and procedures relating to graduate appeals.

## **11. Consent Agenda:**

The Chair confirmed that contents of the Consent Agenda were approved and received under Agenda Item # 2 save for item #11.5.

### **11.1. Public Minutes of the May 26, 2026 Meeting\* (M)**

#### **11.2. Minor Program Adjustments from USC\* (I)**

(i) Faculty of Business and Information Technology: Bachelor of Commerce\* (I)

(ii) Faculty of Health Sciences: Bachelor of Health Sciences - Kinesiology – Advanced entry for Fitness and Health Promotion Graduates\* (I)

#### **11.3. Minor Program Adjustments from GSC\* (I)**

(i) Faculty of Health Sciences: PhD in Health Sciences\* (I)

#### **11.4. Cyclical Program Review from GSC\*(I)**

(i) 18-Month Follow-up Report: Master of Information Technology Security\* (I)

#### **11.6. Update on Scholarships & Major Award Recipients\* (I)**

#### **11.7. New Graduate Scholarships, Awards and Fellowships\* (I)**

**Item pulled from Consent Agenda:**

#### **11.5 Institutional Quality Assurance Process (IQAP) Policy and Procedures\* (I)**

In response to questions, S. Thrush advised that the revisions clarify and streamline procedures without changing existing approval pathways or academic quality assurance requirements. N. Crow advised that any further clarification can be sought directly from CIQE as outlined in the supporting material.

## **12. Termination**

There being no other business, and upon a motion to terminate by S. Nokleby, the AC Meeting terminated at 4:25 p.m.

Sandra Grouette, Assistant University Secretary

**2026-2027 ACADEMIC COUNCIL WORKPLAN**  
**Subject to change based on items arising during course of year**

| Meeting                                                    | Agenda Item (Lead)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| September 22, 2026<br>Meeting & Orientation<br>(In-Person) | <p>*Academic Council Orientation before meeting (US)*</p> <p>Fall 2026 Honorary Degree Recipients<br/> COU Academic Colleague Report (PG)<br/> Senior Academic Administrator Search Update (if applicable) (LL)<br/> 2026-2027 Enrollment Update (LL/ST)<br/> USC Report (MB)<br/> GSC Report (PMB)<br/> GNC Report (LL)<br/> Research Committee Report (LJ)<br/> Policy Instruments (Approval/Consultation) - if applicable<br/> Conferral of Degrees - Fall 2026 (RO)</p> <p><b>Governance</b><br/> Academic Council Vice-Chair Nomination (US)<br/> Academic Council Board of Governors Liaison (US)<br/> Faculty Council Membership Lists (US)<br/> Faculty Council Vice-Chairs Appointments (US)<br/> 2026-2027 AC Workplan (US)<br/> 2026-2027 GNC Workplan (US)</p> |
| October 27, 2026<br>Session<br>(In-Person)                 | Topic of broad academic interest – TBC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| November 24, 2026<br>Meeting<br>(In-Person)                | <p>COU Academic Colleague Report (PG)<br/> Senior Academic Administrator Search Update (if applicable) (LL)<br/> 2027-2028 Budget Approach (LL/BM/ST)<br/> USC Report (MB)<br/> GSC Report (PMB)<br/> GNC Report (LL)<br/> Research Committee Report (LJ)<br/> Policy Instruments (Approval/Consultation) - if applicable <ul style="list-style-type: none"> <li>Annual Policy Report (JM/US)</li> </ul> </p> <p><b>Governance</b><br/> Remaining Faculty Council Membership Lists (US)<br/> Remaining Faculty Council Vice-Chair Appointments (US)<br/> 2026-2027 USC &amp; GSC Workplans (US)<br/> Elections Key Dates &amp; Open Positions (US) (TBD Jan or Nov)</p>                                                                                                    |

MB = Mary Bluehardt, NC = Nicola Crow, JF = Jennifer Freeman, LJ = Les Jacobs,  
LL = Lori Livingston, JM = Jennifer MacInnis, BM = Brad MacIsaac, PG = Pariss Garramone, PMB= Pejman Mirza-Babaei,  
SM = Steven Murphy, JS = Joe Stokes, ST = Sarah Thrush, US = University Secretariat

|                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| January 26, 2027<br>Meeting<br>(Virtual)  | <p>COU Academic Colleague Report (PG)<br/> 2027-2028 Tuition Framework (Provost/ST)<br/> USC Report (MB)<br/> GSC Report (PMB)<br/> GNC Report (Provost)<br/> Research Committee Report (LJ)<br/> Policy Instruments (Approval/Consultation) - if applicable<br/> Conferral of Degrees – Winter 2027 (RO)<br/> 2027-2028 Undergraduate Academic Schedule (RO)<br/> 2027-2028 Graduate Academic Schedule (RO)</p> <p><b>Governance</b><br/> Elections Key Dates &amp; Open Positions (US) (TBD Jan or Nov)</p>                                                                                                                                                                                                                 |
| February 23, 2027<br>Session<br>(Virtual) | Topic of broad academic interest – TBC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| March 23, 2027<br>Meeting<br>(In-Person)  | <p>Spring 2027 Honorary Degree Recipients (SM)<br/> COU Academic Colleague Report (PG)<br/> Student Recruitment, Success and Retention (Provost)<br/> Enrollment Update (ST)<br/> USC Report (MB)<br/> GSC Report (PMB)<br/> Research Committee Report (LJ)<br/> Office of Research Services Executive Report (LJ/JF)<br/> Policy Instruments (Approval/Consultation) - if applicable</p> <p><b>Governance</b> (if applicable)<br/> 2026 Nominations and Election Results (US) (TBD dependent on election timing)</p> <p><b>Note:</b> USC and GSC - Minor Program Adjustments (MPA) Deadline<br/> <b>Note:</b> USC and GSC - Major Program Modification (MPM) Deadline<br/> <b>Note:</b> Academic Policy Changes Deadline</p> |
| April 27, 2027<br>Session<br>(In-Person)  | Topic of broad academic interest – TBC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

|                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>May 25, 2027<br/>Meeting<br/>(In-Person)</p>  | <p>COU Academic Colleague Report (PG)<br/>Teaching Award Recipients (Provost)<br/>Academic Programs Update (Provost)</p> <ul style="list-style-type: none"> <li>• Continuous Learning Annual Report (Provost)</li> <li>• Quality Assurance Annual Report (Provost/ST)</li> </ul> <p>2027-2028 Activity-based Budget Model (Provost/BM/ST)<br/>2027-2030 Budget (Provost/BM/ST)<br/>USC Report (MB)<br/>GSC Report (PMB)<br/>GNC Report (Provost)<br/>Research Committee Report (LJ)</p> <ul style="list-style-type: none"> <li>• Strategic Research Plan Annual Report (LJ)</li> </ul> <p>Policy Instruments (Approval/Consultation) - if applicable<br/>Conferral of Degrees – Spring/Summer 2027 (RO)</p> <p><b>Governance</b> (if applicable)<br/>2026 Nominations and Election Results (US) (TBD dependent on election timing)</p> |
| <p>June 15, 2027<br/>Meeting<br/>(In-Person)</p> | <p>COU Academic Colleague Report (PG)<br/>Annual Integrated Academic-Research Plan, Institutional and SMA Metrics Report (Provost/ST)<br/>USC Report (MB)<br/>GSC Report (PMB)<br/>GNC Report (Provost)<br/>Research Committee Report (LJ)<br/>Policy Instruments (Approval/Consultation) - if applicable<br/>Update on Scholarships and Major Award recipients (JS)</p> <p><b>Governance</b><br/>Academic Council Meeting Schedule Evaluation and Assessment<br/>Academic Council Experience Survey<br/>2027-2028 Academic Council – Expressions of Interest and Appointments (US)<br/>2027-2028 Academic Council – Research Committee Appointments/Renewals (US)<br/>2027 Election Conclusion</p> <p>*Summer: EOI for AC Vice-Chair and Academic Council Board of Governors Liaison</p>                                              |

