

SENATE EXECUTIVE COMMITTEE

Monday April 22, 2024
3:30 p.m. – 4:30 p.m. EST
NH 3308

TIMING	AGENDA ITEM	PAGE	ACTION
	OPEN SESSION		
3:30 p.m.	1. Minutes of March 25, 2024 and Business Arising To approve the minutes as distributed/amended.	3	Decision
3:35 p.m. (10 min)	2. Recommendation re: Academic Quality Enhancement Committee To recommend that Senate approve the creation of the proposed Academic Quality Enhancement Committee, as presented.	5	Decision
3:45 p.m. (5 min)	3. Recommendation re: Filling Vacancies on Senate Committees/Councils NB: Report to be distributed separately following Senate elections.		Decision
3:50 p.m. (10 min)	4. Guidelines for Visitors to Senate Meetings	11	Oral/Discussion
4:00 p.m. (15 min)	5. Draft May 6, 2024 Senate Agenda To approve the May 6, 2024 Senate agenda, as presented/amended	15	Decision
	6. Other Business		Input
	CONFIDENTIAL SESSION Committee members, Secretariat and Technical Staff as required		
4:15 p.m. (15 min)	7. Senate Self-Evaluation Survey Results	91	Oral/Discussion
	8. Other Business		Input
	9. Next Meeting: Tuesday May 28, 2024 from 3:30-4:30 p.m.		

April 16, 2024

Mike Grivicic
Associate University Secretary

University of Waterloo
SENATE EXECUTIVE COMMITTEE
Minutes of the March 25, 2024 Meeting
[in agenda order]

Present: Joan Coutu, Laura Deakin, Jack deGooyer, Catherine Dong, Vivek Goel (chair), Mike Grivicic (secretary), Christiane Lemieux, Rory Norris, David Porreca, Mary Robinson, James Rush, Sharon Tucker, Clarence Woudsma

Guests: David DeVidi, Jenny Flagler-George, Genevieve Gauthier-Chalifour, Diana Goncalves, Andrea Kelman, Tim Weber-Kraljevski

Regrets: Jeff Casello, Carol Ann MacGregor, Luke Potwarka

1. MINUTES OF THE FEBRUARY 20, 2024 MEETING AND BUSINESS ARISING

A motion was heard to approve the minutes as distributed. Deakin and Porreca. Carried. There was no business arising.

2. NOMINATIONS TO SENATE COMMITTEES/COUNCILS AND TO THE BOARD OF GOVERNORS

The committee heard that these reports were still in progress and awaiting a number of nominations, and by consensus agreed that the reports be brought forward directly to Senate on behalf of the committee. A motion was heard to recommend that Senate acclaim the membership of Senate committees and councils and the Board of Governors as provided on the list of nominees to approve, and to recommend that Senate delegate approval to the Senate Executive Committee for any vacancies which remain. Porreca and Dong. Carried. The Secretariat is undertaking to review the process for gathering these nominations to foster maximum transparency and will also assess how to time these processes to flow smoothly to Senate.

3. DELEGATION OF AUTHORITY FOR THE ROSTER OF GRADUANDS

The chair spoke to the report and recommendation, noting that this approach was developed in 2023 to facilitate the process for approval of thousands of graduands and allows greater flexibility in securing last minute approvals. A motion was heard to recommend that Senate approve the delegation of its authority for the approval of the roster of graduands jointly to the chair and vice-chair of Senate, for convocation ceremonies scheduled in June 2024 and October 2024, and to recommend that Senate direct that a report on the complete roster of graduands be presented for information to the Senate meeting following the relevant convocation. Deakin and Dong. Carried.

4. GUIDELINES FOR VISITORS TO SENATE MEETINGS

Gauthier-Chalifour pointed to applicable provisions in the Senate bylaws and in University policies and indicated that guidelines would provide practical guidance on good practices for Senate in approving representations, registration of delegations etc.; a parallel process is also underway for the Board of Governors and could glean from established practices at comparator universities. By consensus, members agreed with the proposed approach.

5. GUIDELINES FOR MINUTES OF MEETINGS

The chair recalled a recent Senate meeting where the drafting of the minutes arose as a point of discussion, and observed that developing such guidelines was under consideration prior to that. Prospective guidelines would help to set expectations and could be posted publicly. Members noted that a considerable range of acceptable practice exists in this space, and that the while current practices have generally been satisfactory it would be beneficial to reflect the variability of the discussion without inviting dilatory debate.

6. SENATE SELF-EVALUATION SURVEY RESULTS

The survey has been issued and closes later today; once closed, the Secretariat will proceed to prepare a report at the aggregate level which would be transitory to a summative report to Senate. The aim of this approach would be to provide some of the available data before terms expire for outgoing Senators, and to do a deeper dive into the data at a future meeting of Senate Executive Committee. [Note: the survey data was not forwarded to Senate for the April cycle, and a report will be brought to the committee for the next meeting]

7. DRAFT APRIL 8, 2024 SENATE AGENDA

Members discussed the draft agenda and highlighted: plan to invite teaching award recipients to speak at Senate on their experiences and what they enjoy about teaching; significant portion of the meeting is likely to be allocated to discussion of the draft operating budget; the report re: ADDS status will be switched from the consent agenda to the

regular agenda. A motion was heard to approve the April 8, 2024 Senate agenda as amended. Lemieux and Porreca. Carried.

8. OTHER BUSINESS

Coutu suggested that Senate would benefit from a discussion of what accessibility accommodations are generally considered to be reasonable, and this might include an overview from staff who routinely work in this space. DeVidi observed that the Accessible Education Project is examining guidelines pertaining to accessibility for students with the aim to provide clarity for these questions. By consensus, members agreed to arrange for a presentation on the Accessible Education Project at an upcoming Senate meeting.

9. NEXT MEETING – Monday April 22, 2024 from 3:30-4:30 p.m.

April 9, 2024

Mike Grivicic
Associate University Secretary

Senate Graduate & Research Council and Senate Undergraduate Council

For Discussion

Open Session

To: **Senate Executive Committee**

Sponsor/Presenters:

David DeVidi
Associate Vice-President, Academic

Jeff Casello
Associate Vice-President, Graduate Studies and Postdoctoral Affairs

Gen Gauthier-Chalifour
University Secretary

Date of Meeting: April 22, 2024

Agenda Item Identification: **Senate Governance Review Recommendation:
Academic Quality Enhancement (AQuE) Committee**

Recommendation/Motion:

To recommend Senate approve the creation of the proposed Academic Quality Enhancement (AQuE) Committee of Senate, as presented.

Summary:

In response to a request to all Senate Committees as part of the Senate Governance Review, both the Senate Graduate & Research Council (SGRC) and Senate Undergraduate Council (SUC) have engaged in a review of their terms of references and, after a series of strategic discussions that occurred from December 2022 to November 2023, are bringing forward recommendations to Senate Executive Committee.

As part of this process and in consultation with the Provost and Dean's Council, SGRC and SUC are proposing the creation of a new AQuE Committee of Senate. The draft proposal of the committee's composition and remit is included below.

The AQuE Committee would oversee the quality assurance processes related to academic programming and the formation of the new committee would take the current Institutional Quality Assurance Process (IQAP) process from SGRC and SUC. This change would remove a significant volume of work from the SGRC and SUC agendas, allowing those bodies to give greater focus and attention to issues of strategic priority within the remit of those Councils. More importantly, this change will streamline the approval processes for program reviews, progress reports, and any additional quality assurance processes that the University implements for other categories of

academic programming while improving the quality of the feedback that programs receive during the approval process.

With initial endorsement of the creation of the new committee from both SGRC and SUC, the Associate Vice-President, Academic (AVPA) and the Associate Vice-President, Graduate Studies and Postdoctoral Affairs (AVPGSPA) have worked in collaboration with the Academic Quality Enhancement Office (formerly the Quality Assurance Office) and the Secretariat to develop draft terms of reference for the AQuE Committee which are included with this report. On recommendation of the Secretariat, it is proposed that the terms of reference lie outside of Bylaw 2, as is done with the Senate Honorary Degrees Committee, as the proposed committee's mandate is from the IQAP and not the University of Waterloo Act (1972). Dean's Council, SUC, and SGRC have now endorsed the proposed terms of reference for recommendation to Senate for final approval through Senate Executive Committee.

Governance Path:

Senate Graduate & Research Council initial endorsement (mm/dd/yy): 11/13/23

Senate Graduate & Research Council endorsement of the terms of reference (mm/dd/yy): 04/08/24

Senate Undergraduate Council initial endorsement (mm/dd/yy): 04/11/23

Senate Undergraduate Council endorsement of the terms of reference (mm/dd/yy): 04/09/24

Proposal:

That Senate creates a new AQuE Committee of Senate.

Contextual Remarks:

A review was conducted of comparator institutions across the province, which found that at least seven Ontario universities have a special committee that is responsible for IQAP business. These include some of Waterloo's frequent comparators: McMaster, Ottawa, Queens and Western. In one case, the special committee is a joint committee of the analogous Senate bodies responsible for undergraduate and graduate academic programming; for the remainder, the committee is one created by the Senate (or analogue) and is devoted specifically to IQAP business.

Counting non-voting "resource" members, six of the seven committees from other institutions have memberships of about 10-15 (three have 10 members, two have 12, one has 15), while Western's committee has 24 members. The mandates of the committees vary slightly, but generally each includes receiving and reviewing Final Assessment Reports (FARs), and the local analogue of Progress Reports, with empowerment to approve said reports on behalf of Senate.

The comparators' activities also include reviewing and approving the responses to reviewers' recommendations from the program and dean(s), as well as implementation plans. To varying degrees, the comparators allocate a nominal oversight role for the IQAP processes with some comparators recommending (via the committee Chair(s)) revisions to the IQAP to Senate. A subset of comparators has embedded their committees more closely in the IQAP operations/ processes. For at least two comparators, the committee is involved in the approval of new academic programs.

Most of these committees are chaired by the AVPA/analogue, and one is co-chaired with AVPGSPA/analogue. Some committees include student members, but several do not. Not counting cases where the AVPGSPA analogue is a Dean of Grad Studies, only one requires that a faculty dean be a member.

Proposed Structure and Remit for Academic Quality Enhancement Committee:

In consideration of comparators' practices as well as the unique needs at Waterloo, SUC and SGRC have endorsed a proposed committee with ten voting members and two non-voting resources, with membership as follows:

1. The AVPA [co-Chair]
2. The AVPGSPA [co-Chair]
3. Three (3) faculty members appointed from among the membership of SUC [two-year term; Affiliated and Federated Institutions of Waterloo (AFIW) members of SUC are eligible but not required]
4. Three (3) faculty members appointed from among the membership of SGRC [two-year term, with SUC and SGRC terms staggered]
5. One (1) undergraduate student Senator
6. One (1) graduate student Senator
7. Director, Academic Quality Enhancement Office, or delegate, as a non-voting resource
8. Registrar, or delegate, as a non-voting resource

The streamlined remit for the committee recommends a smaller and more efficient committee, hence the proposed membership.

SUC and SGRC have endorsed the proposed remit of the committee, as follows:

1. On behalf of Senate, to review and approve academic quality assurance reports including Final Assessment Reports (FAR) and related implementation plans, and Progress Reports (PR) within the IQAP, with reporting to Senate on all decisions made thereon.
2. On behalf of Senate, to receive and approve all continuous assessments of credentialing programs that fall outside the remit of the IQAP (e.g., for 'microcredentials' or academic initiatives that do not result in degrees or diplomas, such as the Undergraduate Communications Requirements), with reporting to Senate on all decisions made thereon.
3. To report on and make recommendations to Senate on institutional quality assurance processes. This activity will normally occur in consultation with the administrators and staff responsible for the quality assurance function.

While approval of new academic programs is part of the remit at some universities, it is the view of SGRC and SUC that this would not be appropriate for Waterloo at this time and that these matters would continue to be the responsibility of SUC/SGRC.

Proposed Processes for Reviewing and Approving FARs and PRs:

SUC and SGRC have also endorsed the following proposed processes for reviewing and approving FARs and PRs.

As a first step, each FAR/PR is to be read by either the AVPA or the AVPGSPA with the choice of reader being based on academic focus, as well as availability. Following this reading, the AVP will communicate comments/questions to the authors of the report for potential revisions. Once the report is judged by the AVP to be sufficiently ready for

further review it will be shared with the other members of the committee, and this may consist also of sharing the report with the less-pressing questions/comments from the AVP.

Based on the likely degree of discussion of a particular FAR/PR (as judged by the AVP), the AVP will bring forward the report to the committee in one of two processes:

- a. Asynchronous/online process: Committee members questions are gathered and shared with the program. When the program's responses are received, all members' questions and the program's responses will be shared with the committee. This process can be iterated as necessary. Approval of the report may be completed via electronic vote.
- b. Synchronous/in-person meeting process: Representatives of the program attend a meeting to answer questions. After hearing from the program representative, the committee votes. Committee members may request for a given process to move from (a) to (b) at any time.

Possible outcomes of the process are:

- a. Approval of the report with no revisions;
- b. Approval of the report contingent upon the completion of minor revisions to be verified and approved by the AQuE Office; or
- c. A request for substantial revisions to the report which requires a restarting of the evaluation process.

The committee then reports to Senate on its approvals, normally three or four times per year.

Proposed Terms of Reference:

The below draft terms of reference for an Academic Quality Enhancement Committee have been developed by the AVPA and AVPGSPA, in collaboration with the Academic Quality Enhancement Office and the Secretariat, following the initial endorsement from both SGRC and SUC. Final approval of the new committee will be by Senate.

Academic Quality Enhancement Committee – Terms of reference

The Academic Quality Enhancement Committee shall have the following powers and duties:

1. To consider, study, and review all matters pertaining to the University's Institutional Quality Assurance Process (IQAP), and make recommendations to Senate, thereon. In the case of editorial changes to the IQAP, consider and approve such changes on behalf of Senate, and report to Senate for information.
2. On behalf of Senate, consider and approve all Final Assessment Reports and Progress Reports within the University's IQAP, and provide Senate with a summary of council's deliberations in this regard. Any matter of controversy that might arise may be referred to Senate.
3. On behalf of Senate, consider and approve any aspects of the quality enhancement processes that fall outside the remit of the IQAP, and provide Senate with a summary of council's deliberations in this regard. Any matter of controversy that might arise may be referred to Senate.

The membership of this committee shall consist of the following:

- The associate vice-president, academic, who shall co-chair this committee.
- The associate vice-president, graduate studies and postdoctoral affairs, who shall co-chair this committee.
- Three faculty members, drawn from either the ex-officio or elected/appointed members of the Undergraduate Council of Senate, who shall serve for a term of two years, appointed on the recommendation of the Undergraduate Council.
- Three faculty members, drawn from either the ex-officio or elected/appointed members of the Graduate & Research Council of Senate, who shall serve for a term of two years, appointed on the recommendation of the Graduate & Research Council.
- Two members of Senate from the elected student members, one of whom shall be an undergraduate student and one of whom shall be a graduate student.

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1. General

These Guidelines are intended to outline attendance expectations for visitors to meetings of the University of Waterloo Senate and its standing committees and councils. It is the expectation that the business of these meetings can proceed appropriately and with full attention to a comfortable, safe and secure environment for all meeting participants.

These Guidelines describe measures that are consistent with the *University of Waterloo Act, 1972* ("the Act"), as amended, Senate Bylaws and other University policies and protocols addressing individual conduct, safety and security.¹

2. Authority

The Act requires that meetings of Senate be open to the public.

Senate Bylaw 1, s.6.02, provides that, "Non-members in attendance at meetings shall not disrupt the proceedings of the meeting nor cause any disturbance by unreasonable noise or vocal expression. The chair may remove any such person when, in the chair's sole judgment, such person is engaging in improper or disruptive conduct that is detrimental to Senate carrying out its business."

The Act, and Senate Bylaw 1, provide for circumstances in which a meeting of Senate or its committees and councils is held in closed session, "for the purpose of considering confidential financial matters of the university of where intimate financial or personal matters of any person may be disclosed".²

3. Registration of Attendance

- 3.1. Visitors who wish to attend and observe proceedings of the open session of a Senate or Senate standing committee or council meeting must register with the Secretariat in advance of the meeting.
- 3.2. In cases where the number of visitors wishing to attend an open session meeting exceeds the physical capacity of the meeting room, space will be granted to individuals in order of their advance registration with the Secretariat until such time as the meeting has commenced, and thereafter to individuals in order of their arrival at the meeting.
- 3.3. Visitors may be required to sign-in upon arrival at the meeting and the names provided through this process may be listed among the attendees included in the official minutes of the meeting.

4. Representations to Senate

- 4.1. Members of the University community wishing to make representations to a meeting of Senate must file their request with the Secretariat, in writing, by noon on the day of the Senate Executive Committee

¹ <https://uwaterloo.ca/secretariat/policies-guidelines-signing-procedures>

² Senate Bylaw 1, s.7

meeting that precedes the scheduled regular meeting of Senate, as published on the Secretariat website, and include the nature of the proposed representation.

- 4.2. Requests are considered by the Senate Executive Committee and granted with approval from Senate when the agenda is considered.
- 4.3. Speakers are required to limit their remarks to five minutes.
- 4.4. Speakers shall avoid personal attacks or offensive references to any individual.
- 4.5. A maximum of fifteen minutes may be devoted to representations from individuals and groups who wish to address the members of Senate. These statements will normally be heard following dispensation of the minutes.
- 4.6. If more than three requests for representations are received for a given Senate meeting, they will be considered by the Senate Executive Committee in the order received.
- 4.7. An individual or group may bring a representation to Senate on a given subject matter once in a Senate meeting cycle (May 1 to April 30).
- 4.8. The Senate Executive Committee has the authority to adapt the process outlined in these guidelines in cases where its application is uncertain.

5. Representations to Senate Standing Committees and Councils

- 5.1. Senate Bylaw 1, s.9.01, provides that “Any members of the university community, or of the public-at-large, wishing to make representations to any meeting of a committee or council shall file with the secretary of the relevant committee or council, at least two full working days prior to the date of such proposed meeting, written notice to that effect with such notice to designate the nature of the proposed representations.”³
- 5.2. Requests for representations to a Senate standing committee or council will be considered by the respective chair and granted with approval from the committee when the agenda is considered.
- 5.3. The provisions in sections 4.3 to 4.8 of these guidelines shall also apply in the case of representations to a Senate standing committee or council.