## Governance & Nominations Committee (GNC)

### 2026-2027 Workplan

Subject to change based on items arising during course of year

| Meeting                                       | Agenda Item (Lead: University Secretariat unless otherwise stated)                                                                                                                                                                                                                                                                                                                                                                    | Academic Council<br>(If Applicable) | Board<br>(if Applicable) |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------|
| <b>September 15, 2026</b>                     | <ul style="list-style-type: none"> <li>• Annual GNC Terms of Reference Review</li> <li>• Faculty Council Membership Lists</li> <li>• Faculty Council Vice-Chair Nominations</li> <li>• Academic Council Vice-Chair Nominations</li> <li>• Academic Council Board of Governors Liaison</li> <li>• 2026-2027 GNC Workplan</li> <li>• Academic Council Experience Survey Results</li> <li>• Governance Update (if applicable)</li> </ul> | <b>September 22, 2026</b>           | <b>December 3, 2026</b>  |
| <b>October 20, 2026<br/>(Date may change)</b> | <ul style="list-style-type: none"> <li>• Remaining Faculty Council Lists</li> <li>• Remaining Faculty Vice Chair Nominations</li> <li>• Review and Approval of 2027 Election Timeline (TBD)</li> <li>• Governance Update (if applicable)</li> </ul>                                                                                                                                                                                   | <b>November 24, 2026</b>            | <b>December 3, 2026</b>  |
| <b>January 19, 2027</b>                       | <ul style="list-style-type: none"> <li>• Review and Approval of 2027 Election Timeline (TBD)</li> <li>• 2027 Election Update (if applicable)</li> <li>• Governance Update (if applicable)</li> </ul>                                                                                                                                                                                                                                  | <b>January 26, 2027</b>             | <b>March 4, 2027</b>     |
| <b>April 20, 2027<br/>(Date may change)</b>   | <ul style="list-style-type: none"> <li>• 2027 Nominations, Election Results and Process Update</li> <li>• Academic Council Meeting Schedule Evaluation and Assessment Format</li> <li>• Governance Update (if applicable)</li> </ul>                                                                                                                                                                                                  | <b>May 25, 2027</b>                 | <b>June 24, 2027</b>     |

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                      |                      |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|----------------------|
| <b>June 8, 2027</b> | <ul style="list-style-type: none"> <li>• Academic Council Meeting Schedule Evaluation and Assessment</li> <li>• Academic Council Experience Survey</li> <li>• Governance Update (if applicable)</li> <li>• 2027-2028 Academic Council - Expressions of Interest and Appointments</li> <li>• 2027-2028 Academic Council - Research Committee Appointments</li> <li>• 2027 Election process concludes</li> </ul> <p>*Summer: EOI for AC Vice-Chair and Academic Council Board of Governors Liaison</p> | <b>June 15, 2027</b> | <b>June 24, 2027</b> |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|----------------------|

## ACADEMIC COUNCIL REPORT

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**SESSION:**

Public ☒  
Non-Public ☐

**ACTION REQUESTED:**

Decision ☒  
Discussion/Direction ☐  
Information ☐

**TO:** Academic Council

**DATE:** September 22, 2026

**PRESENTED BY:** Lori Livingston, Provost and Vice-President Academic

**FROM:** Governance & Nominations Committee (GNC)

**SUBJECT:** 2026-2027 Faculty Council Vice-Chair Appointments

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**EXECUTIVE SUMMARY:**

- One of GNC's responsibilities is to oversee the recruitment, selection, and election process of new members to Academic Council and its committees, and, recommend appointments for approval by Academic Council.
- GNC is recommending Academic Council approve the appointments of the respective Faculty Council Vice-Chairs.

**MOTION:**

*That, pursuant to the Governance & Nominations Committee's recommendation, Academic Council hereby approves the appointment of the following individuals as Vice-Chair of their respective Faculty Council for the term of October 1, 2026 to September 30, 2027:*

- *Dr. Andrew Hogue; Faculty of Business and Information Technology*
- *Dr. Zeinab El-Sayegh; Faculty of Engineering and Applied Science*
- *Dr. Nooshin Rotondi; Faculty of Health Sciences*
- *Dr. Ana Vakiloroyaei; Faculty of Science*
- *Dr. Robin Kay; Frazer Faculty of Education*
- *Dr. Amir Mostaghim; Faculty of Social Science and Humanities*

**KEY CONSIDERATIONS:**

- For the nominated Faculty Council Vice-Chairs, each Faculty Council solicited expressions of interest for the role from its Eligible Members, with any expressions received being considered by the respective Deans.
- The Deans recommend their nominations to Academic Council through GNC.
- The Faculty Council Vice-Chair will serve a one-year term.
- All Faculties have submitted their nominations.

**NEXT STEPS:**

- None.

## ACADEMIC COUNCIL REPORT

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**SESSION:**

Public  
Non-Public

☒  
☐**ACTION REQUESTED:**

Decision  
Discussion/Direction  
Information

☒  
☐  
☐

**TO:** Academic Council

**DATE:** September 22, 2026

**PRESENTED BY:** Lori Livingston, Provost and Vice-President Academic

**FROM:** Governance & Nominations Committee (GNC)

**SUBJECT:** 2026-2027 Faculty Council Membership Lists

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**EXECUTIVE SUMMARY:**

- The annual review and approval of Faculty Council membership lists is an extension of the GNC's broad responsibilities regarding oversight of recruitment, selection, and election of new members of Academic Council and its Committees.
- GNC is recommending Academic Council approve the 2026-2027 Faculty Council membership lists.

**MOTION:**

*That, pursuant to the Governance & Nominations Committee's recommendation, Academic Council hereby approves the following 2026-2027 Faculty Council membership lists, as presented:*

- *Faculty of Business and Information Technology*
- *Faculty of Engineering and Applied Science*
- *Faculty of Health Sciences*
- *Faculty of Science*
- *Frazer Faculty of Education*
- *Faculty of Social Science and Humanities*

**KEY CONSIDERATIONS:**

- All Faculties have submitted their respective 2026-2027 Faculty Council membership lists.

**NEXT STEPS:**

- None.

**SUPPORTING REFERENCE MATERIALS:**

- Faculty of Business and Information Technology Faculty Council List
- Faculty of Engineering and Applied Science Faculty Council List
- Faculty of Health Sciences Faculty Council List
- Faculty of Science Faculty Council List
- Frazer Faculty of Education Faculty Council List
- Faculty of Social Science and Humanities Faculty Council List

Business & Information Technology - Faculty Council Membership (2026-2027)