6. Order and Decorum

- 6.1. As the presiding officer of the meeting, the Chair is responsible for maintaining order and decorum at meetings.
- 6.2. Only duly appointed and elected members of Senate and its standing committees and councils may participate in debate and/or sit at the table. Members of senior administration and/or resource persons who attend meetings of Senate or a standing committee or council to facilitate its work may be called upon to respond to questions. Visitors to meetings do not have speaking privileges unless otherwise provided by the Chair.
- 6.3. Interference with the progress of a meeting by a visitor will not be permitted and any visitor who attempts to impede the business of the meeting will be instructed by the Chair to leave.

³ Senate Bylaw 1, s.9.01 is specific to standing committees and councils of Senate, and does not apply to the body Senate as a whole.

7. Recording of Meetings

Audio and/or video recording or transmittal of meetings is not permitted. The Secretariat may cause the meeting to be recorded for minute-taking purposes. Such recordings will be held confidentially and securely on University-supported servers and destroyed following approval of the respective minutes.

8. Contact

Questions related to these guidelines should be directed to the Secretariat at senate@uwaterloo.ca.

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SENATE

MONDAY May 6, 2024

3:30 P.M. EST

NH 3407 / Zoom

[Governing Documents and Resources](#)

TIMING	AGENDA ITEM	PAGE	ACTION
	OPEN SESSION		
3:30 p.m.	1. Territorial Acknowledgement (Marcus Shantz)	Oral	
	2. Conflict of Interest	Oral	Declaration
	3. Approval of the Agenda, and Approval of the Consent Agenda To approve the agenda as presented/amended, and to approve or receive for information the items on the consent agenda, listed as items 13-19 of the Senate agenda.	Oral	Decision
	4. Minutes of the April 8, 2024 Meeting To approve the minutes of the April 8, 2024 meeting as distributed/amended.	19	Decision
	5. Business Arising from the Minutes a. Reporting to follow up from representation at April Senate meeting	TBD	TBD
3:40 p.m. (10 mins)	6. Teaching Award Winners a. Carol Hulls – recipient of the Distinguished Teacher Award b. Shannon Kennelly – recipient of the Amit & Meena Chakma Award for Exceptional Teaching by a Student	Oral	Information
3:50 p.m. (20 mins)	7. Report of the President a. President’s Update	Oral	Information
4:10 p.m. (10 mins)	8. Reports – Senate Graduate and Research Council a. Major Modifications – Civil Engineering, Co-Operative Program To approve the proposed major modifications to the Master of Engineering (MEng) in Civil Engineering – Co-operative Program, effective September 1, 2024, as presented.	25	Decision
	b. Major Modifications – Chemical Engineering To approve the proposed major modifications to the Doctor of Philosophy (PhD) and Master of Engineering (MEng) in Chemical Engineering, effective September 1, 2024, as presented.	41	Decision

TIMING	AGENDA ITEM	PAGE	ACTION
	<ul style="list-style-type: none"> c. Regulation Revisions – Approved Doctoral Dissertation Supervisors To approve the proposed academic regulation revisions to the Approved Doctoral Dissertation Supervisors (ADDS) section of the Graduate Studies Academic Calendar (GSAC), effective September 1, 2024, as presented 	##	Decision
4:20 p.m. (5 mins)	9. Report – Senate Undergraduate Council <ul style="list-style-type: none"> a. Major Modifications – Recreation and Leisure Studies, and Recreation and Sport Business To approve the proposed major modifications to Honours Recreation and Leisure Studies, and Honours Recreation and Sport Business, effective September 1, 2025, as presented. 	45	Decision
4:25 p.m. (15 mins)	10. Report – Senate Long Range Planning Committee <ul style="list-style-type: none"> a. Waterloo Values – Review of Draft Values Statement That Senate endorse the Values Statement as presented in the attachment to this report, and further to recommend that the Board of Governors give final approval to the same Values Statement. 	57	Discussion / Decision
4:40 p.m. (10 mins)	11. Reports – Senate Executive Committee <ul style="list-style-type: none"> a. Guidelines for Senate Visitors [to be determined] b. Recommendation re: Academic Quality Enhancement Committee [NB: subject to recommendation at April 22 SEC] 	##	TBD
	12. Report - Honorary Degrees Committee: Spring 2024 Convocation List of Honorands	##	Decision
4:50 p.m. (5 mins)	Consent Agenda <i>Motion: To approve or receive for information the items on the consent agenda, listed as items 13-19 of the Senate agenda</i>		
	13. Senate Work Plan	61	Information
	14. Report – Senate Graduate & Research Council	63	Information
	15. Report – Senate Undergraduate Council	65	Information
	16. Report – Senate Long Range Planning Committee	67	Information
	17. Report - Vice-President, Research & International - Awards, Distinctions, Grants, Waterloo International Engagements	69	Information
	18. Report of the Vice-President, Academic and Provost <ul style="list-style-type: none"> a. Faculty Appointments, Leaves 	71	Information
		##	Information

TIMING	AGENDA ITEM	PAGE	ACTION
4:55p.m.	19. Report – COU Academic Colleague	83	Information
	20. Other Business	Oral	
	CONFIDENTIAL Senators, Vice-Presidents, Secretariat and Technical Staff as required		
	21. Minutes of the April 8, 2024 Meeting To approve the minutes of the April 8, 2024 meeting as distributed/amended.	87	Decision
	22. Business Arising from the Minutes	Oral	Input
5:00 p.m. (10 mins)	23. Report of the President a. Recommendation for Associate Professor, Emeritus designation	89	Decision
	24. Recommendation re: Dean of Arts Nominating Committee To be distributed separately	##	Decision
5:10 p.m. (10 mins)	25. Senate Self-Evaluation Survey Results (report from SEC) To be distributed separately	##	Decision
	26. Other Business	Oral	Input
	27. Adjournment		

April 29, 2024

Mike Grivicic
Associate University Secretary to
Senate

Important Dates

June 10, 2024	Senate Meeting
June 18, 2024	Board of Governors Meeting
June 27-28, 2024	International Conference – From Targeting Academia to Promoting Trust and Understanding
September 23, 2024	Senate Meeting
September 25, 2024	Board & Senate Retreat
October 21, 2024	Senate Meeting
October 29, 2024	Board of Governors Meeting

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University of Waterloo
SENATE
Minutes of the Monday April 8, 2024 Meeting
[in agenda order]

Present: John Abraham, Nasser Abukhdeir, Marc Aucoin, Aubrey Basdeo, Jean Becker, Jeff Casello, Judy Castaneda, Trevor Charles, Joan Coutu, Kristine Dalton, Laura Deakin, Charmaine Dean, David DeVidi, Catherine Dong, Aiman Fatima, Mark Ferro, Bruce Frayne, Murray Gamble, Genevieve Gauthier-Chalifour (Secretary), Vivek Goel (Chair), Mike Grivicic (Associate Secretary), Vikas Gupta, David Ha, Peter Hall, Kevin Hare, Neela Hassan, Chris Houser, Nadine Ibrahim, Narveen Jandu, Acey Kaspar, Scott Kline, Christiane Lemieux, Xianguo Li, Lili Liu, Jennifer Lynes Murray, Stephanie Maaz, Ellen MacEachen, Carol Ann MacGregor, Blake Madill, Colleen Maxwell, Peter Meehan, Kristiina Montero, Richard Myers, Cathy Newell Kelly, Christopher Nielsen, Rory Norris, James Nugent, Erin O'Connell, Troy Osborne, David Porreca, Jacinda Reitsma, Cynthia Richard, Mary Robinson, James Rush, John Saabas, Labibah Salim J Ali, Beth Sandore Namachchivaya, Rida Sayed, Asher Scaini, Marcus Shantz, Siva Sivoththaman, James Skidmore, Christopher Taylor, Sharon Tucker, Diana Vangelisti, Dan Weber, Stanley Woo, Clarence Woudsma, Annie Yang

Guests: Katherine Acheson, Faisal Al-Faisal, Rebecca Butler, Aldo Caputo, Nenone Donaldson, Skyler Duggan, Bernard Duncker, Donna Ellis, Becky Elming, Melanie Figueiredo, Jenny Flagler-George, Barbara Forrest, Diana Goncalves, Bryan Grimwood, Sarah Hadley, Michelle Hollis, Diane Johnston, Ahmad Kamal, Andrea Kelman, Nick Manning, Eleanor McMahon, Nicholas Pfeifle, Chris Read, Karl Schuett, Greg Smith, Allan Starr, Brandon Sweet, Tim Weber-Kraljevski, Sarah Willey-Thomas

Absent: Sheila Ager*, Lisa Aultman-Hall, Kim Cuddington, Jack DeGooyer, Paul Fieguth*, Wendy Fletcher*, Mark Giesbrecht*, Rob Gorbet*, Kelly Grindrod, Natalie Hutchings*, Sonia Ismail, Martin Karsten*, Achim Kempf*, Veronica Kitchen, Alysia Kolentis*, Brad Lushman, Shana MacDonald, Luke Potwarka, Sivabal Sivaloganathan, Graeme Turner, Mary Wells, Changbao Wu

*regrets

OPEN SESSION

The chair welcomed Senators to the meeting and offered remarks:

- Senate elections were completed last month, with new Senators starting at the May meeting;
- Three new University Professors announced - Raouf Boutaba (Computer Science), Philippe Van Cappellen (Earth & Environmental Sciences), and En-hui Yang (Electrical and Computer Engineering)
- Appointment of Dr. Jennifer Gillies to the position of Associate Provost, Campus Support and Accessibility, effective March 4
- The May Senate meeting will include an item on Waterloo's Values, which will be discussed at the Senate Long Range Planning Committee on April 10.

The chair recognized those Senators whose terms end on April 30, 2024 and thanked them for their service to the University.

1. TERRITORIAL ACKNOWLEDGEMENT

Jennifer Lynes Murray offered a territorial acknowledgement along with a personal reflection.

2. CONFLICT OF INTEREST

Senators were asked to declare any conflicts they may have in relation to the items on the agenda. No conflicts were declared.

3. APPROVAL OF THE AGENDA, AND APPROVAL OF THE CONSENT AGENDA

The chair suggested amendments to allow a student representation after item 5, and to withdraw item 9(c) pending further consultation. A motion was heard to approve the agenda as amended, and to

approve or receive for information the items on the consent agenda, listed as items 12-16 of the Senate agenda. Porreca and Casello. Carried.

4. MINUTES OF THE MARCH 4, 2024 MEETING

A motion was heard to approve the minutes as distributed. Kline and Porreca. Carried.

5. BUSINESS ARISING FROM THE MINUTES

There was no business arising.

Representation

Ahmad Kamal addressed Senate as follows: called for a moment of silence for Sofyan Taya; expressed dissatisfaction with the University's stance of principled neutrality with respect to the ongoing situation in Gaza; called on the University to sever research and academic ties with Technion and other Israeli universities in relation to those universities' relationship with the military, and divestment from organizations that supply military equipment to Israel; expressed the destruction of schools, universities and libraries in Gaza and targeting of academics amounts to scholasticide; asserted the University should call for an arms embargo, and demanded a statement on the passing of Dr. Taya.

The Chair observed: the University condemns the violence in Gaza and supports the calls for a ceasefire and for the release of hostages; academic freedom includes the free flow of academic collaborations and supporting faculty members and students in these collaborations; the research funds in question are not direct expenditures of the University but are external funds. The Vice-President Research & International further iterated: significant concern with the war and violence in Gaza; the areas of research in question are in quantum, nanotechnology and water; as is the case for much cutting-edge research in fields like quantum computing and at this institution broadly, it is possible to apply advances in knowledge to areas outside their original purpose, here that would be much longer term. On the question of release of related grant proposal documentation: all grant proposals and associated reports handled by the institution represent the intellectual property of the owners and are held under their ownership.

Members discussed: areas for research collaboration in the current agreement with Technion, in addition to Water, Nanotechnology and Quantum Computing include AI, health, cybersecurity, photonics and smart cities; though a call for proposals was circulated for research in AI and cybersecurity, no proposals were funded from that 2023 call and there has been no activity past that call; the University conducts due diligence in advance of engagements with donors, as per Policy 7, and also relies on our safeguarding research team along with guidance from the federal government to conduct risk assessments. Some members expressed that the relationship with Technion represents a reputational risk, given that institution's engagement with the military, and a broader examination of similar such relationships may be appropriate; potential to raise reputational risks at the upcoming Board meeting; a Senator expressed that there has been far less University communications on the situation in Gaza, in comparison to that in Ukraine.

For the next meeting of Senate, the Office of Research will consider whether the titles of research proposals can be provided to Senate, and will provide Senate with further context on processes for assessing research partnerships. The University will consider the policy framework that guides such partnerships in a comprehensive manner to ensure that it is consistent with best practices.

6. SENATE WORKPLAN

This item was received for information.

7. REPORT – TEACHING AWARDS COMMITTEE

Casello announced the recipients of the Amit & Meena Chakma Award Exceptional Teaching by a Student: Anthony Vogliano, Sean Monahan, Shannon Kennelly and Ryan Lok. DeVidi announced the recipients of the Distinguished Teacher Award: Cecilia Cotton, Brenda Lee, Carol Hulls, and Jordan Hamilton. Senate applauded all of the award recipients, and 1-2 of the recipients will be invited to an upcoming Senate meeting to speak to Senate about their teaching experience.

8. REPORT OF THE PRESIDENT

a. President's Update. Goel provided his report and offered the following:

- Recent provincial announcement re: allocation of international student places, with Waterloo's allocation in line with that of 2023, though concerns persist on the general trends for international applications and that the confusion caused as a result of the communications from the federal and provincial governments may deter some students from considering Waterloo
- Provincial budget had minimal additional funding for postsecondary education, though potential new provisions under the Building Ontario Fund may support large scale projects for postsecondary student housing
- Freedom of Expression and Respectful Engagement Task Force is well underway with consultation activity
- Town Hall event regarding the university budget on April 23
- Launch of the Future Cities Institute on April 3rd
- Approval of revisions to Policy 29 will make Waterloo a smoke-free campus on July 1, 2024 with allowance for designated smoking areas during a transition period in support of smoking cessation

On the last point, one Senator noted that the new policy would prohibit smoking outdoors but that he believed risks for respiratory illnesses from an indoor environment persist; the chair noted that the smoking policy changes come through the Wellness Collaborative which was created in response to and guided by the principles of the Okanagan Charter.

9. REPORT – SENATE GRADUATE AND RESEARCH COUNCIL

Casello provided an overview of reports (a) and (b).

a. New Program – Graduate Type II Diploma in Climate Change

A motion was heard to approve the creation of the Type 2 Graduate Diploma in Climate Change, effective September 1, 2024, as presented. Casello and Frayne. Carried.

b. Major Modifications – MA in Recreation and Leisure Studies

A motion was heard to approve the proposed major modifications to the Master of Arts (MA) in Recreation and Leisure Studies, effective September 1, 2025, as presented. Casello and DeVidi. Carried.

c. Regulation Revisions – Approved Doctoral Dissertation Supervisors

Casello noted that this item has been withdrawn to be taken back to the council for further discussion, as well as for discussion with FAUW's Lecturers Committee.

10. REPORTS – SENATE EXECUTIVE COMMITTEE

a. Elections to Senate Committees and Councils

Additional nominations were received from one senator via email during the meeting and those nominations will be included in the tranche to be approved by Senate Executive Committee following the meeting.

A motion was heard to acclaim the membership of Senate committees and councils as presented on the list of nominees, and to delegate approval to the Senate Executive Committee for any remaining or subsequent vacancies. Porreca and Lynes Murray. Carried.

b. Elections to the Board of Governors

A motion was heard to acclaim the election of a graduate student Senator to the Board of Governors as presented on the list of nominees, for a two-year term commencing May 1, 2024; and to delegate approval to the Senate Executive Committee for any vacancies which exist. Porreca and Woudsma. Carried.

For items (a) and (b), where elections are necessary these will be held following the meeting.

c. Delegation of Authority for Approval of Roster of Graduands

A motion was heard that Senate delegate its authority for the approval of the roster of graduands jointly to the chair and vice-chair of Senate, for convocation ceremonies scheduled in June 2024 and October 2024, and that Senate direct that a report on the complete roster of graduands be presented for information to the Senate meeting following the relevant convocation. Newell Kelly and DeVidi. Carried.

11. REPORT OF THE SENATE FINANCE COMMITTEE

a. 2024/25 Annual Operating Budget

The chair observed that a budget education session was held on March 25th with approximately 50 Senators in attendance, and that the recommendation under consideration comes from the Senate Finance Committee meeting held on April 2nd. The report includes detail on the wide range of discussion at the committee meeting along with a copy of the PowerPoint slides given at that meeting.

James Rush provided a presentation and noted the following: suppression of expenses in previous budget years due to Bill 124, and the impact of the compensation reopener clause increased expenses on the 2023/24 budget as well as the upcoming operating budget; projected but uncertain increased expenses arising from new employee compensation agreements that would take effect on May 1, 2024, along with general inflation in expenses broadly; revenues face ongoing constraints due to the domestic tuition freeze and corridor funding limitations; international tuition levels are now competitive with peers so there is diminished ability for further increases; enrollment trends for domestic and international enrollments; projected unmitigated operating deficit of \$74.5 million in 2024/25; mitigation measures to include across the board ongoing reduction to expenses in both academic and academic support units as well as centrally controlled funds and targeted additional ongoing reductions to achieve a total target of \$42.5 m, as well as one time contributions from units and central reserves to address the remaining projected \$32 m; recent survey by COU shows that many institutions are facing similar deficits; financial challenges are likely to last for a number of years, and a multi-year, multi-modal approach with more sustainable targeted approaches to efficiencies, cost containment and revenue generation to address shortfalls aims to support Waterloo's finances.

Members discussed: more action will be needed on top of the budget mitigation measures described, and the approach described will allow time for medium and longer term mitigation plans to firm up; risk and transition funds will be drawn upon as a one-time budget measure; accessing funds from central sources will displace expenditure on long-term investments and strategies; limited detailed information was provided in the budget documentation re: expenses, and this may be an area that Senate may want more detailed information; this year's budget proposal provided additional data requested by Senators, and the University is continuing efforts to build the tools to provide more detailed data (which dovetails with the approach to integrated planning); while mitigation measures are uniform across Faculties and units, not all are equally well-positioned to manage expense reductions; it is important to assess how units support the mission of the University and deliver value, though presently there is no framework to facilitate those measurements; regarding property, it could be useful to obtain a list of long-term projects kept by the Building & Properties Committee, and the Senate Long Range Planning Committee will have a role in the new Campus Master Planning process; the budget presentation could benefit from disaggregating salaries; providing the detailed information that feeds into the building of the operating budget could overwhelm Senate's consideration of the key points.

A motion was heard that Senate recommend that the Board of Governors approve the 2024/25 Operating Budget, as presented. Lynes Murray and Newell Kelly. Carried.

CONSENT AGENDA

The consent agenda was approved under item 3, with items approved or received for information.

12. REPORT – SENATE GRADUATE & RESEARCH COUNCIL. Received for information.

a. Regulation Revisions – Graduate Studies Academic Calendar

To approve the proposed academic regulation revisions to the Graduate Studies Academic Calendar (GSAC), effective May 1, 2024, as presented.

13. REPORT – SENATE UNDERGRADUATE COUNCIL

a. Regulation Revisions – Regulation Revisions, Faculty of Science

To approve the proposed academic regulation revisions to Doctor of Optometry Academic Regulations, Course Grades and Credits, and Online Courses, for the Faculty of Science, effective September 1, 2024, as presented.

14. REPORT – SENATE LONG RANGE PLANNING COMMITTEE

Received for information.

15. REPORT OF THE VICE-PRESIDENT, RESEARCH & INTERNATIONAL. Received for information.

16. REPORT OF THE VICE-PRESIDENT, ACADEMIC AND PROVOST

a. Faculty Appointments, Leaves. Received for information.

b. University Professor designation. Received for information.

17. OTHER BUSINESS

There was no other business.

With no further business in open session, Senate convened in confidential session.

April 11, 2024
MG/dg

Mike Grivicic
Associate University Secretary to
Senate

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Senate Graduate & Research Council

For Approval

Open Session

To: Senate

Sponsor: Charmaine Dean
Vice-President, Research & International

Jeff Casello
Associate Vice-President, Graduate Studies and Postdoctoral Affairs

Presenter: Jeff Casello

Contact Information: jcasello@uwaterloo.ca

Date of Meeting: May 6, 2024

Agenda Item Identification: **8(a). Report – Senate Graduate & Research Council:
Major Modification – MEng in Civil Engineering**

Recommendation/Motion:

To approve the proposed major modifications to the Master of Engineering (MEng) in Civil Engineering, effective September 1, 2024, as presented.

Summary:

[Senate Graduate & Research Council](#) met on April 8, 2024 and agreed to forward the following items to Senate for approval as part of the regular agenda.

Jurisdictional Information:

This item is being submitted to Senate in accordance with [Senate Bylaw 2](#), section 4.03(e): “Consider, study and review all proposals for new graduate programs, the deletion of graduate programs, major changes to existing graduate programs, arrange for internal appraisals as the council shall see fit, and make recommendations to Senate thereon.”

Governance Path:

Engineering Faculty Council approval date (mm/dd/yy): 02/27/24

Senate Graduate & Research Council approval date (mm/dd/yy): 04/08/24

Highlights/Rationale:

The proposed revision is adding a direct entry Co-operative program/option to the MEng in Civil Engineering program as presented in Appendix A.

Building on the success of co-op program at undergrad level, the program helps MEng students to be integrated into the job market aligning with the main objectives of the MEng. It can be concluded that this new co-op program:

- Helps in developing communication skills, networking, and new collaborations
- Aligns well with the University's and Province's vision on "Work Integrated Learning"
- Helps attracts good applicants to the CEE MEng program
- Allows students to maximize their employability potential by providing them with job search skills and valuable co-op work experience

Feedback from graduate students and some potential employers has been collected through different sessions indicating the clear support of the program.

The admission to the MEng (Co-op) program will be based on academic merit and considering previous work experiences to maintain high quality and reputation among employers. The initial capacity of the program will be limited to 20 students distributed over the three terms. The program capacity will be reviewed yearly based on the number of placements/work experiences, types of jobs and employers' evaluations. In the event of a student not finding a co-op work experience, the student may transfer to the regular MEng without co-op.

The co-op program/option will be supported by Co-operative Education. The Feasibility Report that was completed by Co-operative Education is included as Appendix B.

Documentation Provided:

Appendix A – Graduate Studies Program Revision Template

Appendix B - Co-operative & Experiential Education (Co-op) Preliminary Review

SGRC Appendix A: Graduate Studies Program Revision Template



Graduate Studies Program Revision Template

Prior to form submission, review the [content revision instructions](#) and information regarding [major/minor modifications](#). For questions about the form submission, contact [Trevor Clews](#), Graduate Studies and Postdoctoral Affairs (GSPA).

Faculty: Engineering

Program: Master of Engineering (MEng) in Civil Engineering – Co-operative Program

Program contact name(s): Adil Al-Mayah

Form completed by: Adil Al-Mayah

Description of proposed changes:

Note: changes to courses and milestones also require the completion/submission of the [SGRC Graduate Studies Course/Milestone Form](#).

Adding a direct entry Co-operative program/option to the MEng in Civil Engineering program.

Is this a [major modification](#) to the program? Yes

Rationale for change(s):

Building on the success of co-op program at undergrad level, the program helps MEng students to be integrated into the job market aligning with the main objectives of the MEng. It can be concluded that this new co-op program:

- *Helps in developing communication skills, networking, and new collaborations*
- *Aligns well with the University's and Province's vision on "Work Integrated Learning"*
- *Helps attracts good applicants to the CEE MEng program*
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The co-op program/option will be supported by Co-operative Education. Attached is the Feasibility Report that was completed by Co-operative Education.

Proposed effective date: Term: Fall Year: 2024

Current [Graduate Studies Academic Calendar \(GSAC\)](#) page (include the link to the web page where the changes are to be made):

<https://uwaterloo.ca/graduate-studies-academic-calendar/engineering/department-civil-and-environmental-engineering/master-engineering-meng-civil-engineering>

Current MEng in Civil Engineering Graduate Studies Academic Calendar content:	Proposed MEng in Civil Engineering – Co-operative Program Graduate Studies Academic Calendar content:
<p>MASTER OF ENGINEERING (MENG) IN CIVIL ENGINEERING</p> <p>Program information</p> <ul style="list-style-type: none"> • Admit term(s) <ul style="list-style-type: none"> ○ Fall, Winter & Spring • Delivery mode <ul style="list-style-type: none"> ○ On-campus • Length of program <ul style="list-style-type: none"> ○ Full-time: 4 terms (16 months) ○ Part-time: 8 terms (32 months) • Program type <ul style="list-style-type: none"> ○ Master's ○ Professional • Registration option(s) <ul style="list-style-type: none"> ○ Full-time ○ Part-time • Study option(s) <ul style="list-style-type: none"> ○ Coursework • Additional program information <ul style="list-style-type: none"> ○ The University of Waterloo does not provide funding for MEng in Civil Engineering students, and the candidates are expected to be self-supporting. <p>Admission requirements</p> <ul style="list-style-type: none"> • Minimum requirements <ul style="list-style-type: none"> ○ An Honours Bachelor's degree (or equivalent) with a 75% standing. ○ Graduate Record Examination (GRE) score (only for those applicants who completed their degree outside of Canada and the United States). • Application materials <ul style="list-style-type: none"> ○ Résumé ○ Supplementary information form ○ Transcript(s) • References <ul style="list-style-type: none"> ○ Number of references: 2 	<p>MASTER OF ENGINEERING (MENG) IN CIVIL ENGINEERING - <u>CO-OPERATIVE PROGRAM</u></p> <p>Program information</p> <ul style="list-style-type: none"> • Admit term(s) <ul style="list-style-type: none"> ○ Fall, Winter & Spring • Delivery mode <ul style="list-style-type: none"> ○ On-campus • Length of program <ul style="list-style-type: none"> ○ <u>Full-time: 4-5 terms (16-20 months)</u> • Program type <ul style="list-style-type: none"> ○ <u>Co-operative</u> ○ Master's ○ Professional • Registration option(s) <ul style="list-style-type: none"> ○ Full-time ○ Part-time • Study option(s) <ul style="list-style-type: none"> ○ Coursework • Additional program information <ul style="list-style-type: none"> ○ The University of Waterloo does not provide funding for MEng in Civil Engineering students, and the candidates are expected to be self-supporting. <p>Admission requirements</p> <ul style="list-style-type: none"> • Minimum requirements <ul style="list-style-type: none"> ○ An Honours Bachelor's degree (or equivalent) with a 75% standing. ○ Graduate Record Examination (GRE) score (only for those applicants who completed their degree outside of Canada and the United States). • Application materials <ul style="list-style-type: none"> ○ Résumé ○ Supplementary information form ○ Transcript(s) • References

Current MEng in Civil Engineering Graduate Studies Academic Calendar content:	Proposed MEng in Civil Engineering – Co-operative Program Graduate Studies Academic Calendar content:
<ul style="list-style-type: none"> ○ Type of references: academic or professional • English language proficiency (ELP) (if applicable) <p>Degree requirements</p> <ul style="list-style-type: none"> • Graduate Academic Integrity Module (Graduate AIM) • Courses <ul style="list-style-type: none"> ○ Students must complete 8 one-term graduate level courses (0.50 unit weight) taken from the 500, 600 and 700 series courses (or courses acceptable for graduate credit). ○ At least 4 of the 8 required courses must be taken within the Department of Civil and Environmental Engineering. ○ An English for Multilingual Speakers (EMLS) technical/professional writing course for Engineers is required for all students who were not English Language Proficiency (ELP) exempt at the time of admission. ○ A maximum of 2 500 level courses may be counted for credit. ○ The candidate must obtain a pass in all courses credited to their program, with a minimum overall average of 70% (a grade of less than 65% in any course counts as a failure). ○ At least half of the courses used for credit must normally be Faculty of Engineering courses. 	<ul style="list-style-type: none"> ○ Number of references: 2 ○ Type of references: academic or professional • English language proficiency (ELP) (if applicable) <p>Degree requirements</p> <p><u>The MEng in Civil Engineering – Co-operative Program will enable students to combine graduate studies with work experience.</u></p> <p><u>The program includes completion of 1-2 required work terms. The work term(s) typically takes place in term 3 (or terms 3 and 4). The work term(s) must meet CEE standard work term requirements and Departmental requirements. Students should apply to jobs related to their program of study. Note: the program must start and end on an academic term. Students in the program are encouraged to complete WIL 601 Career Success Strategies in the academic term prior to the first work term.</u></p> <ul style="list-style-type: none"> • Graduate Academic Integrity Module (Graduate AIM) • Courses <ul style="list-style-type: none"> ○ Students must complete 8 one-term graduate level courses (0.50 unit weight) taken from the 500, 600 and 700 series courses (or courses acceptable for graduate credit). ○ At least 4 of the 8 required courses must be taken within the Department of Civil and Environmental Engineering. ○ An English for Multilingual Speakers (EMLS) technical/professional writing course for Engineers is required for all students who were not English Language Proficiency (ELP) exempt at the time of admission. ○ A maximum of 2 500 level courses may be counted for credit. ○ The candidate must obtain a pass in all courses credited to their program, with a minimum overall average of 70% (a grade of less than 65% in any course counts as a failure). ○ At least half of the courses used for credit must normally be Faculty of Engineering courses. • <u>Graduate Studies Work Report</u>

Current MEng in Civil Engineering Graduate Studies Academic Calendar content:	Proposed MEng in Civil Engineering – Co-operative Program Graduate Studies Academic Calendar content:
	<ul style="list-style-type: none"> ○ <u>Students must complete one or two work-term experiences. For each work experience, a work report must be submitted to the Department for review to earn credit for the work report.</u> ○ <u>Students are responsible for following the roles and responsibilities of Cooperative and Experiential Education (CEE).</u>

How will students currently registered in the program be impacted by these changes?

Students currently enrolled in the MEng in CEE program will not be impacted, as this program will be offered at the entry level starting on Fall 2024.

Department/School approval date (mm/dd/yy): 12/14/2023

Reviewed by GSPA (for GSPA use only) date (mm/dd/yy): 1/18/2024

Faculty approval date (mm/dd/yy):

Senate Graduate & Research Council (SGRC) approval date (mm/dd/yy):

Senate approval date (mm/dd/yy) (if applicable):

Co-operative & Experiential Education (Co-op) Preliminary Review

Proposed Program: Master of Engineering in Civil Engineering, Co-operative Education

Program Effective Date: Fall 2024

Requested by: Adil Al-Mayah, Associate Chair Graduate Studies for Department of Civil and Environmental Engineering

Prepared by: Eva Skuza, Faculty Relations Manager, Engineering and Richard Wikkerink, Director, Student & Faculty Relations – December 11, 2023

Executive Summary

The Department of Civil and Environmental Engineering has expressed intent to add a program-level work integrated learning (WIL) experience (co-op) option to their master's program for fall 2024. The co-op components of the degree will be fully administered by Co-operative & Experiential Education (Co-op) with the work integrated learning (WIL) component included as a milestone degree requirement.

Co-op is in the midst of a Graduate Work Integrated Learning pilot and in 2024 will be proposing an enhanced student support model and new program requirements developed for graduate students. It will leverage existing resources and infrastructure and provide customized resources and supports for programs and students. MEng programs and students involved in pilots are providing feedback and input to these changes.

The industry and jobs analysis indicates that MEng students will be competitive in finding co-op jobs aligned with their program of study. The industry analysis for Canada predicts a labour shortage over 2022-2031, providing an opportunity for co-op to position the distinct skills and experience possessed by the students in the Civil and Environmental Engineering MEng program. The economy remains unpredictable, a factor that has a direct impact on labour market conditions. Waterloo has a very strong reputation with employers and adding graduate students will enhance more senior job opportunities, especially with eight-month work terms. To maximize access to quality jobs, students will need to explore a wide range of type of employer and geographic locations.

With the understanding of a cap of 20 students total in 2024-2025, with admission cycles in the fall, winter and spring term, Co-op supports in principle the proposed new MEng Civil Engineering Co-op program and will collaborate with the academic unit on the development and administration of co-op components of the degree.



Co-op recommends the Department of Civil and Environmental Engineering consider the following:

- Establish new co-op admission requirements for fall 2024 so that students may be directly admitted to the program, reducing barriers for international students who are required to obtain a co-op work permit to work in Canada.
- Include co-op degree requirements in graduate calendar.
- That WIL-601 be required for students prior to participating in a recruitment term.
- The co-op sequence is designed to be flexible, within the framework that two terms of study must be completed prior to the first work term and the program ends on a study term.
- Review the implications of involvement in co-op as related to items such as, but not limited to, student statuses, funding packages, and scholarships.

Co-op, with leadership from the designated Faculty Relations Manager, will:

- Ensure that the labour market and co-op job analysis for MEng programs informs graduate job development working group, Account Management (AM) and Business Development (BD) activities and targets.
- Collaborate with the program to identify student experience profiles along with specific skills that are developed and enhanced through the program to contribute to job development activities.
- Collaborate with the Associate Chair Graduate Studies for Civil and Environmental Engineering and the Graduate Officer/Coordinator to work through the Co-op Program Plan and in 2025, align with new program requirements and student support model.
- Together with the program determine success measures that link the MEng learning outcomes with criteria for co-op success that clarify the expectation for quality work terms.

Work-Integrated Learning at UW

Co-operative Education is a form of work integrated learning (WIL), which allows students to apply classroom learning to the workplace and, likewise, connect workplace learning to their degree and areas of specialization. For those students who are seeking a stronger connection between their studies and industry, the University of Waterloo's co-op programs distinguish it amongst Canadian institutions. Furthermore, Co-op provides a robust system of support for students (domestic and international visa) seeking work experiences in Canada or internationally.

Benefits go beyond the students. Industry partners benefit by gaining access to a wider range of grad students who bring varied experiences personally, professionally, and academically. All stakeholders will benefit from opportunities for idea exchange and strengthened connection between academic research and innovations in industry.

Introducing a new co-op plan aligns with the strategic focus on [GradWIL](#) at an institutional level and will continue to reinforce UW as a WIL leader for both



undergraduate and graduate programs.

The key components of a [quality WIL experience](#) are pedagogy, experience, assessment and reflection, or P.E.A.R. Making sure all four elements are included in the development of program-level WIL are critical for creating a quality WIL experience.

- Pedagogy – includes the academic course content and the WIL curriculum
- Experience – meaningful and aligned appropriately with the WIL model
- Assessment – including the learning outcomes for the program + Future Ready Talent Framework
- Reflection – on the WIL experience and in alignment with the idea of “purposeful work”

Co-op Program Structure

The MEng Civil Engineering Co-op program will follow the model of other graduate co-op programs. All co-op students are responsible for following the procedures, [roles and responsibilities](#) of co-op students.

Co-op students are strongly encouraged to complete WIL 601 (which will be available on LEARN as of Winter 2024) prior to their first co-op work term (typically completed in their pre-recruitment term) and before they apply to jobs concurrently. WIL 601 provides information on navigating the co-op employment process, foundational career preparation and teaches students how to prepare professional job search documents. Some graduate programs have positioned WIL 601 as a foundational requirement for co-op participation. Students who have already completed similar UW co-op preparation modules (e.g.: PD1 Career Fundamentals) may not be required to take WIL 601.

The Centre for Career Development (CCD) provides career and co-op preparation resources and services (e.g.: resume, cover letter, interview preparation, job search, etc.) for all graduate students. These services are accessed more readily when promoted by the academic program or incorporated into existing courses. Additional collaboration between Civil and Environmental Engineering, Student & Faculty Relations (SFR) and CCD may be required prior to fall 2024 to establish how existing services and staff will be utilized.

Co-op work terms must meet [standard work term requirements](#) for all graduate students. MEng Civil Engineering students will have access to the co-op job board through WaterlooWorks or may arrange their own employment, externally, which must be approved by Co-op. During the experience, graduate students will be supported by Co-op Advisors through site visits, e-check-ins and work term ratings. Employers will evaluate the work performance of students via the [Student Performance Evaluation](#) (SPE); a rating of ‘satisfactory’ or above will grant the student credit for the work term.

To evaluate program effectiveness and WIL outcomes, the Co-op Faculty Relations Manager, Engineering, will monitor key metrics annually to ensure program quality.



Master of Engineering Learning Outcomes

Given that there are multiple factors contributing to the measure of quality (e.g., labour market, student experience, engagement, and readiness for the workplace), the department and Co-operative Education will need to determine the criteria and process to assess the “quality of work term position.”

The success of a co-op program can be measured through the learning that occurs on a work term thorough the [Future Ready Talent Framework](#) (FRTF) as assessed by the Student Performance Evaluation and the Major Reflective Report. The program may wish to consider mapping MEng learning outcomes and courses to the FRTF for further insight.

Co-op Sequence

Students in MEng Civil Engineering will be required to complete one standard co-op work term following a minimum of two terms of study. Co-op strongly recommends that students complete two consecutive co-op work terms in their program structure for a longer immersive work experience. This would meet needs for industry partners, builds on the current MEng model and would be consistent with other UW graduate co-op plans. As outlined by the program, students will need to complete eight courses. It is recommended that students be granted the flexibility to select either term 3 or term 4 to do their work term, noting that all co-op programs must end on a study term to maximize the integration of classroom and workplace learning.