| Voting Members (as set out in Academic Council Handbook) |                                                                                           |                                                                  |                                                                                                        |                                                                                                                                                                                                                               |                                                                                                                        |                                                                                                                                                                       |                          |                          |                                 |
|----------------------------------------------------------|-------------------------------------------------------------------------------------------|------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|---------------------------------|
| V(1)(d)(i)                                               | V(1)(d)(ii)                                                                               | V(1)(d)(iii)                                                     | V(1)(d)(iv)                                                                                            | V(1)(d)(v)                                                                                                                                                                                                                    | V(1)(d)(vi)                                                                                                            | V(1)(d)(vii)                                                                                                                                                          | V(1)(g)                  | V(1)(h)                  |                                 |
| Dean, Associate Deans & Assistant Deans                  | Tenured/Tenure Track<br>(primary appt in Faculty including those on research/other leave) | Tenured/Tenure Track<br>(at least 25% secondary appt in Faculty) | Teaching Faculty<br>(full-time with primary appt in Faculty or at least 25% secondary appt in Faculty) | Representatives of Teaching Assistants & Part-Time Faculty*<br>(taught in Faculty at least 2 consecutive years)<br><br>Not to number more than 10% of categories i,ii, iii and iv combined, where this number is at least 10. | Students*<br><br>Not to number more than 10% of categories i,ii, iii and iv combined, where this number is at least 10 | Professional/Managerial/ Technical/Administrative Staff*<br><br>Not to number more than 10% of categories i,ii, iii and iv combined, where this number is at least 10 | Ex-Officio (non-voting)  | Executive Committee      | Non Voting                      |
| Carolyn McGregor <b>CHAIR</b>                            | Alexander Serenko <b>(RL) June 30.27</b>                                                  |                                                                  | Adam Prokop <b>(Leave)</b>                                                                             | June Melnychuk (TA)                                                                                                                                                                                                           | Tommy Michailidis (BITSoc Pres)                                                                                        | Sylvie Brosseau/ DPO                                                                                                                                                  | Amanda Cooper            | Carolyn McGregor (Chair) | Brianna McKay (AA)              |
| Andrew Hogue <b>Vice Chair</b>                           | Alvaro Quevedo                                                                            |                                                                  | Ahmed Sheikh                                                                                           | Sara Taghavi Motlagh (Sess)                                                                                                                                                                                                   | Isabela Valles VP of IT                                                                                                | Joel Stewart                                                                                                                                                          | Brad MacIsaac            | Andrew Hogue             | Camille Boate (Staff)           |
| Peter Lewis                                              | Amir Rastpour                                                                             |                                                                  | Aisha Husain                                                                                           |                                                                                                                                                                                                                               | Esha Lodhi                                                                                                             | Kerry Morrison (AA Rep)                                                                                                                                               | Carol Rodgers            | Peter Lewis              | Cierra Richardson               |
| Amanda McEachern Gaudet                                  | Amirali Abari                                                                             |                                                                  | Amin Ibrahim                                                                                           |                                                                                                                                                                                                                               | Chris Panetta (BITSoc Co Pres)                                                                                         | Amanda Miller (EL Rep)                                                                                                                                                | Catherine Davidson       | Sylvie Brosseau / DPO    | Cyndi Hillis (AA)               |
|                                                          | Amirmohsen Golmohammadi                                                                   |                                                                  | Ana Duff                                                                                               |                                                                                                                                                                                                                               |                                                                                                                        |                                                                                                                                                                       | Hossam Kishawy           | Amanda McEachern Gaudet  | Desiree Saunders                |
|                                                          | Bill Kapralos                                                                             |                                                                  | Ash Andrews                                                                                            |                                                                                                                                                                                                                               |                                                                                                                        |                                                                                                                                                                       | James Barnett            |                          | Erin Sawyer                     |
|                                                          | Bin Chang                                                                                 |                                                                  | Ashfakkudin Rubel <b>(PL)</b>                                                                          |                                                                                                                                                                                                                               |                                                                                                                        |                                                                                                                                                                       | Jamie Bruno              |                          | Ilham Hoque (AA)                |
|                                                          | Chen Shen                                                                                 |                                                                  | Asifa Aamir                                                                                            |                                                                                                                                                                                                                               |                                                                                                                        |                                                                                                                                                                       | Jennifer McInnis         |                          | Jake Gibbons (Staff)            |
|                                                          | Fletcher Lu                                                                               |                                                                  | Brent MacRae                                                                                           |                                                                                                                                                                                                                               |                                                                                                                        |                                                                                                                                                                       | Joe Stokes               |                          | Jeanelle Grant                  |
|                                                          | Gabby Resch                                                                               |                                                                  | Gavin Ball                                                                                             |                                                                                                                                                                                                                               |                                                                                                                        |                                                                                                                                                                       | Ken Wilson               |                          | Jennifer Kessell (Staff)        |
|                                                          | Igor Kotlyar                                                                              |                                                                  | James Robb                                                                                             |                                                                                                                                                                                                                               |                                                                                                                        |                                                                                                                                                                       | Krista Hester            |                          | Lydia Stewart (Staff)           |
|                                                          | John Friedlan                                                                             |                                                                  | Josh Lowe                                                                                              |                                                                                                                                                                                                                               |                                                                                                                        |                                                                                                                                                                       | Les Jacobs               |                          | Nadya Lim-Douglas (Library Rep) |
|                                                          | Joseph Krasman                                                                            |                                                                  | Lindsay Ristuccia                                                                                      |                                                                                                                                                                                                                               |                                                                                                                        |                                                                                                                                                                       | Lori Livingston          |                          | Sara Horruzey (EA)              |
|                                                          | Julie Thorpe                                                                              |                                                                  | Meghan Adams                                                                                           |                                                                                                                                                                                                                               |                                                                                                                        |                                                                                                                                                                       | Mary Bluechardt          |                          | Sureka Smith                    |
|                                                          | Kamal Smimou                                                                              |                                                                  | Mehdi Hossein-Nejad                                                                                    |                                                                                                                                                                                                                               |                                                                                                                        |                                                                                                                                                                       | Nicola Crow              |                          | Theeben Jegatheesan (AA Rep)    |
|                                                          | Karolina Krystyniak                                                                       |                                                                  | Samaneh Mazaheri                                                                                       |                                                                                                                                                                                                                               |                                                                                                                        |                                                                                                                                                                       | Pejman Mirza-Babaei      |                          |                                 |
|                                                          | Khalil El-Khatib <b>(RL) June 30.27</b>                                                   |                                                                  | Theresa Miedema                                                                                        |                                                                                                                                                                                                                               |                                                                                                                        |                                                                                                                                                                       | Thomas McMorrow          |                          |                                 |
|                                                          | Li Yang                                                                                   |                                                                  | William Thurber                                                                                        |                                                                                                                                                                                                                               |                                                                                                                        |                                                                                                                                                                       | Sarah Thrush             |                          |                                 |
|                                                          | Loutfouz Zaman                                                                            |                                                                  |                                                                                                        |                                                                                                                                                                                                                               |                                                                                                                        |                                                                                                                                                                       | Steven Murphy            |                          |                                 |
|                                                          | Michael Bliemel                                                                           |                                                                  |                                                                                                        |                                                                                                                                                                                                                               |                                                                                                                        |                                                                                                                                                                       |                          |                          |                                 |
|                                                          | Miguel Vargas Martin                                                                      |                                                                  |                                                                                                        |                                                                                                                                                                                                                               |                                                                                                                        |                                                                                                                                                                       |                          |                          |                                 |
|                                                          | Nader Azad                                                                                |                                                                  |                                                                                                        |                                                                                                                                                                                                                               |                                                                                                                        |                                                                                                                                                                       |                          |                          |                                 |
|                                                          | Nelson Amaral                                                                             |                                                                  | ACADEMIC ASSOCIATES (LTFM)                                                                             |                                                                                                                                                                                                                               |                                                                                                                        |                                                                                                                                                                       | UPDATED: August 20, 2026 |                          |                                 |
|                                                          | Patrick Hung                                                                              |                                                                  | Nadia Vanteeva                                                                                         |                                                                                                                                                                                                                               |                                                                                                                        |                                                                                                                                                                       |                          |                          |                                 |
|                                                          | Pooria Madani                                                                             |                                                                  |                                                                                                        |                                                                                                                                                                                                                               |                                                                                                                        |                                                                                                                                                                       |                          |                          |                                 |
|                                                          | Rajen Akalu                                                                               |                                                                  |                                                                                                        |                                                                                                                                                                                                                               |                                                                                                                        |                                                                                                                                                                       |                          |                          |                                 |
|                                                          | Richard Pazzi                                                                             |                                                                  |                                                                                                        |                                                                                                                                                                                                                               |                                                                                                                        |                                                                                                                                                                       |                          |                          |                                 |
|                                                          | Salma Karray <b>(RL) Dec 31.26</b>                                                        |                                                                  |                                                                                                        |                                                                                                                                                                                                                               |                                                                                                                        |                                                                                                                                                                       |                          |                          |                                 |
|                                                          | Serena Sohrab                                                                             |                                                                  |                                                                                                        |                                                                                                                                                                                                                               |                                                                                                                        |                                                                                                                                                                       |                          |                          |                                 |
|                                                          | Shahram Heydari                                                                           |                                                                  |                                                                                                        |                                                                                                                                                                                                                               |                                                                                                                        |                                                                                                                                                                       |                          |                          |                                 |
|                                                          | Shoeb Mohammad                                                                            |                                                                  |                                                                                                        |                                                                                                                                                                                                                               |                                                                                                                        |                                                                                                                                                                       |                          |                          |                                 |
|                                                          | Stephen Jackson                                                                           |                                                                  |                                                                                                        |                                                                                                                                                                                                                               |                                                                                                                        |                                                                                                                                                                       |                          |                          |                                 |
|                                                          | Stephen Marsh                                                                             |                                                                  |                                                                                                        |                                                                                                                                                                                                                               |                                                                                                                        |                                                                                                                                                                       |                          |                          |                                 |
|                                                          | Wei-Lin Wang                                                                              |                                                                  |                                                                                                        |                                                                                                                                                                                                                               |                                                                                                                        |                                                                                                                                                                       |                          |                          |                                 |
|                                                          | Xinyao (Joseph) Zhou                                                                      |                                                                  |                                                                                                        |                                                                                                                                                                                                                               |                                                                                                                        |                                                                                                                                                                       |                          |                          |                                 |
|                                                          | Ying (Annie) Jiang                                                                        |                                                                  |                                                                                                        |                                                                                                                                                                                                                               |                                                                                                                        |                                                                                                                                                                       |                          |                          |                                 |
|                                                          | Ying Zhu                                                                                  |                                                                  |                                                                                                        |                                                                                                                                                                                                                               |                                                                                                                        |                                                                                                                                                                       |                          |                          |                                 |
|                                                          |                                                                                           |                                                                  |                                                                                                        |                                                                                                                                                                                                                               |                                                                                                                        |                                                                                                                                                                       |                          |                          |                                 |
| 4                                                        | 37                                                                                        |                                                                  | 17                                                                                                     | 2                                                                                                                                                                                                                             | 4                                                                                                                      | 4                                                                                                                                                                     |                          |                          |                                 |