Co-op sequences will be determined with the program and student at the start of the first term of study, noting relevant deadlines as associated with WIL 601. In graduate programs, we are learning that early engagement in work-search strengthens the work term outcomes. As the program develops a pattern of work term sequences, there would be benefit (student expectations, job development, streamline process) in establishing a common sequence and managing individual modifications to sequences through sequence change processes.

Sample Sequence MEng Civil Engineering Co-op with 2 work terms:

Term 1	Term 2	Term 3	Term 4	Term 5
Direct-entry Study Co-op prep (WIL 601)	Study Work search	Work Term 1	Work Term 2	Study Completion of Work Report

Co-op Admissions

Programs seeking to add co-op as an option for their students are strongly encouraged to establish a direct-entry co-op program. There are a range of benefits to this structure, including Co-op’s ability to forecast earlier the number of students expected to be



scheduled for a work term from the program and adjust employer and student-facing resources as necessary. Based on current process, visa students can be considered by Canadian immigration for a co-op work permit along with a student permit, preventing lengthy application processes when a work permit is applied for separately.

Beginning fall 2025, students will apply and be directly admitted into the MEng Civil Engineering Co-op plan. The academic unit will need to establish a specific process and criteria for admissions into this new program.

Where there is demand for co-op, consideration should be given to the value and intention of a WIL experience, as academic standing is not always an indicator of workplace success. Additionally, graduate students bring a range of personal, professional, and academic experiences and so while the more experienced students may ultimately be successful in finding co-op employment, they arguably may not be the students to benefit most from the WIL experience.

Degree Requirements

Graduate students completing the Co-operative education degree requirements will receive a “Co-operative Education” degree designation. These requirements include the following:

- Complete a minimum of one standard co-op work term and receive a Student Performance Evaluation of “marginal” or better
- Complete a work report/reflection requirement administered by the academic department

Graduate Student Support

The [Centre for Career Development](#) (CCD) is located in the Tatham Centre at the Waterloo campus and provides support to undergrad and grad students (whether in co-op or not), alumni and staff with co-op and career planning and preparation. Existing services include 1:1 appointments for resumes, cover letters, interview skills, work search, career planning and others, 1:1 drop-ins, workshops, both on and offline resources and supports all offered through a dedicated team of existing co-op and career staff.

Civil Engineering graduate co-op students will be assigned to a team of Career Advisors who provide answers to co-op related questions as well as support throughout the co-op recruitment process. Once students secure a work term, they are offered additional support via a dedicated co-op Student Advisor who is available throughout the term, and provides a work term consultation and reviews e-check-ins.

Job Development

The labour market and job analysis provides a mixed report on recent trends for the Civil and Environmental Engineering co-op program. Looking more broadly, the [2015 Engineering Labour Force Survey](#) “highlights a large and growing need to replace retiring engineers as they exit the workforce. This is particularly relevant for civil, mechanical, electrical and electronic engineers as well as computer engineers. Replacement demand for engineers is an important theme that will be relevant for the next decade as the baby boom generation retires.”



As jobs are distributed across Canada and with a wide variety of employers, students will need to consider broad job searches to find employment relevant to their area of discipline. Mobility of graduate students is a consideration for the program when establishing expectations for the co-op program.

With the graduate job development working group in Co-op, there is additional focus on strategies to develop jobs that are meaningful for the learning of graduate co-op students. Building on the success of the co-op option in other Master of Engineering programs, we feel that the typical lead time needed to develop jobs will be shortened. With strong connections into associated industries, Co-op will actively develop a range of suitable opportunities for graduate students and monitor impact jobs available for senior undergraduate Civil students.

As a course-based program with many pathways, marketing these students to employers provides an opportunity to profile the more specialized and focused areas of expertise and knowledge graduate students bring. The GradWIL Co-op pilots have demonstrated that students who are actively engaged in preparing for and participating in job search activities over two terms optimize their employment outcomes. Graduate student services from CCD have been enhanced and are being leveraged to support students in their job search, noting that the new program plan will examine the resources required to provide these supports. Proposed modifications to Co-op supports based on the GradWIL project outcomes will benefit this program.

Additional Considerations

Graduate WIL

Co-op and the GSPA, along with the faculties are undergoing a multi-unit, multi-year project to expand WIL offerings at the graduate level and enhance co-op programming, supports, and processes for graduate students. Therefore, graduate co-op will undergo several changes over the coming years which will impact existing programming, support, and job development efforts for graduate students.

Student Status and Fees

Graduate co-op students have their term status changed to co-op and pay a [co-op fee](#) during employed co-op work terms. Participation in graduate co-op may have implications for student statuses, funding packages and scholarships. The program will need to investigate further and make students aware of this.

International Students and Work Experiences

Co-op's international team will support work terms held outside of Canada, adhering to UW and Global Affairs Canada (GAC) travel polices and advisories.

Students studying on a visa must obtain a co-op work permit in order to find employment for a co-op work term. Applying for a co-op work permit in Canada can take several months, with recent processing times taking at least six months. Direct admission to the co-op program provides access to the co-op work permit along with the study permit. Co-op's international team will support international students with



programming to support working in Canada.

Equity

Equity is an important component to consider within a competitive admissions and co-op process. For example, international students may encounter additional barriers such as: varying levels and types of work experience of incoming students, potential for travel restrictions, as well as the complexities of obtaining funding and/or security clearance that may be required for some roles can often be a disadvantage to international students and can delay or impact work term opportunities.

Co-op Program Plan

Following all levels of academic program approval for this new program and before the first term of admission, completion of a Co-op Program Plan will be required. The Co-op Program Plan is a checklist of information, records, system, communications, etc., that ensure Co-op administered co-op plans are set-up appropriately and necessary decisions are made. This is a collaborative activity led by a designated Faculty Relations Manager and the academic unit.

Overview of core data from the Civil UG program:

Civil Graduate students have different experiences and skills than UG students and job competition between UG and Graduate students will be present but mitigated by business development strategies to market the graduate student skillset to industry partners. The complete analysis is available by request.

1. Graduate students are highly successful in finding co-op jobs (figure 1), noting economic and mobility impacts associated with the global pandemic years (2020-2022).
2. Employment trends (figure 2) from comparable MEng graduate programs demonstrate variation but with an overall balanced trend for civil engineering jobs.
3. Fall work terms have the highest number of senior UG Civil Engineering students scheduled out and Spring work terms have the highest number of junior UG Civil Engineering students scheduled out (figure 3). This suggests that a Spring work term may be ideal for Masters students, however, this could impact junior level undergraduate students.
4. Analysis of occupational classifications (figure 4) aligned with engineering indicates a sustained positive trend.
5. Employment by industry (figure 5) indicates a mixture of areas of growth and decline due to complex economic conditions since 2020.



Figure 1 – Graduate Programs Co-op Employment rate

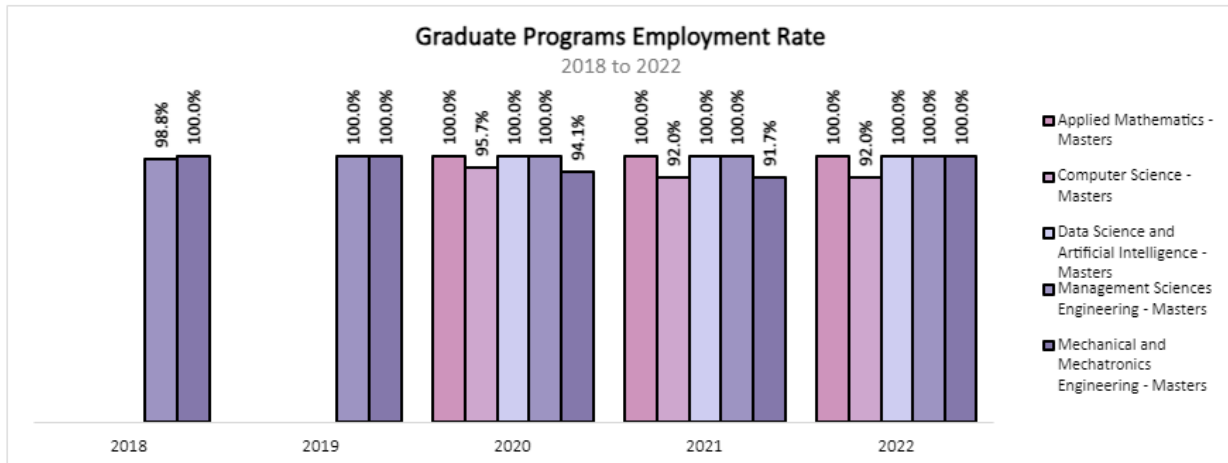


Figure 2 – Top NAICS Codes by Employed Count for comparable graduate program

Overall Top 10 NAICS Codes by Employed Count for Compareable Graduate Programs from 2018 to 2022

Job NOC Code	2018 # Emp. / Rank	2019 # Emp. / Rank	2020 # Emp. / Rank	2021 # Emp. / Rank	2022 # Emp. / Rank	2018 to 2022	2018 to 2022	Overall Net Change
2173 - Software engineers and designers	11 3	5 5	30 1	32 1	40 1	118		2
2172 - Database analysts and data administrators	10 5	4 6	19 2	25 2	32 2	90		3
2171 - Information systems analysts and consultants	11 3	12 1	9 3	8 5	30 3	70		0
1122 - Professional occupations in business management consulting	23 1	8 3	7 5	9 4	22 4	69		-3
2132 - Mechanical engineers	16 2	10 2	4 8	4 6	5 10	39		-8
213 - Civil, mechanical, electrical and chemical engineers	10 5	6 4	1 15	4 6	7 7	28		-2
2174 - Computer programmers and interactive media developers	2 11	2 11	7 5	10 3	7 7	28		4
1112 - Financial and investment analysts	5 8	4 6	2 13	1 16	9 5	21		3
2133 - Electrical and electronics engineers	3 9	1 14	8 4	4 6	3 14	19		-5
2147 - Computer engineers (except software engineers and designers)	0 22	3 8	3 10	2 11	9 5	17		17

Figure 3 – UG Civil Engineering students scheduled out each term (2016 – 2023)

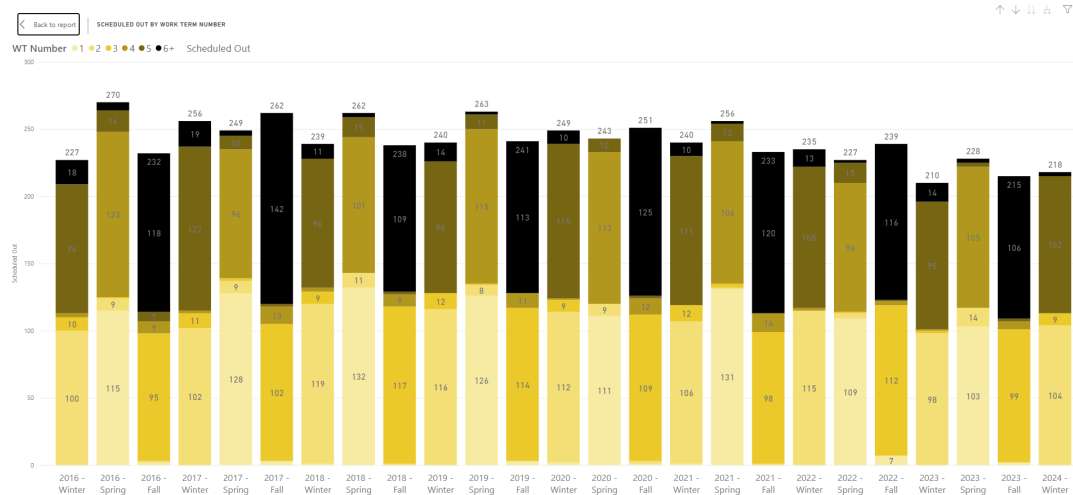


Figure 4 – Occupational Classifications and Employment trends

Noc Grouping of Interest to Engineering by Employed Counts Across Canada from 2018 to 2022

Class Level	National Occupational Classification (NOC)	2018	2019	2020	2021	2022	Trend 2018 to 2022	Net Growth/Decline 2022 - 2018
Range	Natural and applied sciences and related occupations, except management [21-22]	1,416,300	1,505,600	1,582,500	1,666,900	1,767,300		351,000
2-Digit	Professional occupations in natural and applied sciences [21]	841,600	941,400	1,009,500	1,116,400	1,192,300		350,700
	Technical occupations related to natural and applied sciences [22]	574,800	564,200	572,900	550,500	575,100		300
3-Digit	Professional occupations in applied sciences (except engineering) [212]	550,000	618,000	694,700	765,200	825,100		275,100
	Professional occupations in engineering [213]	229,000	247,300	240,700	275,400	287,700		58,700
	Professional occupations in education services [412]	722,300	721,100	753,000	819,300	822,300		100,000
	Professional occupations in finance [111]	421,000	442,100	469,200	473,100	502,500		81,500
	Professional occupations in business [112]	367,000	389,200	409,000	454,200	475,300		108,300

Figure 5 – Industry employment trends

All NAICS Sector by Employed Counts Across Canada from 2018 to 2022

Gray indicating NAICS Sector of interest to Engineering Programs

NAICS Sector	2018	2019	2020	2021	2022	Trend 2018 to 2022	Net Growth/Decline 2022 - 2018
Wholesale and retail trade [41, 44-45]	2,887,600	2,937,800	2,761,300	2,888,400	2,984,700		97,100
Health care and social assistance [62]	2,393,600	2,476,900	2,402,500	2,519,600	2,603,700		210,100
Manufacturing [31-33]	1,781,300	1,750,200	1,669,400	1,747,800	1,785,100		3,800
Professional, scientific and technical services [54]	1,465,200	1,557,700	1,561,800	1,689,200	1,809,700		344,500
Construction [23]	1,435,800	1,473,900	1,407,700	1,451,500	1,552,900		117,100
Educational services [61]	1,293,300	1,330,500	1,318,200	1,448,700	1,471,100		177,800
Finance, insurance, real estate, rental and leasing [52-53]	1,204,400	1,239,200	1,240,800	1,325,900	1,367,700		163,300
Accommodation and food services [72]	1,235,300	1,219,800	945,700	967,700	1,049,600		-185,700
Public administration [91]	953,900	1,009,400	1,006,000	1,081,400	1,136,100		182,200
Transportation and warehousing [48-49]	979,400	1,030,900	942,700	985,500	981,400		2,000
Information, culture and recreation [51, 71]	775,900	779,900	676,800	717,100	808,600		32,700
Other services (except public administration) [81]	788,600	790,700	704,400	717,400	714,700		-73,900
Business, building and other support services [55-56]	772,400	763,500	686,800	680,400	693,600		-78,800
Forestry, fishing, mining, quarrying, oil and gas [21, 113-114, 1153, 2100]	332,500	332,400	306,900	325,700	328,500		-4,000
Agriculture [111-112, 1100, 1151-1152]	284,400	294,000	279,700	258,500	257,300		-27,100
Utilities [22]	139,600	134,300	133,000	137,700	148,300		8,700



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Senate Graduate & Research Council

For Approval

Open Session

To: Senate

Sponsor: Charmaine Dean
Vice-President, Research & International

Jeff Casello
Associate Vice-President, Graduate Studies and Postdoctoral Affairs

Presenter: Jeff Casello

Contact Information: jcasello@uwaterloo.ca

Date of Meeting: May 6, 2024

Agenda Item Identification: **8(b). Report – Senate Graduate & Research Council:
Major Modification – PhD and MSc in Chemical Engineering**

Recommendation/Motion:

To approve the proposed major modifications to the Doctor of Philosophy (PhD) in Chemical Engineering and Master of Applied Science (MSc) in Chemical Engineering, effective September 1, 2024, as presented.

Summary:

[Senate Graduate & Research Council](#) met on April 8, 2024 and agreed to forward the following items to Senate for approval as part of the regular agenda.

Jurisdictional Information:

This item is being submitted to Senate in accordance with [Senate Bylaw 2](#), section 4.03(e): “Consider, study and review all proposals for new graduate programs, the deletion of graduate programs, major changes to existing graduate programs, arrange for internal appraisals as the council shall see fit, and make recommendations to Senate thereon.”

Governance Path:

Engineering Faculty Council approval date (mm/dd/yy): 02/27/24

Senate Graduate & Research Council approval date (mm/dd/yy): 04/08/24

Highlights/Rationale:

The proposed revision is to update the Graduate Research Fields in the PhD and MASc in Chemical Engineering as presented in Appendix A.

This is to better reflect and rebrand current graduate research activities for PhD and MASc in Chemical Engineering. Students have been consulted and are in support of the change. This change will improve the student experience by aligning graduate student research activity with research activity within the Department.

There are no changes to the program's learning outcomes.

Documentation Provided:

Appendix A – Graduate Studies Program Revision Template

SGRC Appendix A: Graduate Studies Program Revision Template



Graduate Studies Program Revision Template

Prior to form submission, review the [content revision instructions](#) and information regarding [major/minor modifications](#). For questions about the form submission, contact [Trevor Clews](#), Graduate Studies and Postdoctoral Affairs (GSPA).

Faculty: Engineering

Programs: (1) Doctor of Philosophy (PhD) in Chemical Engineering
(2) Master of Applied Science (MAsc) in Chemical Engineering,

Program contact name(s): Xianshe Feng, Judy Caron

Form completed by: Xianshe Feng

Description of proposed changes:

Note: changes to courses and milestones also require the completion/submission of the [SGRC Graduate Studies Course/Milestone Form](#).

Updating the Graduate Research Fields

Is this a [major modification](#) to the program? Yes

Rationale for change(s):

Updating the Graduate Research Fields, in order to better reflect and rebrand current graduate research activities for PhD and MAsc in Chemical Engineering. Students have been consulted and are in support of the change. This change will improve the student experience by aligning graduate student research activity with research activity within the Department. There are no changes to the program’s learning outcomes.

Proposed effective date: Term: Fall Year: 2024

Current [Graduate Studies Academic Calendar \(GSAC\)](#) page (include the link to the web page where the changes are to be made):

<https://uwaterloo.ca/graduate-studies-academic-calendar/engineering/department-chemical-engineering/doctor-philosophy-phd-chemical-engineering>

<https://uwaterloo.ca/graduate-studies-academic-calendar/engineering/department-chemical-engineering/master-applied-science-masc-chemical-engineering>

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:
<p>Graduate research fields</p> <ul style="list-style-type: none"> • Biochemical and Biomedical Engineering • Green Reaction Engineering • Interfacial Phenomena, Colloids and Porous Media • Nanotechnology • Polymer Science and Engineering • Separation Processes • Process Systems Engineering 	<p>Graduate research fields</p> <ul style="list-style-type: none"> • <u>Biotechnology</u> and Biomedical Engineering • <u>Electrochemical Engineering</u> • <u>Nanotechnology for Advanced Materials</u> • <u>Soft Matter and Polymer Engineering</u> • <u>Sustainable Reaction Engineering</u> • Process Systems Engineering

How will students currently registered in the program be impacted by these changes?