Engineering & Applied Science - Faculty Council Membership (2026-27)

| Voting Members (as set out in Academic Council Handbook) |                                                                                                                 |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|-------------|-----------------------------------------------------------------------------------|-------------------------------------------|-------------------------------------------|
| V(1)(d)(i)                                               | V(1)(d)(ii)                                                                                                     | V(1)(d)(iii)                                                                      | V(1)(d)(iv)                                                                                                           | V(1)(d)(v)                                                                                                                     | V(1)(d)(vi) | V(1)(d)(vii)                                                                      | V(1)(g)                                   | V(1)(h)                                   |
| Dean, Associate Deans & Assistant Deans                  | Tenured/Tenure Track<br><small>(Primary appointment in Faculty including those on research/other leave)</small> | Tenured / Tenure Track<br><small>(At least 25% secondary appt in Faculty)</small> | Teaching Faculty<br><small>(Full-time with primary appt in Faculty or at least 25% secondary appt in Faculty)</small> | Representatives of Teaching Assistants & Part-Time Faculty*<br><small>(Taught in Faculty at least 2 consecutive years)</small> | Students*   | Professional/ Managerial/ Technical/ Administrative Staff*                        | Ex-Officio<br><small>(Non-voting)</small> | Executive Committee                       |
| Kishawy, Hossam (Dean)                                   | Abou Ziki, Jana                                                                                                 |                                                                                   | Abdalbari, Anwar                                                                                                      |                                                                                                                                |             | Anderson, Kirsten (Secretary, non-voting)                                         | Bluechartd, Mary                          | Kishawy, Hossam (Chair)                   |
| Shahid, Hidayat (Assistant Dean)                         | Agelin-Chaab, Martin                                                                                            |                                                                                   | Abdel Hafeez, Khalid                                                                                                  | TBD                                                                                                                            | TBD         | Crocker, Kelly (Resource, non-voting)                                             | Cooper, Amanda                            | Electing now (Vice-Chair)                 |
| Agelin-Chaab, Martin (Associate Dean, Academic)          | Alwidian, Sanaa                                                                                                 |                                                                                   | Aydin, Eda                                                                                                            |                                                                                                                                |             | Kim, David (Ex-officio, non voting)                                               | Crow, Nicola                              | Agelin-Chaab, Martin                      |
| Mahmoud, Qusay (Assistant Dean)                          | Atkinson, Kirk                                                                                                  |                                                                                   | Aydin, Murat                                                                                                          |                                                                                                                                |             | Rehal, Govind                                                                     | Davidson, Catherine                       | Anderson, Kirsten (Secretary, non-voting) |
| Mohany, Atef, (Assistant Dean)                           | Azim, Akramul                                                                                                   |                                                                                   | Elagamy, Naglaa                                                                                                       |                                                                                                                                |             | Tinline, Kailey                                                                   | Frazer, Mitch                             | Crocker, Kelly (Resource, non-voting)     |
|                                                          | Barari, Ahmad                                                                                                   |                                                                                   | Farzam, Masoud                                                                                                        |                                                                                                                                |             |                                                                                   | Jacobs, Les                               | Kim, David (Ex-officio, non-voting)       |
|                                                          | Billal, MD Mashum                                                                                               |                                                                                   | Finn, Ryan                                                                                                            |                                                                                                                                |             |                                                                                   | Kishawy, Hossam                           | Lang, Haoxiang                            |
|                                                          | Charest-Finn, Meaghan                                                                                           |                                                                                   | Genco, Filippo                                                                                                        |                                                                                                                                |             |                                                                                   | Livingston, Lori                          | Mahmoud, Qusay                            |
|                                                          | Dincer, Ibrahim                                                                                                 |                                                                                   | Jawad, Dima                                                                                                           |                                                                                                                                |             |                                                                                   | MacInnis, Jennifer                        | McKellar, Jennifer                        |
|                                                          | Dong, Min                                                                                                       |                                                                                   | Moallemi, Nasim                                                                                                       |                                                                                                                                |             |                                                                                   | MacIsaac, Brad                            | Mohany, Atef                              |
|                                                          | Eklund, Mikael                                                                                                  |                                                                                   | Perera, Sharman                                                                                                       |                                                                                                                                |             |                                                                                   | McMorrow, Thomas                          | Shahid, Hidayat                           |
|                                                          | El-Darieby, Mohamed                                                                                             |                                                                                   | Sami, Hami                                                                                                            |                                                                                                                                |             |                                                                                   | Mirza-Babaei, Pejman                      | Wang, Ying                                |
|                                                          | Elgazzar, Khalid                                                                                                |                                                                                   | Saniei, Namdar                                                                                                        |                                                                                                                                |             |                                                                                   | McCartney, Kimberly                       |                                           |
|                                                          | El-Gindy, Moustafa                                                                                              |                                                                                   | Shahid, Hidayat                                                                                                       |                                                                                                                                |             |                                                                                   | McGregor, Carolyn                         |                                           |
|                                                          | El-Sayegh, Zeinab                                                                                               |                                                                                   | Shi, Qi                                                                                                               |                                                                                                                                |             |                                                                                   | Murphy, Steven                            |                                           |
|                                                          | Fayazfar, Ramona                                                                                                |                                                                                   | Wu, Leon                                                                                                              |                                                                                                                                |             |                                                                                   | Rodgers, Carol                            |                                           |
|                                                          | Gaber, Hossam E.                                                                                                |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   | Stokes, Joe                               |                                           |
|                                                          | Hangan, Horia                                                                                                   |                                                                                   | Academic Associates                                                                                                   |                                                                                                                                |             |                                                                                   | Thrush, Sarah                             |                                           |
|                                                          | Harvel, Glenn                                                                                                   |                                                                                   | Hosinzadeh Nooshabadi, Mehdi                                                                                          |                                                                                                                                |             |                                                                                   | Wilson, Ken                               |                                           |
|                                                          | He, Yuping                                                                                                      |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Hoorweg, Daniel                                                                                                 |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Hosseini, Sayyed Ali                                                                                            |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Ibrahim, Walid M.                                                                                               |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Ikeda, Brian                                                                                                    |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Kanaan, Dina                                                                                                    |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Kaye, Matthew H.                                                                                                |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Kiani, Amirkianoosh                                                                                             |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Lang, Haoxiang                                                                                                  |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Lin, Xianke                                                                                                     |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Liu, Tao                                                                                                        |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Lu, Lixuan                                                                                                      |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Macdonald, Brendan                                                                                              |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Machrafi, Rachid                                                                                                |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Makrehchi, Masoud                                                                                               |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | McKellar, Jennifer                                                                                              |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Milman, Ruth                                                                                                    |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Mohammadi, Nasim Beigi                                                                                          |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Mohany, Atef                                                                                                    |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Nichita, Eleodor M.                                                                                             |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Pejhan, Shabnam                                                                                                 |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Phaneuf, Mario                                                                                                  |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Pioro, Igor                                                                                                     |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Pop-Iliev, Remon                                                                                                |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Qureshi Tanvir                                                                                                  |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Reddy, Bale                                                                                                     |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Ren, Jing                                                                                                       |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Rizvi, Ghaus M.                                                                                                 |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Rohrauer, Greg                                                                                                  |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Rosen, Marc                                                                                                     |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Roy, Langis                                                                                                     |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Rushton, Mitchell                                                                                               |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Saadatnia, Zia                                                                                                  |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Sami, Hani                                                                                                      |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Seo, Jaho                                                                                                       |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Shahbazpanahi, Shahram                                                                                          |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Sidhu, Tarlochan                                                                                                |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Tokuhiro, Akira                                                                                                 |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Waller, Edward                                                                                                  |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Wang, Ying                                                                                                      |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Williamson, Sheldon S.                                                                                          |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Yao, Kundi                                                                                                      |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Youssef, Mohamed Z.                                                                                             |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Yousefi, Samuel                                                                                                 |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          | Yurkewich, Aaron                                                                                                |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          |                                                                                                                 |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
|                                                          |                                                                                                                 |                                                                                   |                                                                                                                       |                                                                                                                                |             |                                                                                   |                                           |                                           |
| Total of V(1)(d)(i), (ii), (iii) & (iv) =                |                                                                                                                 |                                                                                   | 10% of V(1)(d)(i), (ii), (iii) & (iv) =                                                                               | 8.3                                                                                                                            |             | *cannot exceed 10% of V(1)(d)(i), (ii), (iii) & (iv) (where total is at least 10) |                                           |                                           |

| Health Sciences - Faculty Council Membership (2026-2027) |                                                                                           |                                                                  |                                                                                                        |                                                                                                                 |                                                                                   |                                                         |                         |                                      |
|----------------------------------------------------------|-------------------------------------------------------------------------------------------|------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------|-------------------------|--------------------------------------|
| Voting Members (as set out in Academic Council Handbook) |                                                                                           |                                                                  |                                                                                                        |                                                                                                                 |                                                                                   |                                                         |                         |                                      |
| V(1)(d)(i)                                               | V(1)(d)(ii)                                                                               | V(1)(d)(iii)                                                     | V(1)(d)(iv)                                                                                            | V(1)(d)(v)                                                                                                      | V(1)(d)(vi)                                                                       | V(1)(d)(vii)                                            | V(1)(g)                 | V(1)(h)                              |
| Dean, Associate Deans & Assistant Deans                  | Tenured/Tenure Track<br>(primary appt in Faculty including those on research/other leave) | Tenured/Tenure Track<br>(at least 25% secondary appt in Faculty) | Teaching Faculty<br>(full-time with primary appt in Faculty or at least 25% secondary appt in Faculty) | Representatives of Teaching Assistants & Part-Time Faculty*<br>(taught in Faculty at least 2 consecutive years) | Students*                                                                         | Professional/Managerial/Technical/Administrative Staff* | Ex-Officio (non-voting) | Executive Committee                  |
| Carol Rodgers                                            | Adam Cole                                                                                 |                                                                  | Courtney Cross                                                                                         | Sessional                                                                                                       | Amber Rizvi                                                                       | Amy Anderson                                            | Amanda Cooper           | Amy Anderson                         |
| Hilde Zitzelsberger                                      | Adam Dubrowski                                                                            |                                                                  | Elita Partosoedarso                                                                                    | TA                                                                                                              | Ifra Khurram                                                                      | Andrea Cope                                             | Brad MacIsaac           | Bernadette Murphy                    |
| Janet McCabe                                             | Bernadette Murphy                                                                         |                                                                  | Greg Hardy                                                                                             |                                                                                                                 | Sabrina Gallant                                                                   | Cindy Arnett                                            | Carolyn McGregor        | Carol Rodgers (Dean)                 |
| Nick Wattie                                              | Brenda Gamble                                                                             |                                                                  | Joseph Gurgis                                                                                          |                                                                                                                 | Sanaa Majoo                                                                       | Emily Daley                                             | Catherine Davidson      | Elita Partosoedarso                  |
|                                                          | Carol Rodgers                                                                             |                                                                  | Kylie Kierinkiewicz                                                                                    |                                                                                                                 | Zahara Afzali                                                                     | Emmeline Meens Miller                                   | Hossam Kishawy          | Greg Hardy                           |
|                                                          | Caroline Barakat                                                                          |                                                                  | Laura Banks                                                                                            |                                                                                                                 |                                                                                   | Ian Barker                                              | James Barnett           | Hilde Zitzelsberger                  |
|                                                          | Cassandra Lane (effc. Dec 1 2026)                                                         |                                                                  | Lavern Bourne                                                                                          |                                                                                                                 |                                                                                   | Jennifer Flintoff                                       | Jennifer MacInnis       | Janet McCabe                         |
|                                                          | David Rudoler                                                                             |                                                                  | Mikael Khan                                                                                            |                                                                                                                 |                                                                                   | Jenny Tolevski                                          | Joe Stokes              | Jennifer Abbass Dick                 |
|                                                          | Efrosini Papaconstantinou                                                                 |                                                                  | Milly Ryan-Harshman                                                                                    |                                                                                                                 |                                                                                   | Lynn Tulloch                                            | Ken Wilson              | Jenny Tolevski (recording secretary) |
|                                                          | Ginny Brunton                                                                             |                                                                  | Nancy Bergeron                                                                                         |                                                                                                                 |                                                                                   | Marsha Townsend                                         | Kimberley McCartney     | Lavern Bourne                        |
|                                                          | Heather Sprenger                                                                          |                                                                  | Nooshin Rotondi                                                                                        |                                                                                                                 |                                                                                   | Michelle Sutcliffe                                      | Les Jacobs              | Nick Wattie                          |
|                                                          | Hilde Zitzelsberger                                                                       |                                                                  | Sarah Mavor                                                                                            |                                                                                                                 |                                                                                   | Nate Ballantyne                                         | Lori Livingston         | Otto Sanchez                         |
|                                                          | Holly Jones Taggart                                                                       |                                                                  | Sownthariyah Senthilchelvan                                                                            |                                                                                                                 |                                                                                   | Nitharshana Premachandran                               | Mary Bluechardt         | Sugirthan Ganeswararajan             |
|                                                          | Janet McCabe                                                                              |                                                                  | DC Faculty                                                                                             |                                                                                                                 |                                                                                   | Poonam Cardoso                                          | Nicola Crow             |                                      |
|                                                          | Jennifer Abbass-Dick                                                                      |                                                                  | Arlene De La Rocha                                                                                     |                                                                                                                 |                                                                                   | Rodrigo Bazyl                                           | Pejman Mirza Babei      |                                      |
|                                                          | JoAnne Arcand                                                                             |                                                                  | Angela Miller                                                                                          |                                                                                                                 |                                                                                   | Ryan Foley                                              | Sarah Thrush            |                                      |
|                                                          | Joy Hutchinson                                                                            |                                                                  | Crystal Garvey                                                                                         |                                                                                                                 |                                                                                   | Samantha Provenzano                                     | Steven Murphy           |                                      |
|                                                          | Julia Wigmore                                                                             |                                                                  | Dana Chorney                                                                                           |                                                                                                                 |                                                                                   | Sugirthan Ganeswararajan                                | Thomas McMorrow         |                                      |
|                                                          | Meghann Lloyd                                                                             |                                                                  | Heather Glen                                                                                           |                                                                                                                 |                                                                                   | Tricia McMahon                                          |                         |                                      |
|                                                          | Mika Nonoyama                                                                             |                                                                  | Leslie Graham                                                                                          |                                                                                                                 |                                                                                   |                                                         |                         |                                      |
|                                                          | Niccholas La Delfa                                                                        |                                                                  | Tracey Persaud                                                                                         |                                                                                                                 |                                                                                   |                                                         |                         |                                      |
|                                                          | Nick Wattie                                                                               |                                                                  | Vanessa Rozario-Roy                                                                                    |                                                                                                                 |                                                                                   |                                                         |                         |                                      |
|                                                          | Otto Sanchez                                                                              |                                                                  | Rebecca Milburn (Dean)                                                                                 |                                                                                                                 |                                                                                   |                                                         |                         |                                      |
|                                                          | Paul Yelder                                                                               |                                                                  | Lindsey MacIntosh (AD)                                                                                 |                                                                                                                 |                                                                                   |                                                         |                         |                                      |
|                                                          | Pierre Côté                                                                               |                                                                  |                                                                                                        |                                                                                                                 |                                                                                   |                                                         |                         |                                      |
|                                                          | Robert Balogh                                                                             |                                                                  |                                                                                                        |                                                                                                                 |                                                                                   |                                                         |                         |                                      |
|                                                          | Samantha Horvath                                                                          |                                                                  | LTFM                                                                                                   |                                                                                                                 |                                                                                   |                                                         |                         |                                      |
|                                                          | Shilpa Dogra                                                                              |                                                                  | Winnie Wong                                                                                            |                                                                                                                 |                                                                                   |                                                         |                         |                                      |
|                                                          | Sue Coffey                                                                                |                                                                  | Joanna Yousif (LOA)                                                                                    |                                                                                                                 |                                                                                   |                                                         |                         |                                      |
|                                                          | Syed. M. Qadri                                                                            |                                                                  |                                                                                                        |                                                                                                                 |                                                                                   |                                                         |                         |                                      |
|                                                          | Toba Bryant                                                                               |                                                                  |                                                                                                        |                                                                                                                 |                                                                                   |                                                         |                         |                                      |
|                                                          | Winnie Sun                                                                                |                                                                  |                                                                                                        |                                                                                                                 |                                                                                   |                                                         |                         |                                      |
|                                                          |                                                                                           |                                                                  |                                                                                                        |                                                                                                                 |                                                                                   |                                                         |                         |                                      |
| Total of V(1)(d)(i), (ii), (iii) & (iv) =                |                                                                                           |                                                                  |                                                                                                        | 5.4                                                                                                             | *cannot exceed 10% of V(1)(d)(i), (ii), (iii) & (iv) (where total is at least 10) |                                                         |                         |                                      |
|                                                          | 54                                                                                        |                                                                  | 10% of V(1)(d)(i), (ii), (iii) & (iv) =                                                                |                                                                                                                 |                                                                                   |                                                         |                         |                                      |