Current PhD and MASc in Chemical Engineering students will not be affected.

Department/School approval date (mm/dd/yy): 11/13/23

Reviewed by GSPA (for GSPA use only) date (mm/dd/yy): 12/15/23

Faculty approval date (mm/dd/yy):

Senate Graduate & Research Council (SGRC) approval date (mm/dd/yy):

Senate approval date (mm/dd/yy) (if applicable):

Senate Undergraduate Council

For Approval

Open Session

To: Senate

Sponsor: David DeVidi
Associate Vice-President, Academic

Presenter: David DeVidi
Contact Information: david.devidi@uwaterloo.ca

Date of Meeting: May 6, 2024

Agenda Item Identification: **9(a). Report – Senate Undergraduate Council:
Major Modification – Recreation and Leisure Studies & Recreation
and Sport Business**

Recommendation/Motion:

To approve the proposed major modifications to Recreation and Leisure Studies (Bachelor of Arts - Honours), and Recreation and Sport Business (Bachelor of Arts - Honours), effective September 1, 2025, as presented.

Summary:

[Senate Undergraduate Council](#) met on April 9, 2024 and agreed to forward the following items to Senate for approval as part of the consent agenda.

Jurisdictional Information:

This item is being submitted to Senate in accordance with [Senate Bylaw 2](#), section 5.03(b): “Make recommendations to Senate with respect to new undergraduate programs/plans, the deletion of undergraduate programs/plans, and major changes to undergraduate programs/plans.”

Governance Path:

Health Faculty Council approval date (mm/dd/yy): 03/22/24

Senate Undergraduate Council approval date (mm/dd/yy): 04/09/24

Highlights/Rationale:

These proposed revisions are to 1. revise plan name and requirements for Honours Recreation and Leisure Studies, and 2. Revise the plan name for Honours Recreation and Sport Business, as presented in Appendices A and B.

1. Recreation and Leisure Studies

To change the plan title to Recreation, Leadership, and Health, and to revise the requirements as presented in Appendix A.

Through alumni and student surveys, coop consultation, and interviews with various partners, the Department of Recreation and Leisure Studies has revised their recreation and leisure studies program. Through this revision, they are highlighting the ways in which recreation and leisure can enhance the wellbeing and health of communities and its members. Graduates from the program will be well positioned to become leaders in recreation and community organizations, and make their respective communities more inclusive spaces for all people.

Students currently enrolled in the Recreation and Leisure Studies program will have the option to follow the existing or the revised curriculum. Consultation has been conducted with current students, alumni, cooperative education and community organization.

Approvals have been granted by the following University of Waterloo units – Political Science, Social Development Studies, Faculty of Environment, Peace and Conflict Studies, School of Public Health Sciences, English. The Faculties of Arts, Math and Science have been informed of the change to remove our Restricted Electives.

2. Recreation and Sport Business

To change the plan title to Sport and Recreation Management, as presented in Appendix B.

The revised name better reflects the curriculum and the evolution of the field in theory and practice. The revised name also reflects a wider scope of sectors (public, non-profit, and business) that their students study and work. Current students and alumni have also been consulted and have demonstrated support for this change. Current students can choose to switch to the revised plan name and calendar rules after September 1, 2025, or remain with the previous plan name.

Documentation Provided:

Appendix A – Recreation and Leisure Studies

Appendix B – Recreation and Sport Business

SUC Appendix A: Recreation and Leisure Studies

H-Recreation & Leisure Studies Recreation, Leadership, and Health (Bachelor of Arts - Honours)

Under Review | Fall 2025

General Program/Plan Information

Faculty

Faculty of Health

Academic Unit

Department of Recreation and Leisure Studies

Field of Study

Recreation and Leisure Studies

Faculty

Faculty of Health

Undergraduate Credential Type

Major

Program Type

Honours

Degree

Bachelor of Arts (Health)

Proposed

Program/Plan Name

Recreation, Leadership, and Health (Bachelor of Arts - Honours)

Existing

Program/Plan Name

Recreation and Leisure Studies (Bachelor of Arts - Honours)

Systems of Study

Co-operative

Regular

Online Degree/Diploma

Admissions

Admissions Entry Point

Direct Entry

Admission Requirements: Minimum Requirements

Requirements Information

Invalid Combinations

No

Average Requirement

Yes

Minimum Average(s) Required

- A minimum cumulative overall average of 65.0%.
- A minimum cumulative major average of 70.0%.

Proposed

Graduation Requirements

- See Bachelor of Arts (Health) degree-level requirements.
- Complete a total of 20.0 units:
 - 11.5 units of required courses.
 - 2.5 units of additional REC courses.
 - 6.0 units of elective courses.

Existing

Graduation Requirements

- See Bachelor of Arts (Health) degree-level requirements.
- Complete a total of 20.0 units:
 - 5.0 units of required courses.
 - 6.5 units of additional REC courses.
 - 2.0 units of approved courses.
 - 6.5 units of elective courses.

Co-operative Education Program Requirements

For students in the co-operative system of study, see Bachelor of Arts co-operative education program requirements.

Course Requirements (units)

Required Courses

0

Units to Complete

No Rules

Course Requirements (no units)

Approved Courses List

- Complete 4 all of the following
 - Complete at least 1 course from: ACTSC, AMATH, CO, COMM, MATBUS, MATH, MTHEL, PMATH, STAT
 - Complete at least 1 course from: ANTH, EGON, GSJ, LS, PACS, PSCI, SDS, SMF, SOCWK, STV
 - Complete at least 1 course from: ARABIC, ASL, CHINA, CI, CROAT, DUTCH, EASIA, FR, GER, GRK, INDENT, INDG, ITAL, ITALST, JAPAN, JS, KOREA, LAT, MOHAWK, PORT, REES, RUSS, SI, SPAN
 - Complete at least 1 course from: BIOL, CHEM, EARTH, MNS, PHYS, SCI
 - Complete at least 1 course from: CLAS, COMMST, HIST, HUMSC, INDG, MEDVL, PHIL, RS, VCULT
 - Complete at least 1 course from: CS
 - Complete at least 1 course from: ENBUS, ENVS, ERS, GEOG, INDEV, INTEG, PLAN
 - Complete at least 1 course from: ENGL
 - Complete at least 1 course from: FINE, MUSIC, THPERF
 - Complete at least 1 course from: GERON, HEALTH, HLTH, KIN
 - Complete at least 1 course from: PSYCH (excluding PSYCH101/PSYCH101R)
 - Complete at least 1 course from: SOC

Required Courses

- Complete all of the following
 - Complete all the following:
 - **ENVS205 - Sustainability: The Future We Want (0.50)**

- HEALTH107 - Sociology of Activity, Health, and Well-Being (0.50)
- REC100 - Introduction to the Study of Recreation and Leisure (0.50)
- REC101 - Introduction to Recreation and Leisure Services (0.50)
- REC120 - Experience Design and Delivery (0.50)
- REC201 - Introduction to Leisure, Equity, Diversity, and Inclusion for Just Communities (0.50)
- **REC215 - Marketing Recreation, Sport, and Events (0.50)**
- **REC219 - Introduction to Event Studies (0.50)**
- **REC230 - Outdoor Recreation, Tourism, and the Natural Environment (0.50)**
- **REC280 - Introduction to Tourism (0.50)**
- **REC256 - Foundations of Community Engagement in Recreation and Leisure (0.50)**
- **REC318 - Leadership Theory and Practice in Recreation, Sport and Leisure Organizations (0.50)**
- **REC356 - Leisure and Community (0.50)**
- REC371 - Quantitative Data Analysis and Mobilization (0.50)
- REC373 - Qualitative Approaches to Leisure Research (0.50)
- REC405 - Leisure and Well-Being (0.50)
- REC420 - Advanced Program Evaluation in Leisure Services (0.50)
- **REC456 - Innovative Solutions for Healthy Communities (0.50)**
- **Complete 1 of the following:**
 - **ENGL210F - Genres of Business Communication (0.50)**
 - **ENGL210G - Genres of Fundraising Communication (0.50)**
- **Complete 1 of the following:**
 - **GSJ260 - Social Determinants of Health (0.50)**
 - **HLTH260 - Social Determinants of Health (0.50)**
- **Complete 1 of the following:**
 - **LS271 - Conflict Resolution (0.50)**
 - **PACS202 - Conflict Resolution (0.50)**
 - **PACS313 - Community Conflict Resolution (0.50)**
- **Complete 1 of the following:**
 - **PSCI100 - Power, Politics, and Policy: An Introduction (0.50)**
 - **SDS231R - Introduction to Social Policy Processes (0.50)**
- Complete 1 of the following:
 - PSYCH101 - Introductory Psychology (0.50)
 - PSYCH101R - Introductory Psychology (0.50)

Course Lists

Required Courses

No Rules

Are there cross-listed courses listed in requirements? **Cross-Listings Options** 
 Yes All cross-listings to be displayed

Proposed

Additional Constraints

1. MUSIC353W can be used towards the 2.5 units of REC courses.

Existing

Additional Constraints ⓘ

1. MUSIC353W can be used towards the 6.5 units of REC courses.

Notes ⓘ

- See Faculty of Health for recommended course sequences.

Specializations

Specializations for this Major ⓘ

No

Workflow Information

Change to Undergraduate Communication Requirement

No

Workflow Path ⓘ

Committee approvals

Faculty/AFIW Path(s) for Workflow ⓘ

Faculty of Health

Senate Workflow

Senate Regular

Dependencies

Dependent Courses and Programs/Plans

PREREQUISITES

✓ REC 371 - Quantitative Data Analysis and Mobilization	View Courses >
✓ REC 215 - Marketing Recreation, Sport, and Events	View Courses >
✓ REC 401 - Advanced Seminar on the Socio-Cultural and Behavioural Dimensions of Leisure	View Courses >
✓ REC 373 - Qualitative Approaches to Leisure Research	View Courses >
✓ AFM 123 - Accounting Information for Managers	View Courses >
✓ REC 120 - Experience Design and Delivery	View Courses >
✓ REC 475 - Independent Study: Translating Research for Practice	View Courses >
✓ REC 471A - Honours Thesis Proposal	View Courses >
✓ REC 405 - Leisure and Well-Being	View Courses >
✓ REC 151 - Foundations of Therapeutic Recreation Practice	View Courses >
✓ REC 312 - Practicum in Recreation, Sport, and Tourism	View Courses >

SUC Appendix B: Recreation and Sport Business

H-Recreation & Sport Business Sport and Recreation Management (Bachelor of Arts - Honours)

Under Review | Fall 2025

General Program/Plan Information

Faculty

Faculty of Health

Academic Unit

Department of Recreation and Leisure Studies

Field of Study

Recreation and Sport Business

Faculty

Faculty of Health

Undergraduate Credential Type

Major

Program Type

Honours

Degree

Bachelor of Arts (Health)

Proposed

Program/Plan Name

Sport and Recreation Management (Bachelor of Arts - Honours)

Existing

Program/Plan Name

Recreation and Sport Business (Bachelor of Arts - Honours)

Systems of Study

Co-operative

Regular

Online Degree/Diploma

Admissions

Admissions Entry Point

Direct Entry

Admission Requirements: Minimum Requirements

Requirements Information

Invalid Combinations ⓘ

Yes

List of Invalid Combinations ⓘ

Management Studies Minor

Average Requirement ⓘ

Yes

Minimum Average(s) Required ⓘ

- A minimum cumulative overall average of 65.0%.
- A minimum cumulative major average of 70.0%.

Graduation Requirements ⓘ

- See Bachelor of Arts (Health) degree-level requirements.
- Complete a total of 20.0 units:
 - 10.5 units of required courses.
 - 4.0 units of additional REC courses.
 - 2.5 units of approved courses.
 - 3.0 units of elective courses.

Co-operative Education Program Requirements ⓘ

For students in the co-operative system of study, see Bachelor of Arts (Health) co-operative education program requirements.

Course Requirements (units) ⓘ

Required Courses

0

Units to Complete

No Rules

Course Requirements (no units) ⓘ

Required Courses

- Complete all of the following
 - Complete all the following:
 - BET100 - Foundations of Entrepreneurial Practice (0.50)
 - HEALTH107 - Sociology of Activity, Health, and Well-Being (0.50)
 - HRM200 - Basic Human Resources Management (0.50)
 - REC100 - Introduction to the Study of Recreation and Leisure (0.50)
 - REC101 - Introduction to Recreation and Leisure Services (0.50)
 - REC120 - Experience Design and Delivery (0.50)
 - REC201 - Introduction to Leisure, Equity, Diversity, and Inclusion for Just Communities (0.50)
 - REC213 - The Business of Professional Sport (0.50)
 - REC215 - Marketing Recreation, Sport, and Events (0.50)
 - REC219 - Introduction to Event Studies (0.50)
 - REC313 - Amateur Sport from Playground to Podium (0.50)
 - REC371 - Quantitative Data Analysis and Mobilization (0.50)
 - REC373 - Qualitative Approaches to Leisure Research (0.50)
 - REC405 - Leisure and Well-Being (0.50)
 - REC413 - Innovative Solutions in Recreation and Sport Business (0.50)
 - REC420 - Advanced Program Evaluation in Leisure Services (0.50)

- Complete 1 of the following:
 - AFM123 - Accounting Information for Managers (0.50)
 - ARBUS102 - Accounting Information for Managers (0.50)
- Complete 1 of the following:
 - AFM131 - Introduction to Business in North America (0.50)
 - ARBUS101 - Introduction to Business in North America (0.50)
 - BUS111W - Introduction to Business Organization (WLU) (0.50)
- Complete 1 of the following:
 - ARBUS302 - Principles of Marketing (0.50)
 - BUS252W - Introduction to Marketing Management (WLU) (0.50)
 - MGMT244 - Principles of Marketing (0.50)
- Complete 1 of the following:
 - BUS288W - Organizational Behaviour 1 (WLU) (0.50)
 - MSE211 - Organizational Behaviour (0.50)
 - PSYCH238 - Organizational Psychology (0.50)
- Complete 1 of the following:
 - PSYCH101 - Introductory Psychology (0.50)
 - PSYCH101R - Introductory Psychology (0.50)

Course Lists

Approved Courses List

- Choose any of the following:
 - AFM231 - Business Law (0.50)
 - ARBUS202 - Professional and Business Ethics (0.50)
 - BET300 - Foundations of Venture Creation (0.50)
 - BUS121W - Functional Areas of the Organization (WLU) (0.50)
 - BUS208W - Interpersonal Communication (WLU) (0.50)
 - BUS231W - Business Law (WLU) (0.50)
 - BUS311W - Entrepreneurship and New Ventures (WLU) (0.50)
 - BUS362W - Applied Marketing (WLU) (0.50)
 - BUS412W - Services Marketing Management (WLU) (0.50)
 - BUS432W - Consumer Behaviour (WLU) (0.50)
 - BUS452W - Marketing Strategy (WLU) (0.50)
 - BUS462W - Business-to-Business Marketing (WLU) (0.50)
 - BUS472W - Marketing Communications (WLU) (0.50)
 - BUS482W - Sales Management (WLU) (0.50)
 - COMMST100 - Interpersonal Communication (0.50)
 - COMMST101 - Theories of Communication (0.50)
 - COMMST223 - Public Speaking (0.50)
 - COMMST225 - Interviewing (0.50)
 - COMMST226 - Introduction to Race, Culture, and Communication (0.50)
 - COMMST227 - Leadership (0.50)
 - COMMST228 - Public Communication (0.50)
 - COMMST324 - Small Group Communication (0.50)
 - COMMST432 - Conflict Management (0.50)
 - COMMST433 - The Organizational Consultant (0.50)
 - ECON101 - Introduction to Microeconomics (0.50)
 - ECON102 - Introduction to Macroeconomics (0.50)

- o ECON254 - Economics of Sport (0.50)
- o ENGL210F - Genres of Business Communication (0.50)
- o ENGL295 - Social Media (0.50)
- o GSJ207 - Entrepreneurship, Gender, and Social Justice (0.50)
- o HRM301 - Strategic Human Resources Management (0.50)
- o HRM303 - Compensation (0.50)
- o HRM305 - Health and Safety (0.50)
- o HRM307 - Labour Relations (0.50)
- o LS206 - Canadian Government and Politics (0.50)
- o LS271 - Conflict Resolution (0.50)
- o LS283 - Business Law (0.50)
- o MGMT220 - Entrepreneurship and the Creative Workplace (0.50)
- o PACS202 - Conflict Resolution (0.50)
- o PHIL206 - Philosophy of Sport (0.50)
- o PHIL215 - Professional and Business Ethics (0.50)
- o PSCI100 - Power, Politics, and Policy: An Introduction (0.50)
- o PSCI231 - Government and Business (0.50)
- o PSCI252 - Global South (0.50)
- o PSCI260 - Canadian Government and Politics (0.50)
- o PSCI283 - International Political Economy (0.50)
- o PSCI331 - Public Administration (0.50)
- o PSCI334 - Public Policy (0.50)
- o REC206 - Philosophy of Sport (0.50)
- o REC218 - Social Entrepreneurship for Change (0.50)
- o REC312 - Practicum in Recreation, Sport, and Tourism (0.50)
- o REC319 - Event Planning and Design (0.50)
- o REC419 - Event Implementation and Evaluation (0.50)
- o SOC241 - Sociology of Work and Occupations (0.50)

Are there cross-listed courses listed in requirements? **Cross-Listings Options** ⓘ

All cross-listings to be displayed

Yes

Proposed

Additional Constraints ⓘ

1. MUSIC353W can be used towards the 4.0 units of REC courses.
2. For the approved courses:
 1. Registration in HRM courses will require declaration of the Human Resources Management Minor.
 2. Students should contact the Mathematics Business and Accounting unit for information regarding Laurier Business courses.
3. Students are permitted to pursue a double major in Honours Sport and Recreation Management and Honours Therapeutic Recreation, by meeting the requirements of each plan.

Existing

Additional Constraints ⓘ

1. MUSIC353W can be used towards the 4.0 units of REC courses.
2. For the approved courses:
 1. Registration in HRM courses will require declaration of the Human Resources Management Minor.
 2. Students should contact the Mathematics Business and Accounting unit for information regarding Laurier Business courses.
3. Students are permitted to pursue a double major in Honours Recreation and Sport Business and Honours Therapeutic Recreation, by meeting the requirements of each plan.