| Science - Faculty Council Membership (2026-27)                   |                                                                                           |                                                                  |                                                                                                        |                                                                                                                 |                |                                                          |                         |                               |                             |
|------------------------------------------------------------------|-------------------------------------------------------------------------------------------|------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|----------------|----------------------------------------------------------|-------------------------|-------------------------------|-----------------------------|
| Voting Members (as set out in Academic Council Handbook)         |                                                                                           |                                                                  |                                                                                                        |                                                                                                                 |                |                                                          |                         |                               |                             |
| V(1)(d)(i)                                                       | V(1)(d)(ii)                                                                               | V(1)(d)(iii)                                                     | V(1)(d)(iv)                                                                                            | V(1)(d)(v)                                                                                                      | V(1)(d)(vi)    | V(1)(d)(vii)                                             | V(1)(g)                 | V(1)(h)                       | V(1)(j)                     |
| Dean, Associate Deans & Assistant Deans                          | Tenured/Tenure Track<br>(primary appt in Faculty including those on research/other leave) | Tenured/Tenure Track<br>(at least 25% secondary appt in Faculty) | Teaching Faculty<br>(full-time with primary appt in Faculty or at least 25% secondary appt in Faculty) | Representatives of Teaching Assistants & Part-Time Faculty*<br>(taught in Faculty at least 2 consecutive years) | Students*      | Professional/Managerial/ Technical/Administrative Staff* | Ex-Officio (non-voting) | Executive Committee           | Curriculum Committee        |
|                                                                  |                                                                                           |                                                                  |                                                                                                        |                                                                                                                 |                |                                                          |                         |                               |                             |
| Ken Wilson (Dean)                                                | Ali Neshati                                                                               |                                                                  | Ana Vakiloroyaei (Vice-Chair)                                                                          |                                                                                                                 | Dhanvin Ramesh | Gigi Law                                                 | Amanda Cooper           | Ken Wilson                    | Undergraduate               |
| Jeremy Bradbury (Assc Dean Research & GS)                        | Andrea Kirkwood                                                                           |                                                                  | Azar Shakoori                                                                                          |                                                                                                                 | Erin Giroux    | Mahboobeh Zabihhosseinian                                | Brad MacIlsac           | Ana Vakiloroyaei (Vice-Chair) | Randy Fortier (Chair)       |
| Randy Fortier (Assc Dean, Undergraduate & Experiential Learning) | Annie Lee                                                                                 |                                                                  | Cristen Hucaluk                                                                                        |                                                                                                                 | Shengqian Wang | Patricia MacMillan                                       | Carol Rodgers           | Cristen Hucaluk               | Patricia MacMillan          |
|                                                                  | Brad Easton                                                                               |                                                                  | George Stamatiou                                                                                       |                                                                                                                 |                | Richard Drake                                            | Carolyn McGregor        | Dario Bonetta                 | Eric Rapos                  |
|                                                                  | Christopher Collins                                                                       |                                                                  | Ilona Kletskin                                                                                         |                                                                                                                 |                |                                                          | Catherine Davidson      | Eric Rapos                    | Nelson LaFreniere           |
|                                                                  | Cristiano Politowski                                                                      |                                                                  | Joseph MacMillan                                                                                       |                                                                                                                 |                |                                                          | Hossam Kishawy          | Franco Gaspari                | George Stamatiou            |
|                                                                  | Dario Bonetta                                                                             |                                                                  | Kevin Coulter                                                                                          |                                                                                                                 |                |                                                          | Jamie Bruno             | George Stamatiou              | Greg Lewis                  |
|                                                                  | Denina Simmons                                                                            |                                                                  | Kimberly Nugent                                                                                        |                                                                                                                 |                |                                                          | Jennifer MacInnis       | Gigi Law                      | Cristen Hucaluk             |
|                                                                  | Drew Sauve                                                                                |                                                                  | Mariana Shimabukuro                                                                                    |                                                                                                                 |                |                                                          | Joe Stokes              | Greg Lewis                    | Rupinder Brar               |
|                                                                  | Faisal Qureshi                                                                            |                                                                  | Mary Olaveson                                                                                          |                                                                                                                 |                |                                                          | Krista Hester           | Jeremy Bradbury               | Sean Forrester              |
|                                                                  | Fedor Naumkin                                                                             |                                                                  | Michael Miljanovic                                                                                     |                                                                                                                 |                |                                                          | Les Jacobs              | Lennaert van Veen             | Kerry Morrison (non-voting) |
|                                                                  | Franco Gaspari                                                                            |                                                                  | Mihai Beligan                                                                                          |                                                                                                                 |                |                                                          | Lori Livingston         | Nelson LaFreniere             |                             |
|                                                                  | Greg Lewis                                                                                |                                                                  | Nelson Lafreniere                                                                                      |                                                                                                                 |                |                                                          | Mary Bluechardt         | Randy Fortier                 |                             |
|                                                                  | Kourosh Davoudi                                                                           |                                                                  | Paula Di Cato                                                                                          |                                                                                                                 |                |                                                          | Nicola Crow             | Rupinder Brar                 | Graduate                    |
|                                                                  | Helene LeBlanc                                                                            |                                                                  | Randy Fortier                                                                                          |                                                                                                                 |                |                                                          | Pejman Mirza-Babaei     | Sean Forrester                | Jeremy Bradbury (Chair)     |
|                                                                  | Hendrick de Haan                                                                          |                                                                  | Richard Bartholomew                                                                                    |                                                                                                                 |                |                                                          | Sarah Thrush            |                               | Dario Bonetta               |
|                                                                  | Jane Breen                                                                                |                                                                  | Rupinder Brar                                                                                          |                                                                                                                 |                |                                                          | Steven Murphy           |                               | Lennaert van Veen           |
|                                                                  | Janice Strap                                                                              |                                                                  | Sima Soltanpour                                                                                        |                                                                                                                 |                |                                                          | Thomas McMorrow         |                               | Franco Gaspari              |
|                                                                  | Jean-Paul Desaulniers                                                                     |                                                                  | Valeri Kapoustine                                                                                      |                                                                                                                 |                |                                                          |                         |                               |                             |
|                                                                  | Jeremy Bradbury                                                                           |                                                                  |                                                                                                        |                                                                                                                 |                |                                                          |                         |                               |                             |
|                                                                  | Ken Pu                                                                                    |                                                                  |                                                                                                        |                                                                                                                 |                |                                                          |                         |                               |                             |
|                                                                  | Lennaert van Veen                                                                         |                                                                  | D) Academic Associates (LTFM's)                                                                        |                                                                                                                 |                |                                                          |                         |                               |                             |
|                                                                  | Liliana Trevani                                                                           |                                                                  | Zahraa Ibrahim (Physics)                                                                               |                                                                                                                 |                |                                                          |                         |                               |                             |
|                                                                  | Mark Green                                                                                |                                                                  |                                                                                                        |                                                                                                                 |                |                                                          |                         |                               |                             |
|                                                                  | Mehran Ebrahimi                                                                           |                                                                  |                                                                                                        |                                                                                                                 |                |                                                          |                         |                               |                             |
|                                                                  | Muhammad Usman                                                                            |                                                                  |                                                                                                        |                                                                                                                 |                |                                                          |                         |                               |                             |
|                                                                  | Nisha Rani Agarwal                                                                        |                                                                  |                                                                                                        |                                                                                                                 |                |                                                          |                         |                               |                             |
|                                                                  | Olena Zenkina                                                                             |                                                                  |                                                                                                        |                                                                                                                 |                |                                                          |                         |                               |                             |
|                                                                  | Robert Bailey                                                                             |                                                                  |                                                                                                        |                                                                                                                 |                |                                                          |                         |                               |                             |
|                                                                  | Sean Bohun                                                                                |                                                                  |                                                                                                        |                                                                                                                 |                |                                                          |                         |                               |                             |
|                                                                  | Sean Forrester                                                                            |                                                                  |                                                                                                        |                                                                                                                 |                |                                                          |                         |                               |                             |
|                                                                  | Steven Livingstone                                                                        |                                                                  |                                                                                                        |                                                                                                                 |                |                                                          |                         |                               |                             |
|                                                                  | Theresa Stotesbury                                                                        |                                                                  |                                                                                                        |                                                                                                                 |                |                                                          |                         |                               |                             |
|                                                                  | Yuri Bolshan                                                                              |                                                                  |                                                                                                        |                                                                                                                 |                |                                                          |                         |                               |                             |
| 3                                                                | 34                                                                                        |                                                                  | 20                                                                                                     |                                                                                                                 | 3              | 4                                                        |                         |                               |                             |

Total of V(1)(d)(i), (ii), (iii) & (iv) = 57

10% of V(1)(d)(i), (ii), (iii) & (iv) = 5.7

\*cannot exceed 10% of V(1)(d)(i), (ii), (iii) & (iv) (where total is at least 10)