Notes

- See Faculty of Health for recommended course sequences.

Specializations

Specializations for this Major

No

Workflow Information

Workflow Path

Committee approvals

Faculty/AFIW Path(s) for Workflow

Faculty of Health

Senate Workflow

Senate Regular

Dependencies

Dependent Courses and Programs/Plans

PREREQUISITES

✓ REC 413 - Innovative Solutions in Recreation and Sport Business	View Courses >
✓ REC 371 - Quantitative Data Analysis and Mobilization	View Courses >
✓ REC 215 - Marketing Recreation, Sport, and Events	View Courses >
✓ REC 401 - Advanced Seminar on the Socio-Cultural and Behavioural Dimensions of Leisure	View Courses >
✓ REC 373 - Qualitative Approaches to Leisure Research	View Courses >
✓ REC 313 - Amateur Sport from Playground to Podium	View Courses >
✓ AFM 123 - Accounting Information for Managers	View Courses >
✓ REC 120 - Experience Design and Delivery	View Courses >
✓ REC 475 - Independent Study: Translating Research for Practice	View Courses >
✓ REC 471A - Honours Thesis Proposal	View Courses >
✓ REC 405 - Leisure and Well-Being	View Courses >
✓ REC 151 - Foundations of Therapeutic Recreation Practice	View Courses >
✓ REC 213 - The Business of Professional Sport	View Courses >
✓ REC 312 - Practicum in Recreation, Sport, and Tourism	View Courses >

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For Discussion**Open Session****To:** Senate**Sponsor:** Vivek Goel, President and Vice-Chancellor
Contact Information: Office of the President**Presenter:** Michael Dorr, Associate Vice-President, Associate Vice-President, Marketing and Brand Strategy
Melanie Will, Director, Talent Management
Contact Information: (feedback to: <https://uwaterloo.ca/values/contact-us>)**Date of Meeting:** May 6, 2024**Agenda Item Identification:** 10(a) Waterloo Values - Review of Draft Values Statement**Recommendation/Motion:**

That Senate endorse the Values Statement as presented in the attachment to this report, and further to recommend that the Board of Governors give final approval to the same Values Statement.

Summary:

The need to review and update our institutional values has been raised as part of several recent reports. The [President's Anti-Racism Taskforce \(PART\) Report](#) recommended revision of the institution's values to include anti-racist and anti-oppression beliefs. [Waterloo at 100](#), the University's strategic vision, also listed this exercise as part of its next steps in advancing the vision and to help establish the culture required to meet the vision's bold aspirations. The report from the [Provost's Advisory Committee on Building a Resilient University of Waterloo](#) also highlighted the importance of addressing organizational culture and operational processes that encourage and depend on greater coordination and collaboration among other desired features – leading to the concept of “One Waterloo”. In discussions, it was apparent that the current values, adopted as part of the [University of Waterloo Strategic Plan 2020-2025 \(Connecting Imagination with Impact\)](#), were not understood or used by many members of the community.

The draft values statement is the result of consultations across the University community over the past year. Through the consultations, the team affirmed similar perspectives from a broad range of community stakeholders for the need for a shift from the prevailing culture and organizational structures at the University, which often result in siloed work, inefficiencies, and missed opportunities for greater effectiveness and impact. The proposed Waterloo's values are thus seen as an integral component of shaping our organization's culture and by extension the University's impact in the world through its people.

The draft values statement includes an Introduction carrying key messages that supplement the set of three values proposed. The Introduction highlights the importance of the broader values and culture

initiative underway, noting that a plan will follow once the values are finalized. The plan will outline the work ahead in linking behaviours to practices for everyone in our community to connect to and uphold.

Jurisdictional Information

This item is submitted to Senate in accordance with the University of Waterloo Act, 1972, section 22:

“Powers of the Senate

...

(j) to undertake, consider and co-ordinate long-range academic planning;
(k) to consider and to recommend to the Board of Governors policies concerning the internal allocation or use of University resources;”

Governance Path:

The draft values statement was recently reviewed at the Senate Long Range Planning Committee (April 10, 2024) where feedback was provided and incorporated. Prior, the values received input from all key administrative and academic leadership governance bodies: President and Vice-Presidents, Deans’ Council, and Executive Council (scheduled for April 11). Last year, at the Senate and Board Retreat (September 27, 2023), members engaged with the values team and provided direction on the approach and initial frame of values. We are seeking Senate’s review and recommendation to the Board for endorsement at its June 18, 2024 meeting.

Highlights:

The values statement contains introductory text that highlights the call for action from Waterloo at 100 to revisit our values to help build an empowered culture with an emphasis on accountability, nimbleness, and impact. This includes instilling collaboration as a mindset and skill for all in our community. This broader work in values and culture is grounded in imperatives for health and wellness, decolonization and Indigenization, equity and anti-racism, coordination and collaboration across disciplines and organizational boundaries, and the sustenance of excellence across mission-critical activities. Beyond the statement, the values will lead to behaviours embedded in everything we do and practiced by all that make up our community. The values also reflect our history and institutional differentiators, important to linking our future aspirations to our identity as an unconventional research-intensive university offering co-operative education at scale. Three values are proposed to capture what makes Waterloo and its community unique in the world and a leading force into our future: Think Differently, Act with Purpose, and Work Together.

Next Steps:

- Management to consider and incorporate input from Senate.
- Senate to recommend to Board for endorsement.
- Pending endorsement Management will prepare an implementation plan for the values and culture work.

Documentation Provided:

- Draft values statement including an introduction and the values set

DRAFT VALUES

April 15, 2024

INTRODUCTION

The launch of the University of Waterloo's values **represents a commitment**. A commitment to build on our existing cultural strengths; but also identify areas to improve.

As outlined in the **Waterloo at 100** vision...*“we need to find ways to co-ordinate, collaborate and co-create to build an empowered organizational culture with an emphasis on accountability, nimbleness and impact. This cultural shift will also mean instilling collaboration as a mindset and skill in our students and valuing collaborative connections with community and global partners.”*

This values and culture initiative is a direct response to Waterloo at 100's call-to-action and is further grounded by the following imperatives:

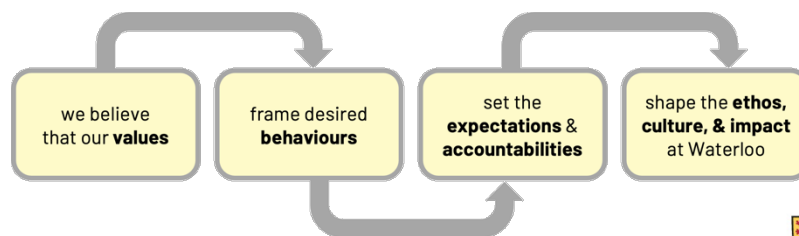
- Ensure the physical and mental health and well-being of our students and employees
- Embrace decolonization, Indigenization, inclusivity, equity, anti-oppression, and antiracism
- Co-ordinate and collaborate across disciplinary and organizational boundaries
- Uphold Waterloo's leadership and excellence in education, scholarship, innovation and entrepreneurship

Values cannot exist in isolation; thus, we are developing a plan for Waterloo values that is (1) **linked** to behaviours (2) **embedded** into how we work (i.e. “everything”) and (3) **practiced** and upheld by everyone.

Reflecting on our history – we defied conventions in 1957 when Waterloo was founded, and our co-operative education model was developed. We have been defying convention ever since.

Today, the University of Waterloo is home to nearly 50,000 students, faculty and staff – in addition to 250,000+ alumni around the world – representing a wonderfully diverse and complex community. This revised set of values represents a way of connecting us all as “one Waterloo”.

The Waterloo culture promotes **innovation, good work**, and endless **curiosity**. For everyone to thrive, we need to foster an environment that is **equitable, responsive, and accountable**. We all have a role to play. By defining our values and embedding them in our daily practice, we are committing to evolving and improving the culture for all at Waterloo.



At the University of Waterloo, **we ...**

THINK DIFFERENTLY *we are unconventional | we are bold | we are innovative*

It takes **courage** to stand out. It takes **curiosity** to be innovative. At Waterloo, we know that great ideas are born when we **challenge the status quo** and ask **bold questions**. We **embrace risks**. We do not fear failure because we learn from our mistakes.

Our capacity to *think differently* is expanded when we seek out perspectives and experiences that are different from our own. We do our best work when we break free from the ordinary. **Openness, diversity of thought, and reciprocity** are essential.

At Waterloo **we defy convention**, we explore the uncharted and we celebrate uniqueness. This **unconventional spirit** is at our core and will help us continue to disrupt and shape the future. We are committed to creating an environment that enables innovative and entrepreneurial thinking in all that we do.

ACT WITH PURPOSE *we drive positive impact | we are responsible | we get things done*

We **make a positive impact** in the Waterloo community and around the world. Our impact is vast, and so is our responsibility – to each other, to the community, the environment, and more. We also have a **responsibility to create an environment** that fosters trust, accountability, and foresight. We identify and develop **equitable and sustainable solutions** for humanity and our planet.

We don't simply solve problems – we identify new opportunities and problems by asking “*why?*” and “*why not?*” And we ask, “*what problems should we solve?*” We maintain the highest standards for excellence while acting with commitments to ethics, integrity, generosity, and care.

We value action because we **learn through the process of doing**. We value **hands-on experiences** through learning, teaching, research, and work. Experience teaches us, reflection helps us grow.

WORK TOGETHER *we are collaborative | we value community | we are “one Waterloo”*

We promote a **culture of collaboration** – Waterloo is at its best when we work together – which results in fresh thinking, inspiration, and innovative breakthroughs. Creative collisions through collaboration create change for the better. **Collaboration as a mindset** extends beyond our students, faculty, and staff– it includes alumni, members of our broader Waterloo community, industry partners, and more.

We encourage our campus community to stand up for one another by **advocating for positive change** through decolonization, Indigenization, inclusivity, equity, and anti-racism across campus. We value the **diverse voices** of our Waterloo community; we respect differences; we believe that our difference is what makes us whole.

We aspire to be “**One Waterloo**”.

Honorary Degrees Committee

For Information

Consent Report

Open Session

To:**Senate****Sponsor:**Vivek Goel
President and Vice-chancellorJames W.E. Rush
Vice-President, Academic and Provost**Presenter:**

Vivek Goel

Contact Information:president@uwaterloo.ca**Date of Meeting:**

May 6, 2024

Agenda Item Identification:**12) Report – Honorary Degrees Committee:
2024 Spring Convocation List of Honorands****Summary:**

The [Honorary Degrees Committee](#) announces the 2024 Spring Convocation List of Honorands.

(S) = speaker

Faculty of Environment: Tuesday, June 11, 2024, 10:00 a.m.

- Sheryl Kennedy – Honorary Doctor of Environment (S)
- Jean Andrey - Honorary Member of the University

Faculty of Health: Tuesday, June 11, 2024, 2:30 p.m.

- Rick Hansen – Honorary Doctor of Law (S)
- Margaret Burnett - Honorary Member of the University
- Rhona Hanning - Distinguished Professor Emerita
- Ron McCarville - Distinguished Professor Emeritus
- Tina Roberts - Honorary Member of the University

Faculty of Mathematics: Wednesday, June 12, 2024, 10:00 a.m.

- Vinton Cerf – Honorary Doctor of Mathematics (S)
- Ian Munro - Distinguished Professor Emeritus
- Lawrence Folland - Honorary Member of the University

Faculty of Mathematics: Wednesday, June 12, 2024, 2:30 p.m.

- No honorands

Faculty of Mathematics: Wednesday, June 12, 2024, 6:30 p.m.

- Ian Stewart – Honorary Doctor of Mathematics (S)

Faculty of Arts: Thursday, June 13, 2025, 10:00 a.m.

- TBD – Invited Guest Speaker (S)

Faculty of Arts: Thursday, June 13, 2024, 2:30 p.m.

- Brad Regehr – Honorary Doctor of Letters (S)
- Collin MacLeod – Distinguished Professor Emeritus

Faculty of Arts: Thursday, June 13, 2024, 6:30 p.m.

- Dominic Barton – Chancellor Emeritus
- Patricia O'Brien – Distinguished Professor Emerita
- Donna Sutherland – Honorary Member of the University
- Alan Webb – Distinguished Professor Emeritus
- Christine Wiedman – Distinguished Professor Emerita

Faculty of Science: Friday, June 14, 2024, 10:00 a.m.

- TBD – Invited Guest Speaker (S)

Faculty of Science: Friday, June 14, 2024, 2:30 p.m.

- Scott Tremaine – Honorary Doctor of Science (S)

Faculty of Engineering: Friday, June 14, 2023, 6:30 p.m.

- TBD – Invited Guest Speaker (S)
- Murray Zink – Honorary Member of the University

Faculty of Engineering: Saturday, June 15, 2023, 10:00 a.m.

- Claudette McGowan – Honorary Doctor of Law (S)

Faculty of Engineering: Saturday, June 15, 2023, 2:30 p.m.

- David & Linda Cornfield – Honorary Doctor of Law (S)

Faculty of Engineering: Saturday, June 17, 2023, 6:30 p.m.

- Bruce Kuwabara – Honorary Doctor of Engineering (S)
- Neil Thomson – Distinguished Professor Emeritus

Biographies:

***Note to SEC, biographies will be provided for Senate package.**

Senate Agenda Items · expected *as needed	May 6, 2024	June 10, 2024	September 23, 2024	October 21, 2024 <i>Strategic Plan Annual Update / Waterloo at 100</i>	November 25, 2024	January 27, 2025	March 3, 2025	April 7, 2025
REGULAR AGENDA (including items for information and discussion)								
Minutes	·	·	·	·	·	·	·	·
Business Arising	·	·	·	·	·	·	·	·
LEADERSHIP UPDATES⁶								
Report of the Vice-President, Academic & Provost	*	*	*	*	*	*	*	*
Report of the Vice-President, Research and International	*	*	*	*	*	*	*	*
COMMITTEE/COUNCIL REPORTS								
Executive Committee	*	*	*	*	*	*	*	*
Graduate & Research Council (GRC)	·	·	·	·	·	·	·	·
Undergraduate Council (UC)	·	·	·	·	·	·	·	·
Long Range Planning Committee				·		·		·
Fall Update, University Operating Budget				·				
Joint Report of GRC & UC, Academic Calendar Dates ¹					·			
University Committee on Student Appeals Annual Report ¹ (Policy 72)					·			
University Appointment Review Committee Annual Report ¹ (Policy 76)								·
Finance Committee - Budget Update ³							·	
Finance Committee - Budget recommendation ^{2, 3}								·
OTHER SENATE AGENDA ITEMS								
New Senator Orientations (before meeting)	·							
Teaching Awards Committee, appointment of members							·	
Delegation of Roster of Graduands								·
Report of Roster of Graduands			·		·			
Convocation Report – summary of this years’ ceremonies					·			
Undergraduate and Graduate Admissions Update						·		
Conduct Self-Assessment Survey ¹							·	
SENATE PRESENTATIONS								
Presentations from the Presidents of the Faculty Association, Waterloo Undergraduate Association and Graduate Student Association ¹							·	
Strategic Plan Accountability Update ¹ (June)		·						
PART Annual Update		·						
Faculty Updates		SCI						

¹ Annual item

² Board of Governors approval

³ Presented by the Vice-President Academic and Provost

⁴ Presented by the President and Vice-Chancellor, and Chair of Senate

⁵ Presented by the University Secretary

⁶ Leadership updates may include such topics as: Talent, We Accelerate Report, Communities (EDI, Sustainability), Waterloo International, etc.

Senate Agenda Items • expected *as needed	May 6, 2024	June 10, 2024	September 23, 2024	October 21, 2024 <i>Strategic Plan Annual Update / Waterloo at 100</i>	November 25, 2024	January 27, 2025	March 3, 2025	April 7, 2025
CONSENT AGENDA								
Reports from Faculties (e.g., appointments, administrative appointments, sabbaticals) ²	•	•	•	•	•	•	•	•
Tenure and Promotion Report ⁴			•					
University Professor Designation ³								•
Call for Nominations for University Professor ³			•					
Call for Nominations for Honorary Degree Recipients ⁴						•		
Report of the COU Academic Colleague ¹	•							am
Senate Committee Appointments ⁵	*	*	•	*	*	*	*	*
CLOSED AGENDA								
Minutes	•	•	•	•	•	•	•	•
Business Arising	•	•	•	•	•	•	•	•
Reports from Committees and Councils	*	*	*	*	*	*	*	*
Honorary Degree Recommendations	*	*	*	*	•	•	*	*
Reports from Search and Review Committees for Policy-based Senior Leadership Appointments and Reappointments	*	*	*	*	*	*	*	*
Report of VP Advancement on Policy 7 ¹		•						

Joint SENATE/BOARD Strategic Plan Focus Sessions 3-4:30	Joint SENATE/BOARD Continuing Education Sessions 3-4:30
• To be determined	• To be determined

Special Topics for 2024-2025 to be Scheduled:

- President's Anti-racism Task Force Update (PART)

For more information: secretariat@uwaterloo.ca
uwaterloo.ca/secretariat, NH 3060

¹ Annual item

² Board of Governors approval

³ Presented by the Vice-President Academic and Provost

⁴ Presented by the President and Vice-Chancellor, and Chair of Senate

⁵ Presented by the University Secretary

⁶ Leadership updates may include such topics as: Talent, We Accelerate Report, Communities (EDI, Sustainability), Waterloo International, etc.



Senate Graduate & Research Council

For Information

Consent Agenda

Open Session

To:

Senate

Sponsor:

Charmaine Dean
Vice-President, Research & International

Jeff Casello
Associate Vice-President, Graduate Studies and Postdoctoral Affairs

Presenter:

Jeff Casello

Contact Information:

jcasello@uwaterloo.ca

Date of Meeting:

May 6, 2024

Agenda Item Identification:

14) Report – Senate Graduate & Research Council

Summary:

[Senate Graduate & Research Council](#) met on April 8, 2024 and agreed to forward the following items to Senate for information as part of the consent agenda. On behalf of Senate, the following items were approved:

1. Research Ethics

Council approved the membership of two (2) new members and the role change of two (2) member of the [Human Research Ethics Board \(HREB\)](#), and the renewal of one (1) member of the [Clinical Research Ethics Board \(CREB\)](#).

2. Academic Program Reviews

Following the review of the report and presentation from the programs, Council approved the following report:

- a. Final Assessment Report: [Classical Studies](#)
- b. Progress Report: [French Studies](#)
- c. Progress Report: [Taxation](#)

There were no issues noted in the report.