Quorum (50% +1) 29.5

| Education - Faculty Council Membership (2026 - 2027)        |                                                                                           |                                                                                                                               |                                                               |                                                                                                                                                                                   |                                                                                                                 |                                                                                   |                                                                                   |                                  |                       |
|-------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------------------------|-----------------------|
| Voting Members (as set out in Academic Council Handbook)    |                                                                                           |                                                                                                                               |                                                               |                                                                                                                                                                                   |                                                                                                                 |                                                                                   |                                                                                   |                                  |                       |
| V(1)(d)(i)                                                  | V(1)(d)(ii)                                                                               | V(1)(d)(ii)                                                                                                                   | V(1)(d)(iii)                                                  | V(1)(d)(iv)                                                                                                                                                                       | V(1)(d)(v)                                                                                                      | V(1)(d)(vi)                                                                       | V(1)(d)(vii)                                                                      | V(1)(g)                          | V(1)(h)               |
| Dean, Associate Deans & Assistant Deans                     | Tenured/Tenure Track<br>(primary appt in Faculty including those on research/other leave) | Teaching Faculty<br>(core faculty members with primary appointment in the Faculty including those on research or other leave) | Tenured/Tenure Track (at least 25% secondary appt in Faculty) | Academic Associates<br>(full-time academic associates holding a primary appt in the Faculty and all full-time academic associates holding at least 25% secondary appt in Faculty) | Representatives of Teaching Assistants & Part-Time Faculty*<br>(taught in Faculty at least 2 consecutive years) | Students*                                                                         | Professional/Managerial/Technical/Administrative Staff*                           | Ex-Officio (non-voting)          | Executive Committee   |
| Amanda Cooper, Dean                                         | Robin Kay (Vice-Chair)                                                                    | Alison Mann                                                                                                                   | Sharon Laucicella                                             | Matthew Morris                                                                                                                                                                    | Sessional Rep - Lois Agard (voting)                                                                             | Undergraduate Student: Serena Roney (voting)                                      | Aaron Mitchell (voting)                                                           | Brad MacIsaac                    | Amanda Cooper         |
| Christian Elia, Associate Dean - Undergraduate Studies      | Kenneth Gyamerah                                                                          | Brenda Jacobs                                                                                                                 |                                                               | Katie Higginbottom                                                                                                                                                                |                                                                                                                 | Graduate Student: Madison Westley (voting)                                        | Tamara Hamilton (voting)                                                          | Carol Rodgers                    | Joelle Rodway         |
| Joelle Rodway, Associate Dean Graduate Studies and Research | Diana Petrarca                                                                            | Diane Tepylo                                                                                                                  |                                                               | Iain Brodie                                                                                                                                                                       | Teaching Assist Rep - Julia DiSomma (voting)                                                                    |                                                                                   | Michelle Patterson                                                                | Catherine Davidson               | Gregory Wilson        |
|                                                             | Janette Hughes                                                                            | Sheila Rhodes                                                                                                                 |                                                               | Amanda Robinson                                                                                                                                                                   |                                                                                                                 |                                                                                   | Susan Snelling                                                                    | Ken Wilson                       | Christian Elia        |
|                                                             | Jennifer Laffier                                                                          | Stephanie Thompson                                                                                                            |                                                               | Greg Wilson                                                                                                                                                                       |                                                                                                                 |                                                                                   | Matt Lucchese                                                                     | Hossam Kishawy                   | Tamara Hamilton (admi |
|                                                             | Jia Li                                                                                    |                                                                                                                               |                                                               |                                                                                                                                                                                   |                                                                                                                 |                                                                                   | Kim Mitchell                                                                      | Mary Bluehardt                   | Alison Mann           |
|                                                             | Robyn Ruttenberg-Rozen                                                                    |                                                                                                                               |                                                               |                                                                                                                                                                                   |                                                                                                                 |                                                                                   |                                                                                   |                                  |                       |
|                                                             | Roland van Oostveen                                                                       |                                                                                                                               |                                                               |                                                                                                                                                                                   |                                                                                                                 |                                                                                   | Laina Andrews                                                                     | Les Jacobs                       | Roland van Oostveen   |
|                                                             | Wendy Barber                                                                              |                                                                                                                               |                                                               |                                                                                                                                                                                   |                                                                                                                 |                                                                                   | Nancy Papadimitrious                                                              | Lori Livingston                  |                       |
|                                                             | Laura Morrison                                                                            |                                                                                                                               |                                                               |                                                                                                                                                                                   |                                                                                                                 |                                                                                   | Jennifer Robb                                                                     | Nicola Crow                      |                       |
|                                                             | Allyson Eamer                                                                             |                                                                                                                               |                                                               |                                                                                                                                                                                   |                                                                                                                 |                                                                                   | Lidiya Anton                                                                      | Jennifer MacInnis                |                       |
|                                                             | Abi Sriharan                                                                              |                                                                                                                               |                                                               |                                                                                                                                                                                   |                                                                                                                 |                                                                                   | Ashley Veenhof                                                                    | Thomas McMorrow                  |                       |
|                                                             | Katrina Carbone                                                                           |                                                                                                                               |                                                               |                                                                                                                                                                                   |                                                                                                                 |                                                                                   | Rozita Bryant-Whitelaw                                                            | Steven Murphy                    |                       |
|                                                             | David Baidoo-Anu                                                                          |                                                                                                                               |                                                               |                                                                                                                                                                                   |                                                                                                                 |                                                                                   |                                                                                   | Vice-President Advancement - TBD |                       |
|                                                             | Robyn Read                                                                                |                                                                                                                               |                                                               |                                                                                                                                                                                   |                                                                                                                 |                                                                                   |                                                                                   | Kimberley McCartney              |                       |
|                                                             |                                                                                           |                                                                                                                               |                                                               |                                                                                                                                                                                   |                                                                                                                 |                                                                                   |                                                                                   | Joe Stokes                       |                       |
|                                                             |                                                                                           |                                                                                                                               |                                                               |                                                                                                                                                                                   |                                                                                                                 |                                                                                   |                                                                                   | Sarah Thrush                     |                       |
| Total Voters 35, quorum 18                                  |                                                                                           |                                                                                                                               |                                                               |                                                                                                                                                                                   |                                                                                                                 |                                                                                   |                                                                                   |                                  |                       |
|                                                             |                                                                                           |                                                                                                                               |                                                               |                                                                                                                                                                                   |                                                                                                                 |                                                                                   |                                                                                   |                                  |                       |
|                                                             |                                                                                           |                                                                                                                               |                                                               |                                                                                                                                                                                   |                                                                                                                 |                                                                                   |                                                                                   |                                  |                       |
|                                                             |                                                                                           |                                                                                                                               |                                                               |                                                                                                                                                                                   |                                                                                                                 |                                                                                   |                                                                                   |                                  |                       |
|                                                             |                                                                                           |                                                                                                                               |                                                               |                                                                                                                                                                                   | *cannot exceed 10% of V (1)(d)(i), (ii), (iii) & (iv) (where total is at least 10)                              | *cannot exceed 10% of V(1)(d)(i), (ii), (iii) & (iv) (where total is at least 10) | *cannot exceed 10% of V(1)(d)(i), (ii), (iii) & (iv) (where total is at least 10) |                                  |                       |

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## 2.9

Serena Roney - UG Student  
serena.roney@ontariotechu.net

Social Science & Humanities - Faculty Council Membership (2026-2027)