3. Curricular Submissions

Council approved new courses, course changes, course inactivations, and minor program modifications for:

- a. [Faculty of Arts](#) (Anthropology; Classic; Economics; English; French; German; Global Governance; History; Peace and Conflict Studies; Philosophy; Political Science; Psychology; Sociology)
- b. [Faculty of Engineering](#) (Civil and Environmental Engineering; Management Science and Engineering)
- c. [Faculty of Health](#) (Public Health Sciences; Kinesiology and Health Sciences)
- d. [Graduate Studies](#) (Interdisciplinary Studies)

Jurisdictional Information:

As provided for in [Senate Bylaw 2](#), section 4.03, council is empowered to make approvals on behalf of Senate for a variety of operational matters:

- c. Receive, consider, study and review briefs on any aspect of graduate studies and research from members of the university.
- f. On behalf of Senate, consider and approve all new graduate courses, the deletion of graduate courses, and proposed minor changes to existing graduate courses and programs, and provide Senate with a brief summary of council's deliberations in this regard. Any matter of controversy that might arise may be referred to Senate.
- i. On behalf of Senate, consider and approve all new graduate scholarships and awards. Any matter of controversy that might arise may be referred to Senate.

Senate Undergraduate Council

For Information

Consent Agenda

Open Session

To: Senate

Sponsor: David DeVidi
Associate Vice-President, Academic

Presenter: David DeVidi
Contact Information: david.devidi@uwaterloo.ca

Date of Meeting: May 6, 2024

Agenda Item Identification: **15) Report – Senate Undergraduate Council**

Summary:

[Senate Undergraduate Council](#) met on April 9, 2024 and agreed to forward the following items to Senate for information as part of the consent agenda. On behalf of Senate, the following items were approved:

1. Academic Program Reviews

Following the review of the report and presentation from the programs, Council approved the following report:

- a. Final Assessment Report: [Systems Design Engineering, and Biomedical Engineering](#)
- b. Progress Report: [Communication Studies, and Digital Arts Communication](#)

There were no issues noted in the report.

2. Curricular Submissions

Council approved new courses, course changes, and course inactivations for:

- a. [Faculty of Environment](#): (Dean of Environment Office)
- b. [Faculty of Health](#): (Recreation and Leisure Studies)

Jurisdictional Information:

As provided for in [Senate Bylaw 2](#), section 5.03, council is empowered to make approvals on behalf of Senate for a variety of operational matters:

- c. On behalf of Senate; consider and approve all new undergraduate courses; the deletion of undergraduate courses; and proposed changes to existing undergraduate courses and minor changes to programs and/or plans; and provide Senate with a summary of council's deliberations in this regard. Any matter of controversy that might arise may be referred to Senate.
- e. Consider, study and review briefs on any aspect of undergraduate studies from members of the university.

For Information**Open Session****To:** Senate**Sponsor:** James W.E. Rush, Vice-President, Academic and Provost
Contact Information: provost@uwaterloo.ca**Presenter:** James W.E. Rush, Vice-President, Academic and Provost
Contact Information: provost@uwaterloo.ca**Date of Meeting:** **May 6, 2024****Agenda Item Identification:** **16) Report from Senate Long Range Planning Committee****Summary:**

Senate Long Range Planning Committee met on April 10, 2024. A summary of the item discussed is provided for the information of Senate.

1. Waterloo Values

The committee reviewed the most current draft of the values statement, and provided feedback on the draft to emphasize strong points and to offer potential improvements for consideration. The feedback will be reviewed by the working group, and the final draft of the Waterloo Values statement will come forward to Senate in May 2024 as a separate item in the regular agenda.

2. Integrative Library Space and Utilization Strategy

The committee received a presentation from Beth Namachchivaya, University Librarian, and Paul Fieguth, Associate Vice President - Academic Operations, on prospective activities and plans for an integrative library space and utilization strategy. This is supported by a commission of the provost to transform library services and spaces in line with the Waterloo@100 strategic direction, seeking a long-term space plan with recommendations for near-term programs and space transformations, with congruence with the One University concept. A steering committee has been formed which will link to the campus community, and work in this space will benefit from examining similar transformations underway at comparator institutions to identify the best strategies for Waterloo.

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For Discussion

Open Session

To: Senate**Sponsor:** Charmaine B. Dean, Vice President Research and International
Contact Information: vpri@uwaterloo.ca**Presenter:** Charmaine B. Dean, Vice President Research and International
Contact Information: vpri@uwaterloo.ca**Date of Meeting:** May 6, 2024**Agenda Item Identification:** 17) Report, Vice-President, Research and International - Awards, Distinctions, Grants, Waterloo International Engagements**Summary:**

Presenting the Vice-President, Research and International Report to Senate for May 2024. This report to Senate highlights successful research, international and entrepreneurial outputs and outcomes for the period March 2024 by the thematic areas as outlined in Waterloo's Strategic Plan 2020-25.

Documentation Provided:

- Vice-President, Research and International May 2024 Report to Senate

**Vice-President, Research & International
Report to Senate
May 2024**

Introduction

This report to Senate highlights successful research and international outputs and outcomes for the period March 2024.

Velocity Highlights:

The Velocity Pitch Competition 2024

This annual pitch competition gives creative, early-stage ventures with potential for cross-industry impact the chance to compete for \$5,000 and obtain further business guidance from Velocity. This year, the competition attracted more than 100 student applications from Faculties across campus. The four winning teams are highlighted below:

CELLECT (CT Murphy, BAsc. '23, Chemical Engineering and Founder)

CELLECT was created out of Murphy's fourth-year capstone design project under the thesis supervision of Chemical Engineering professor, Marc Aucoin. CELLECT's innovative technology uses nanomaterials in menstrual products to diagnose HPV and cervical cancer - potentially eliminating the need for Pap smears. "Menstrual blood is such a stigmatized bodily fluid," says Murphy. "But more than half the world's population experiences it so let's use it to be more informed and proactive about their health. Women's health demands better attention and more knowledge, and I want to help make that happen."

GreaseTech (Minaal Butt, MBET '24 and Co-founder | Jesurun Ramesh, MBET '24 and Co-founder)

GreaseTech is changing how the manufacturing industry maintains its machinery through their hardware and software that accurately lubricates machine bearings, saving time and money. Using sensors on each bearing, the Grease Tech platform signals lubrication status, making scheduling and maintenance easier for companies and tapping into a \$24 billion North American market opportunity,

PatientCompanion (Ethan Alvizo, current BAsc. - Biomedical Engineering and Co-founder | Christy Lee, current BAsc. - Biomedical Engineering and Co-founder | Valerie Liu, current BAsc. - Biomedical Engineering and Co-founder)

PatientCompanion has created a system that enables patients to submit specific requests that are automatically prioritized for nursing staff. The platform intelligently routes non-medical requests, such as those for water or blankets, to personal support workers or volunteers. This innovation promises to alleviate the workload of nurses in hospitals and long-term care facilities.

SheepIt (Noumaan Kaleem, current - Bachelor of Computer Science and Co-founder | Nathan Philippon, current - Bachelor of Computer Science and Co-founder | Saahibdeep Dhaliwal, current - Bachelor of Computer Science and Co-founder | Josiah Plett, current - Bachelor of Computer Science and Co-founder)

SheepIt aims to support hobbyist and specialist sheep farmers by electronically monitoring production rather than relying on pencil and paper for data tracking. The innovation fills a need that smaller sheep farmers have as currently this type of solution is only available for industrial farms.

Co-operative Education and Velocity 2023 Problem Award Recipients

The Problem Award is earned by students who provide the best analysis of an important problem relevant to a co-operative education employer or their larger industrial area. The following six students have earned the 2023 award for their solutions:

- **Adrian Jendo, Engineering 4B – Employer: Carta**

Adrian won the problem award for helping facilitate a new web form upload tool to house financial documents. The change improved customer satisfaction while filing documents.

- **Ashley Juraschka, Engineering 4B – Employer: Toronto Dominion Bank**

Ashley won the award for her efforts to resolve issues related to fraud-induced cybercrime caused by deepfakes. While all industries are at risk of attack, Juraschka pinpointed how financial institutions must take precautionary measures.

- **Luna Li, Engineering 3A – Employer: AECON**

While working with Aecon, Li realized that the company was experiencing delays due to an inefficiency with the shipping and tracking of metals. Li aimed to turn this into an efficiency to improve organization.

- **Claire Thompson, Engineering 4A – Employer: University of Waterloo ORTHOtron Laboratory**

While working at the ORTHOtron Laboratory, Thompson researched spinal biomechanics and identified an issue within the research process, specifically related to recruitment and knowledge transfer.

- **Victoria Ventura, Arts 2B – Employer: Romano Law Office**

At the firm, Ventura observed inefficiencies in conducting court proceedings online that could compromise the integrity of justice systems. [insert what she did to combat this].

- **JD Zhu, Engineering 2A – Employer: Grand River Hospital (GRH)**

At GRH Zhu strived to solve an issue related to personalized cancer treatments. Recognizing how slower and costly simulations limited the development of these treatments. Utilizing CompuCell3D and TOPAS programs, Zhu helped improve operations for medical physicists by ensuring accuracy for their patients.

Funded Research Awards:

Canada Research Chairs

The Canada Research Chairs (CRC) Program invests up to \$311 million per year to attract and retain some of the world's most accomplished and promising minds. Chairholders aim to achieve research excellence in engineering and the natural sciences, health sciences, humanities, and social sciences.

Tier 1 CRCs

A Tier 1 CRC is valued at \$200,000 per year for seven years and renewable one time. Tier 1 CRCs recognize full professors, or associate professors, who are expected to be promoted within two years of the nomination and who are acknowledged by their peers as world leaders in their fields. There are currently 763 active Tier 1 CRCs in Canada.

The following are new and renewed Tier 1 CRCs at the University of Waterloo.

New: Ruodu, Wang - (Department of Statistics and Actuarial Science)

Tier 1 NSERC CRC in Quantitative Risk Management

Wang studies several topics, including the recently developed theory of “e-values” in statistical testing, as well as modeling and assessing uncertainty. He works with financial institutions, regulators and scientists in other fields to help to design risk management tools and statistical procedures.

Renewed: Christopher Eliasmith - (Arts and joint appointment in Systems Design Engineering)

Tier 1 NSERC CRC in Theoretical in Neuroscience

Eliasmith is developing a mathematical theory to help understand how brains process information. He hopes to apply his theory to a wide variety of systems in specific parts of the brain. He is doing so by building biologically-realistic models that are involved in perception, motor control and several aspects of cognition.

Tier 2 CRCs

A Tier 2 CRC is worth \$100,000 per year for five years, plus \$20,000 per year for five years of Federal Research Funds. The Chairs are renewable one time. Tier 2 CRCs recognize exceptional emerging researchers for having the potential to lead in their field. There are currently 1,263 active Tier 2 CRCs in Canada.

The following are the new and renewed Tier 2 CRCs at the University of Waterloo.

New: Talena Atfield - (Department of History)

Tier 2 SSHRC CRC in Tentewatenikonhra'khánion (We Will Put Our Minds Together)

Atfield's goal is to contextualize life at Ohswé:ken (Six Nations) during the first quarter of the 20th century. This goal will be met through analysis and interpretation of archival, linguistic, photographic, and material culture by using community-led interviews and talking circles.

New: Zahid Butt - (School of Public Health Sciences)

Tier 2 CIHR CRC in Interdisciplinary Research for Pandemic Preparedness

Butt's research aims to understand 'syndemics,' - those interrelated interactions between diseases and social and behavioural factors that result in adverse consequences.

New: Kaylena Ehgoetz Mertens - (Department of Kinesiology and Health Sciences)

Tier 2 CIHR CRC in Gait and Neurodegeneration

Ehgoetz-Martens investigates the relationship between walking behaviour and neurodegeneration with the goal of understanding the complexity of walking to identify at-risk individuals and tracking their progression.

New: Aukosh Jagannath - (Department of Statistics and Actuarial Science)

Tier 2 NSERC CRC in Mathematical Foundations of Data Science

Jagannath's research focusses on the mathematics of data science, high-dimensional statistics, average case analysis of high-dimensional non-convex optimization problems.

Renewed: Andrew Bauer – (School of Accounting and Finance)

Tier 2 SSHRC CRC in Taxation, Governance and Risk

Bauer’s research examines the influence of agency issues on tax planning, including governance mechanisms, and the role of uncertainty in shaping tax planning, including risk assessment.

Renewed: Laura Hug – (Biology)

Tier 2 NSERC CRC in Environmental Microbiology

Hug seeks to define microbial diversity at contaminated sites and identify currently unknown metabolic functions. She and her research team are sequencing the total DNA and RNA of a microbial community from a contaminated site. This will generate a blueprint of which species exist e and which pathways are active.

Renewed: Luis Ricardez-Sandoval - (Chemical Engineering)

Tier 2 NSERC CRC in Multiscale Modelling and Process Systems

Ricardez-Sandoval is developing new computational tools that can aid in the design of innovative products and systems for emerging applications in the energy and advanced manufacturing sectors. He does this by using advanced process system techniques and modelling methods, such as multiscale modelling.

Canada Foundation for Innovation – John R. Evans Leaders Fund (CFI JELF) – CRC Partnership Grants

The CFI JELF – CRC program assists institutions to attract and retain researchers and provides support for the CRC program. In the current 2023 announcement, Waterloo had 3 successful proposals which totalled **\$260,000**.

Kaylena Ehgoetz Martens – (Kinesiology) – \$100,000

Project title: Can Gait Identify and Predict Brain Health?

Aukosh, Jagannath – (Statistics and Actuarial Science) – \$80,000

Project title: Project title: Mathematical Foundations of Data Science

Ruodu Wang – (Statistics and Actuarial Science) – \$80,000

Project title: Quantitative Risk Management Lab

Applied Public Health Chair

This funding opportunity aims to fund diverse mid-career applied public health researchers in Canada who will undertake inclusive and equitable applied research programs that tackle pressing public health challenges and who will work with decision makers from various sectors and communities to help support evidence-informed decisions that improve health and health equity.

William Wong – (School of Pharmacy)

Dr. Wong will receive **\$1.15 million** in funding over the next five years for his Applied Public Health Chair in HIV and Sexually Transmitted and Blood-Borne Infections (STBBI) Research. His research helps guide policy and decision-making to ultimately improve HIV/AIDS and STBBI care. Wong’s unique interdisciplinary training in computer science, machine learning, economic evaluation and health services research, brings a novel approach to help solve this great health challenge.

Canadian Foundation for Innovation (CFI)

The Canada Foundation for Innovation (CFI) is a non-profit corporation that invests in research infrastructure at Canadian universities, colleges, research hospitals and non-profit research institutions. Since 1997 the CFI and its affiliate programs such as CFI Innovation Fund and JELF have funded 13,074 projects across Canada worth \$8.8 billion CAD.

In the current round of CFI funding (2023 announcements), 100 proposals were approved across Canada, which represented \$392 Million in investment across 32 research institutions. In addition, \$689 million was leveraged in matching funds from private-sector, provincial and other partners to bring the overall investment to \$1.1 billion in support of Canada's research community.

Since 1997, the University of Waterloo has received \$217 Million CAD across 476 funded CFI projects. In the 2023 awarded projects, The University of Waterloo was successful in securing CFI Innovation Fund (IF) funding for 6 proposals that totalled **\$30.5 Million**.

Dipanjan Basu - (Department of Civil and Environmental Engineering) - \$2,723,302

Project title: Geothermal Energy and Energy Geo-storage Research Laboratory

This project is a field- and laboratory-scale research facility which operates on a hybrid geothermal energy and energy geo-storage system. Low-to-intermediate temperature geothermal energy harvesting in conjunction with underground energy storage has the potential to be a trailblazing technology because it can be employed across Canada and the world and does not require high temperature geothermal resources.

Kaan Erkorkmaz - (Department of Mechanical and Mechatronics Engineering) - \$6,458,020

Project title: Canadian Technology Accelerator for Digital Transformation of Manufacturing (CAN-DX)

CAN-DX will be one of the most advanced, integrated, connected, and multidisciplinary digital manufacturing research facilities in the world. Building upon the remarkable research and commercialization track record of the team, this strategic investment from CFI will boost the competitiveness of Canadian industry and solidify Canada's scientific ranking as one of the top countries in the creation, dissemination, and implementation of new knowledge and technologies driving Industry 4.0.

Ian Goldberg - (Cheriton School of Computer Science) - \$800,000

Project title: UPSCOPE: Understanding Privacy, Security, and Cryptography in Online and Physical Environments

The UPSCOPE Facility will have two primary sets of components: those for studying online environments, and those for studying physical environments – both of which will assist with safely isolating potentially malware-laden devices without harming the privacy or security of existing users of the technologies.

Scott Hopkins - (Chemistry) - \$10,006,500

Project title: A Canadian Free Electron Laser (FEL) project

This project brings together 10 researchers and 8 institutions from across Canada to establish the first infrared free electron laser (IR-FEL) facility in the western hemisphere. The facility will enable fundamental science concerned with monitoring energy flow through molecules and materials, with applications in light harvesting and photo-control of molecular properties.

Christopher Hudson and Elizabeth Irving - (School of Optometry and Vision Science) - \$2,362,150

Project title: Canadian Vision Imaging Center (CVIC)

The infrastructure will comprise specialized facilities for: 1) Imaging of the eye at the cellular level; 2) Imaging of structure and function of the eye; and 3) Imaging the integration of vision and body. The infrastructure will enable the team to create world-leading and unique imaging facilities with advanced capabilities to solve mounting health-care crises related to vision and vision loss, and neurodegenerative and vascular diseases.

Hamid Jahed - (Department of Mechanical and Mechatronics Engineering) - \$8,123,420

Project title: Canadian Alliance in Cold Spray Technology (CACST)

The CACST facilities will connect and accelerate world-class CS research underway at the Universities of Waterloo, Ottawa, Western, New Brunswick, Sherbrooke, Toronto, and Windsor. Specifically, it will enable a holistic approach to CS technology innovation, providing cutting-edge infrastructure for novel CS-specific powder synthesis and manufacturing, transformative CS 3D additive manufacturing, innovative coatings and parts consolidation for intelligent manufacturing.

SSHRC Insight Development Grants

Insight Development Grants support research in its early stages and enable the development of new research questions, as well as experimentation with new methods, theoretical approaches and ideas. Funding is available to both emerging scholars and established scholars for research initiatives of up to two years.

From the 2023 competition, thirteen Waterloo researchers will receive funding that totals more than **\$650,000**.

Nazli Akhtari - (Communication Arts) - \$72,080

Project title: Archival Animations in the Global Iranian Disapora

Katherine Bruce-Lockhart - (History) - \$62,461

Project title: Beyond the Mandela Rule: Global Governance, Prisoners' Rights, and "Universal" Prision Rules from the 19th-21st Centuries

Ada Hurst & Frank Safayeni - (Management Science and Engineering) - \$42,418

Project title: Understanding Collaborative Design Problem Framing by Novice Engineers: Implications for Engineering Design Education

Adan Jerreat-Poole - (Communication Arets) - \$21,330

Project title: Disabled Feminists and Digital Storytelling: Zine-Making Pandemic Lives

Samuel Johnson - (Psychology) - \$62,989

Project title: Mental Task Management Theory

Logan McDonald - (Fine Arts) - \$75,000

Project title: Environmental Scan of Indigenous Artists in Archives

Katherine Misener - (Recreation and Leisure Studies) - \$74,974

Project title: Disrupting the Norms of Community Sport Through Co-Participation of Parents and Children

Juan Moreno-Cruz - (School of Environment, Enterprise and Development) - \$72,928

Project title: The Role of Narratives on Sustainable Food Consumption

Elizabeth Nilsen - (Psychology) and Edith Law - (Cheriton School of Computer Science) - \$66,461

Project title: Associations Between Children's Characteristics and Their Perceptions of, Strategies Toward, and Learning from Teachable Robots

Manaal Fahim Syed - (School of Social Work) - \$61,469

Project title: Intergenerationality in the COVID-19 Crisis: Evolving Definitions and Relations Between Older and Younger Generations in Immigrant Families and Society

Keisuke Teeple (Economics) - \$44,820

Project title: Financial Market Tatonnement

Alliance Grants

Alliance grants encourage university researchers to collaborate with partner organizations from the private, public or not-for-profit sectors. These grants support research projects led by strong, complementary, and collaborative teams that will generate new knowledge and accelerate the application of research results to create benefits for Canada. Waterloo will receive **\$13.7 Million** in Alliance grants across 28 researchers.

Dayan Ban - (Electrical and Computer Engineering) - \$120,000

Project title: Near-Infrared Micro-Light Emitting Diodes for Biomedical Applications

Jonathan Baugh - (Chemistry) - \$1,481,200

Project title: Next-Generation Photonic Source to Enable Quantum Remote Sensing and Communications

Timothy Brecht - (Cheriton School of Computer Science) - \$59,929

Project title: Real-Time Hockey-Analytics Using Puck and Player Tracking Data

Cliff Butcher - (Department of Mechanical and Mechatronics Engineering) - \$167,692

Project title: Characterization and Modelling of an Advanced 7xxx-Series Aluminum Alloy in Hot Forming for Enhanced Lightweighting and Crash Safety

Naveen Chandrashekar - (Department of Mechanical and Mechatronics Engineering) - \$64,567

Project title: Design, Development and Evaluation of Smart Grip Force Monitoring Device for Industrial Use

C. Perry Chou - (Chemical Engineering) - \$202,500

Project title: Novel Strain Engineering and Bioprocessing Strategies for Microbial Production of Heme and Its Porphyrin Precursors

David Del Rey Fernandez - (Applied Mathematics) - \$25,000

Project title: Provably Stable Reduced Basis Methods

David Del Rey Fernandez - (Applied Mathematics) - \$97,998

Project title: Entropy Stable and Asymptotic Preserving Discretizations of Kinetic Models for Fluid Flow Problems

Goretty Maria Dias - (School of Environment, Enterprise and Development) - \$35,000

Project title: Decision Support Tool to Characterize the Energy Use, Impacts and Profitability of Biofertilizers and Alternative Technologies in Controlled Environment Agriculture

Ayman El-Hag - (Electrical and Compute Engineering) - \$25,000

Project title: A Drone-based Inspection System for Outdoor Insulators

Paul Fieguth - (Systems Design Engineering) - \$80,000

Project title: High-Resolution Projector-Camera and LED-Wall Display Calibration

Adrian Gerlich - (Department of Mechanical and Mechatronics Engineering) - \$174,600

Project title: Optimization of Filler Wire and Post-Weld Treatment in AHSS Laser Welds

Adrian Gerlich - (Department of Mechanical and Mechatronics Engineering) - \$265,667

Project title: High Speed Droplet Transfer and Feedback Control in Arc Welding

Carl Haas - (Department of Civil and Environmental Engineering) - \$320,000

Project title: Masonry, Masons and Machines: Leveraging Augmented Reality to Improve Productivity, Health and Safety Outcomes

Carl Haas - (Department of Civil and Environmental Engineering) - \$212,295

Project title: Digitization and Asset Information Modeling to Support Planning for Nuclear Power Plant decommissioning

Roland Hall - (Biology) - \$59,288

Project title: 'Pre-release' Baselines for Compounds of concern in Lakes of the Peace-Athabasca Delta Before Treated Oil Sands Process Water is Discharged to the Athabasca River

Jean-Pierre Hickey - (Department of Mechanical and Mechatronics Engineering) - \$25,000

Project title: Clustering Dynamics of Particles on Our Turbulent Waterways

Trevor Hrynyk - (Department of Civil and Environmental Engineering) - \$106,200

Project title: Toward Hybrid GFRP/FRC Construction for Sustainable Next Generation

Soo Jeon - (Department of Mechanical and Mechatronics Engineering) - \$25,000

Project title: Realtime Reinforcement Learning for Mechatronic Systems with Non-Stationary Behaviors

Kunho Eugene Kim - (Department of Civil and Environmental Engineering) - \$62,000

Project title: Cost effective Retrofit of Ageing Concrete Bridge Components Using Iron-based Shape Memory Alloy (Fe-SMA) Composites

Jan Kycia - (Physics and Astronomy) - \$1,113,491

Project title: Low Temperature Material Characterization of Superconducting Devices for Quantum Computing

Yuning Li - (Chemical Engineering) - \$270,000

Project title: Development of Solid Electrolytes Based on Novel Oxirane-based Polymers

Juewen Liu - (Chemistry) - \$48,000

Project title: Aptamer-based Biosensors for Monitoring Carbamazepine, A Drug with a Narrow Therapeutic Window

Adrian Lupascu - (Physics and Astronomy) - \$1,137,724

Project title: Development of a Scalable Superconducting Quantum Computing Platform Based on Fluxonium Qubits

Sushanta Mitra - (Department of Mechanical and Mechatronics Engineering) - \$25,000

Project title: High Throuhput Ferrofluid Encapsulation using Magnet

Giovanni Montesano - (Department of Mechanical and Mechatronics Engineering) - \$80,000

Project title: Advanced Structural Analysis Toolchain to Support the Development of Lightweight Composite Airframes for High-speed Uncrewed Aerial Vehicles

Michael Reimer - (Electrical and Computer Engineering) - \$1,500,000

Project title: Portable Semiconductor Nanowire Quantum Sensors with Enhanced Efficiency and Timing Resolution

Rebecca Rooney - (Biology) - \$772,235

Project title: Restoring Urban Meadow: The Meadoway

Ehsan Toyserkani - (Department of Mechanical and Mechatronics Engineering) - \$3,498,073

Project title: Holistic Innovation in Additive Manufacturing 2.0 (HI-AM 2.0): Capitalizing on Prior Achievements and Exploring New Frontiers in Directed Energy Deposition Processes

James Tung - (Mechanical and Mechatronics Engineering) - \$30,000

Project title: Foot-based Sensor Fusion for Ambulatory Gait Analysis for Occupational Health and Safety

Lan Wei - (Electrical and Computer Engineering) - \$1,690,122

Project title: Towards Large-scale Spin Qubit Quantum Computers: Simulation, Modeling and Experiment

Awards and Distinctions:

Wei "Adam" Tsen (Chemistry)

[Dorothy Killam Fellowship - National Killam Program](#)

The Dorothy Killam Fellowships provide support to scholars of exceptional ability by granting them time to pursue research projects of broad significance and widespread interest within the disciplines of the humanities, social sciences, natural sciences, health sciences, engineering or studies linking any of these disciplines. These Fellowships are now specifically targeted to mid-career researchers in need of relief from teaching and administrative duties to focus on their research career.

M. Tamer Özsu (Cheriton School of Computer Science)

[2024 IEEE Technical Committee on Data Engineering Education \(IEEE TCDE\) Award](#)

One of four prestigious annual awards conferred by IEEE TCDE, the Education Award recognizes database researchers who have made an impact on data engineering education, including impact on the next generation of data engineering practitioners and researchers. M. Tamer won the IEEE Technical Committee on Data Engineering Education Award for his fundamental contributions to data management and data science pedagogy.

International Agreements:

Student Exchange – Two new and two renewal exchange agreements were signed with the following institutions:

- **Chung-Ang University (Korea) | University College Dublin (Ireland)** – These are two new institution-wide agreements.
- **Czech Technical University (Czech Republic) | Australian National University (Australia)** – These two renewed institution-wide agreements.

Memorandums of Understanding (MOUs) – One MOU and one strategic partnership agreement were renewed that will enable the institutions to continue to explore collaboration across a range of areas including joint research projects, staff and graduate student exchange, seminars and conferences:

- **Dayalbagh Educational Institute (India)** -This MOU involves the Faculty of Engineering.
- **Hong Kong Polytechnic University (Hong Kong)** - This is an institution-wide strategic partnership.

International delegations hosted at the University of Waterloo:

- **Karlsruhe Institute of Technology (KIT)** – Waterloo International hosted virtual Seed Funding celebrations with KIT, Germany.
- **British Consulate General Toronto** – Faculty of Engineering, Waterloo International, and Velocity hosted a delegation which included the Senior Investment Officer, Department for Business and Trade (Auto Sector) from the British Consulate General Toronto.
- **Embassy of Canada to Kazakstan** – Waterloo International hosted a delegation led by the Senior Trade Commissioner at the Embassy of Canada to Kazakhstan and the Director of Strategic Planning and Communications at Karaganda Technical University.

- **Asia Pacific Foundation of Canada** – Renison University College, with support from Waterloo International, hosted a delegation of six Japanese students on the Kakehashi Project led by Asia Pacific Foundation of Canada.
 - **EU Commission** – The Office of Research, in collaboration with Waterloo International, hosted a delegation from the EU Commission on Horizon Europe.
 - **Singapore Institute of Technology (SIT)** – Cooperative and Experiential Education (CEE), Waterloo International, Waterloo Ventures, the Waterloo Institute for Sustainable Aeronautics and the Conrad School of Entrepreneurship & Business hosted a Presidential delegation from the Singapore Institute of Technology (SIT), Singapore.
 - **Dutch Consulate General Toronto** – The Faculty of Environment, with support from Waterloo International, hosted the Cities in Transition Roundtable which featured a former Dutch cabinet minister, the current Dutch Consulate General Toronto, the mayors of Waterloo and Kitchener, and local and industry champions.
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For Information

Open Session

To:

Senate

**Sponsor/Presenter:
Contact Information**

Scott Kline, Chair Religious Studies; COU Academic Colleague
scott.kline@uwaterloo.ca

Date of Meeting:

May 6, 2024

Agenda Item Identification:

19) Report from COU Academic Colleague

The following is a summary of meetings since my last report in May 2023.

Summary of Meetings

1. Academic Colleagues Meeting, August 15-16, 2023

Discussion Theme: Wellbeing of International Students: Solutions from Design Thinking

Dr. Liliane Dionne, Faculty of Education, University of Ottawa, presented research on the Wellbeing of International Students. Using a design-thinking approach, which included peer interviews between graduating BEd students (solution-makers) and international students at the University of Ottawa, Dr. Dionne and her colleagues developed creative solutions to improve the wellbeing of international students on the University campus, including a number of attempts to connect students with their natural environments. This led to initiatives to enhance campus art and to create more opportunities to socialize and study outdoors. During the discussion, Colleagues reflected on how they might contribute to improving the wellbeing of international students and on the recommendations of COU's International Education Working Group, which we had received an update on at the February 2023 meeting.

Updates and Reports—Highlights

COU President Steve Orsini delivered an update on COU's activities in support of the Ontario government's [Blue-Ribbon Panel](#) and shared a preview of his presentation on housing for the upcoming Association of Municipalities Ontario (AMO) Conference. In the discussion that followed, it was highlighted that COU's position on enrollment corridors is that any changes to them should be.

2. 316th Meeting of Council, October 16, 2023

I want to highlight two items in the agenda: 1) The Colleagues led a discussion on the topic of Mitigating Anti-LGBTQ2S+ Movements and Promoting Safe Spaces on Campus. A few Colleagues highlighted practices at their universities and proposed additional actions that would help ensure the campuses are places where members of the university community can express themselves freely without fear of reprisal or physical harm. A few members of Council expressed interest in future discussions related to the role of the university ensuring freedom of expression on their campus. 2) Steven Orsini provided a brief update on COU's increasing activities related to the release of Blue Ribbon Panel report and recommendations.

3. Academic Colleagues Meeting, December 12-13, 2023

Discussion Theme: Free Expression in Relation to Geopolitical Events

Dr. James L. Turk, Director of the Centre for Free Expression, Toronto Metropolitan University, met with COU Academic Colleagues to discuss freedom of expression and academic freedom on university campus. One focus was on the University of Chicago Kalven Committee’s “[Report on the University’s Role in Political and Social Action](#) (1967).” Turk notes that the Kalven Report’s language of “institutional neutrality” is often mischaracterized as universities should play no role in political and social debates. This mischaracterization, Turk argues, misses the point made in the Kalven Report: “A university has a great and unique role to play in fostering the development of social and political values in a society.” The distinction the Kalven Report makes is that the university, as an institution, must remain neutral out of respect for free inquiry on the part of faculty and students. As a result, universities play a central role in political and social change *not* by senior leaders taking formal positions on political and social matters on behalf of their institutions but, rather, by ensuring that universities remain a forum for faculty and students to freely question, challenge, inquire, and take positions on political and social matters. Drawing on a [Stanford University update](#) on freedom of expression, from October 2023, Academic Colleagues discussed instances in which universities, fulfilling their operational responsibilities, sometimes take positions that have political and social ramifications such as decisions regarding investments. When such concerns arise, universities must continue to ensure that faculty and students remain free to exercise their freedom of expression and that faculty remain free to exercise their academic freedom. In all cases, universities must comply with existing laws and government standards (e.g., Criminal Code, labour standards).

Updates and Reports—Highlights

Steve Orsini, the COU President, reported that COU is asking for a timely response from government on the implementation of the Blue-Ribbon Panel report, specifically the recommendations on increasing tuition and operating funding. The President also noted COU recently published an efficiencies report that provides a comprehensive response to the government’s request that universities are committed to greater efficiencies. At the same time, it was noted that the government has a role to play in ensuring the financial sustainability of institutions in terms of increasing tuition and operating grants and in reducing costs to the system (e.g., excessive reporting, red tape and unfunded mandates). As a further response, COU is continuing with its escalating advocacy campaign and is working with provincial associations (such as the Ontario University Student Alliance, and the Ontario Chamber of Commerce and Colleges Ontario) on joint advocacy.

4. Academic Colleagues Meeting, February 13-14, 2024

Discussion Theme: Ontario Student Leadership and Advocacy

Vivan Chiem, President, and Malika Dhanani, Executive Director from the Ontario University Student Alliance (OUSA) joined Academic Colleagues for a discussion of pressing matters facing university students. Among the matters highlighted in their presentation were mental health, accessibility, housing, and food insecurity. It was noted that OUSA is also focused on the matter of sector sustainability (e.g., constrained university revenues through tuition and grant freezes) and awaiting the Blue-Ribbon Panel Report. Academic Colleagues took a particularly keen interest in issue of food insecurity, with a number noting that this is a “town and gown” issue that requires shared vision and integrated response.

Updates and Reports—Highlights

Steve Orsini, President of COU, briefed Colleagues on COU increasing efforts to receive a government response on the Blue-Ribbon Panel Report. With a promised end-of-February announcement, COU is continuing to advocate for a response that fully embraces the financial recommendations in the Blue-Ribbon Panel Report. Orsini reported that at least 10 Ontario universities are facing deficit budgets, with a number of them facing serious financial situations without substantial increases in revenue from

government grant, tuition, or both. Orsini acknowledge that any additional revenue would likely not come from tuition but, rather, government grant.

5. Academic Colleagues Meeting, April 3-4, 2024

Discussion Theme: University Governance

Cheryl Foy, the former University Secretary and In-House Counsel at Ontario Tech University, current President of Strategic Governance Consulting Services Ltd., and the author of [An Introduction to University Governance](#), provided Colleagues with an overview of approaches to university governance and contemporary challenges facing governance. She focused on five themes: 1) the relationship between university governance and institutional autonomy; 2) shared governance as a system and its models; 3) the roles of boards and academic governing bodies; 4) the importance of paying attention to academic governing bodies (senates); and 5) the role of faculty association in governance. The discussion concentrated on the necessity of universities undertaking educational opportunities for their board and senate members to understand the unique roles each plays in collegial governance. Foy made the point that a lack of understanding of members' various roles often provides the basis for a breakdown in communication and trust among boards, senior leadership, and academic governing bodies.

Updates and Reports—Highlights

Steve Orsini, President of COU, briefed Colleagues on COU's response to the Blue-Ribbon Panel Report. On behalf of COU, Orsini expressed concern that the funding recommendations in the Blue-Ribbon Panel Report were not adopted by the Ontario government. Echoing the COU statement "[Ontario's Response Falls Far Short of Blue Ribbon Panel Recommendations](#)" (Feb. 26, 2024), Orsini stated that, while the additional funding provided by Government is welcomed, it does not adequately address the revenue shortfalls created by the multi-year tuition and grant freezes, which will result in further budgetary pressures on a majority of Ontario universities into the future. With the passage of Bill 166, which places a cap on international student study permits, budget pressures will likely become more acute.

6. 317th Meeting of Council, April 4, 2024

The primary focus of the COU Council meeting was the transition of COU to conform with the Ontario Not-For-Profit Corporations Act (ONCA). While the membership on COU Council did not change, the governing structure and members' responsibilities changed to conform with ONCA. Please contact Scott Kline if you would like further information on the changes.

Updates and Reports—Highlights

The Council agenda typically includes a presentation from the Colleagues. This meeting, however, the Colleagues decided to forgo a presentation due to the agenda being full of governance matters related to the COU transition. The Colleagues provided a brief report on their meetings.

Steve Orsini, President of COU, briefed Council on the Blue-Ribbon Panel Report. He reiterated that the funding provided by Government is welcomed, but it does not adequately address the revenue shortfalls created by the multi-year tuition and grant freezes, which will result in further budgetary pressures on most Ontario universities into the future. These shortfalls will likely be exacerbated by the passage of federal legislation, with Bill 166, to limit the number of international students permitted to study in Canada.