| Voting Members (as set out in Academic Council Handbook)      |                                                                                           |                                                                  |                                                                                                        |                                                                                                                 |               |                                                                                   |                         |                       |
|---------------------------------------------------------------|-------------------------------------------------------------------------------------------|------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|-----------------------------------------------------------------------------------|-------------------------|-----------------------|
| V(1)(d)(i)                                                    | V(1)(d)(ii)                                                                               | V(1)(d)(iii)                                                     | V(1)(d)(iv)                                                                                            | V(1)(d)(v)                                                                                                      | V(1)(d)(vi)   | V(1)(d)(vii)                                                                      | V(1)(g)                 | V(1)(h)               |
| Dean, Associate Deans & Assistant Deans                       | Tenured/Tenure Track<br>(primary appt in Faculty including those on research/other leave) | Tenured/Tenure Track<br>(at least 25% secondary appt in Faculty) | Teaching Faculty<br>(full-time with primary appt in Faculty or at least 25% secondary appt in Faculty) | Representatives of Teaching Assistants & Part-Time Faculty*<br>(taught in Faculty at least 2 consecutive years) | Students*     | Professional/Managerial/Technical/Administrative Staff*                           | Ex-Officio (non-voting) | Executive Committee   |
| Thomas McMorrow, Interim Dean                                 | Alyson King                                                                               |                                                                  | Assoc. Teaching Professors                                                                             | Teaching Assistant Rep                                                                                          | Ryan Stoddart | Aaron Mitchell                                                                    | Amanda Cooper           | Aaron Mitchell        |
| Karla Dhungana-Sainju, Associate Dean Research and Innovation | Amy Leach                                                                                 |                                                                  | Amir Mostaghim                                                                                         | Kaiden Kaba                                                                                                     |               | Amy Anderson                                                                      | Brad MacIsaac           | Amy Anderson          |
| Tyler Frederick, Associate Dean UG Student Experience         | Andrea Slane                                                                              |                                                                  | Pariss Garramone                                                                                       |                                                                                                                 |               | Dan Walters                                                                       | Carol Rodgers           | Andrea Slane          |
|                                                               | Arshia Zaidi                                                                              |                                                                  | Ruth Felder (On Leave)                                                                                 |                                                                                                                 |               | Michelle Patterson                                                                | Carolyn McGregor        | Dan Walters           |
|                                                               | Barb Perry                                                                                |                                                                  | Shannon Vettor                                                                                         | Sessional Rep                                                                                                   |               |                                                                                   | Catherine Davidson      | Hannah Scott          |
|                                                               | Bobby Stojanoski                                                                          |                                                                  | Steven Hayle                                                                                           | Peter Milonas                                                                                                   |               |                                                                                   | Hossam Kishawy          | Jessica Hagel         |
|                                                               | Carla Cesaroni                                                                            |                                                                  | Vivian Stamatopoulos                                                                                   |                                                                                                                 |               |                                                                                   | James Barnett           | Karla Dhungana-Sainju |
|                                                               | Christopher O'connor                                                                      |                                                                  | Tanya Karam Zanders                                                                                    |                                                                                                                 |               |                                                                                   | Jamie Bruno             | Karla Emeno           |
|                                                               | Emilia King                                                                               |                                                                  |                                                                                                        |                                                                                                                 |               |                                                                                   | Jennifer MacInnis       | Lindsay Malloy        |
|                                                               | Gary Genosko                                                                              |                                                                  | Sr. Teaching Professor                                                                                 |                                                                                                                 |               |                                                                                   | Joseph Stokes           | Olga Marques          |
|                                                               | Hannah Scott                                                                              |                                                                  | Andrea Braithwaite                                                                                     |                                                                                                                 |               |                                                                                   | Ken Wilson              | Scott Auqanno         |
|                                                               | Isabel Pedersen (On Leave)                                                                |                                                                  | Jordan Harel                                                                                           |                                                                                                                 |               |                                                                                   | Krista Hester           | Thomas McMorrow       |
|                                                               | James Walsh                                                                               |                                                                  | Timothy MacNeill                                                                                       |                                                                                                                 |               |                                                                                   | Les Jacobs              | Tyler Frederick       |
|                                                               | Jen Rinaldi                                                                               |                                                                  |                                                                                                        |                                                                                                                 |               |                                                                                   | Lori Livingston         |                       |
|                                                               | Joseph Eastwood (On Leave)                                                                |                                                                  | Academic Associate (limited term)                                                                      |                                                                                                                 |               |                                                                                   | Mary Bluechartdt        |                       |
|                                                               | Kanika Samuels Wortley                                                                    |                                                                  | Devyani Tewari                                                                                         |                                                                                                                 |               |                                                                                   | Nicola Crow             |                       |
|                                                               | Karla Emeno                                                                               |                                                                  | Justin Rawlins                                                                                         |                                                                                                                 |               |                                                                                   | Pejman Mirza-Babaei     |                       |
|                                                               | Kimberley Clow                                                                            |                                                                  | Leen Egeto                                                                                             |                                                                                                                 |               |                                                                                   | Sarah Thrush            |                       |
|                                                               | Leigh Harkins (On Leave)                                                                  |                                                                  | Nima Nakhaei                                                                                           |                                                                                                                 |               |                                                                                   | Steven Murphy           |                       |
|                                                               | Lindsay Malloy                                                                            |                                                                  |                                                                                                        |                                                                                                                 |               |                                                                                   | Thomas McMorrow         |                       |
|                                                               | Liqun Cao                                                                                 |                                                                  |                                                                                                        |                                                                                                                 |               |                                                                                   |                         |                       |
|                                                               | Logan Ewanation                                                                           |                                                                  |                                                                                                        |                                                                                                                 |               |                                                                                   |                         |                       |
|                                                               | Matthew Shane (On Leave)                                                                  |                                                                  |                                                                                                        |                                                                                                                 |               |                                                                                   |                         |                       |
|                                                               | Natalie Oman                                                                              |                                                                  |                                                                                                        |                                                                                                                 |               |                                                                                   |                         |                       |
|                                                               | Olga Marques                                                                              |                                                                  |                                                                                                        |                                                                                                                 |               |                                                                                   |                         |                       |
|                                                               | Peter Stoett (On Leave)                                                                   |                                                                  |                                                                                                        |                                                                                                                 |               |                                                                                   |                         |                       |
|                                                               | Phillip Shon                                                                              |                                                                  |                                                                                                        |                                                                                                                 |               |                                                                                   |                         |                       |
|                                                               | Rachel Ariss                                                                              |                                                                  |                                                                                                        |                                                                                                                 |               |                                                                                   |                         |                       |
|                                                               | Rebecca Lazarenko                                                                         |                                                                  |                                                                                                        |                                                                                                                 |               |                                                                                   |                         |                       |
|                                                               | Sasha Baglay                                                                              |                                                                  |                                                                                                        |                                                                                                                 |               |                                                                                   |                         |                       |
|                                                               | Scott Aquanno                                                                             |                                                                  |                                                                                                        |                                                                                                                 |               |                                                                                   |                         |                       |
|                                                               | Shahid Alvi                                                                               |                                                                  |                                                                                                        |                                                                                                                 |               |                                                                                   |                         |                       |
|                                                               | Shanti Fernando (On Leave)                                                                |                                                                  |                                                                                                        |                                                                                                                 |               |                                                                                   |                         |                       |
|                                                               | Sharon Lauricella                                                                         |                                                                  |                                                                                                        |                                                                                                                 |               |                                                                                   |                         |                       |
|                                                               | Steven Downing                                                                            |                                                                  |                                                                                                        |                                                                                                                 |               |                                                                                   |                         |                       |
|                                                               | Tanner Mirrlees                                                                           |                                                                  |                                                                                                        |                                                                                                                 |               |                                                                                   |                         |                       |
|                                                               | Taylor Heffer                                                                             |                                                                  |                                                                                                        |                                                                                                                 |               |                                                                                   |                         |                       |
|                                                               | Wesley Crichlow                                                                           |                                                                  |                                                                                                        |                                                                                                                 |               |                                                                                   |                         |                       |
|                                                               | Zenia Kish                                                                                |                                                                  | 10% of V(1)(d)(i), (ii), (iii) & (iv) =                                                                |                                                                                                                 |               |                                                                                   |                         |                       |
|                                                               |                                                                                           |                                                                  |                                                                                                        |                                                                                                                 |               |                                                                                   |                         |                       |
| Total of V(1)(d)(i), (ii), (iii) & (iv) =                     | 3+39+14=56                                                                                |                                                                  |                                                                                                        |                                                                                                                 |               | *cannot exceed 10% of V(1)(d)(i), (ii), (iii) & (iv) (where total is at least 10) |                         |                       |

## ACADEMIC COUNCIL REPORT

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### ACTION REQUESTED:

|                      |                                     |
|----------------------|-------------------------------------|
| Recommendation       | <input type="checkbox"/>            |
| Decision             | <input type="checkbox"/>            |
| Discussion/Direction | <input type="checkbox"/>            |
| Information          | <input checked="" type="checkbox"/> |

**DATE:** 22 September 2026

**FROM:** Graduate Studies Committee

**SUBJECT:** Minor Program Adjustment – PhD in Electrical and Computer Engineering, PhD in Mechanical Engineering, and PhD in Nuclear Engineering

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### COMMITTEE MANDATE:

In accordance with the Graduate Studies Committee (GSC) Terms of Reference, GSC has the responsibility “to approve minor program adjustments” and report them to Academic Council for information.

### BACKGROUND/CONTEXT & RATIONALE:

The change reduces the number of courses required for MASc to PhD transfer students from nine courses to seven courses. Upon transfer, a maximum of two courses taken during the MASc degree may be counted towards the PhD degree requirement. In addition, the student must fulfill all other requirements for the PhD degree.

Previously, students transferring from the MASc to the PhD program were required to complete the full set of degree requirements for both programs.

The reduced course load for MASc to PhD transfer students aligns with the practice of other institutions. Students will be able to better focus on their research with the reduction of the number of courses required.

### RESOURCES REQUIRED:

No additional resources required.

**TRANSITION PLAN:**

This change is effective as of Fall 2026. The Graduate Engineering Program Office will communicate this change to current students. New students as of Fall 2026 will only be required to complete seven courses.

**CONSULTATION AND APPROVAL:**

- ✓ FEAS Graduate Committee: 14 May 2026
- ✓ FEAS Faculty Council: 28 May 2026
- ✓ Graduate Studies Committee (Approval): 23 June 2026
- Academic Council (Information): 22 September 2026

**NEXT STEPS:**

After presentation to Academic Council, this change will be included in the 2027-2028 Academic Calendar.

**SUPPORTING REFERENCE MATERIALS:**

[Electrical and Computer Engineering, PhD](#)

[Mechanical Engineering, PhD](#)

[Nuclear Engineering, PhD](#)

## ACADEMIC COUNCIL REPORT

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**SESSION:**

Public  
Non-Public

☒  
☐**ACTION REQUESTED:**

Decision  
Discussion/Direction  
Information

☒  
☐  
☐

**TO:** Academic Council

**DATE:** September 22, 2026

**FROM:** Joe Stokes, Registrar

**SUBJECT:** Conferral of Degrees – Fall 2026

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**MANDATE:**

Article 1.1(a)(g) of By-law No. 2 provides that Academic Council has the authority to establish the procedures necessary to grant bachelor's degrees, master's degrees, doctoral degrees, honorary degrees and all other degrees, certificates, and diplomas in any and all branches of learning.

**MOTION for CONSIDERATION:**

*That pursuant to the recommendations of each Faculty and the Registrar, Academic Council hereby confirms the eligibility for graduation of those students who have fulfilled all degree requirements at the end of the Fall 2026 term and recommends the conferral of degrees by the Chancellor.*