

SENATE
 MONDAY 15 May 2023
 3:30 P.M. EST
 NH3407/Zoom

TIME	AGENDA ITEM	PAGE	ACTION
	OPEN SESSION		
3:30 p.m.	1. Conflict of Interest	Oral	Declaration
	2. Approval of the Agenda	Oral	Decision
	3. Minutes of the 17 April 2023 Meeting	5	Decision
	4. Business Arising from the Minutes	Oral	Input
	5. Senate Work Plan	11	Information
3:35 p.m. (10 mins)	6. Report of the President a. President's Update	Oral	Information
3:45 p.m. (15 mins)	7. Report – Senate Graduate & Research Council a. Major Program Modification to the Master of Engineering (MEng) in Mechanical and Mechatronics Engineering – Co-operative Program <i>Motion: To approve adding a direct entry Co-operative program/option to the MEng in Mechanical and Mechatronics Engineering Program, effective 1 September 2023, as presented.</i>	13	Decision
	b. Major Program Modification to the Graduate Diploma (GDip) in Design Engineering and Graduate Diploma (GDip) in Design Engineering – Co-operative Program <i>Motion: To approve discontinuing the type 2 GDip in Design Engineering and the type 2 GDip in Design Engineering – Co-operative Program, effective 1 September 2023, as presented.</i>	23	Decision
	c. Major Program Modification to the Master of Mathematics (MMath) in Statistics <i>Motion: To approve discontinuing the coursework study option from the MMath in Statistics program, effective 1 September 2023, as presented.</i>	31	Decision

TIME	AGENDA ITEM	PAGE	ACTION
4:00 p.m. (5 mins)	<p>8. Report – Senate Undergraduate Council</p> <p>a. Closure of Application to Part-Time On-Campus Three-Year General Science Program</p> <p><i>Motion: That Senate approve the closure of application to part-time on-campus Three-Year General Science program, effective 1 September 2023, as presented.</i></p>	39	Decision
4:05 p.m. (15 mins)	<p>9. Amendments to Policy 33 – Ethical Behaviour</p> <p><i>Motion: That Senate approve the amendments to Policy 33, as presented in the attachment to this report, and that Senate recommends the amendments to the Board of Governors for approval.</i></p>	41	Decision
4:20 p.m. (5 mins)	<p>10. Amendment to Bylaw 4 – Ex-Officio Membership</p> <p><i>Motion: That Senate gives second and final reading to the amendments to Senate Bylaw4 as presented in this report, with said amendments to effect:</i></p> <p>i. <i>Removal of the Vice-President, Advancement, the Vice-President University Relations, and the Deputy Provost, Integrated Planning and Budgeting as ex-officio members of Senate</i></p> <p>ii. <i>Addition of the Associate Vice-President, Equity, Diversity, Inclusion and Anti-Racism, the Associate Vice-President, Indigenous Relations, and the Associate Vice-President Academic Operations as ex-officio members of Senate</i></p>	49	Second Reading Approval
4:25 p.m. (5 mins)	<p>Consent Agenda</p> <p><i>Motion: To approve or receive for information the items on the consent agenda, listed as items 11-15 of the Senate agenda</i></p>		
	11. Report – Senate Graduate & Research Council	53	Information
	12. Report – Senate Undergraduate Council	55	Information
	a. Academic Regulation Revision of the Second Degree and Degree Upgrades for the Faculty of Health	57	Decision
	<i>Motion: To Senate approve the proposed academic regulation revision to the second degree and degree upgrades for the Faculty of Health, effective 1 September 2024, as presented.</i>		
	13. Report – Honorary Degree Committee	59	Information
	14. Report – COU Academic Colleague	67	Information

TIME	AGENDA ITEM	PAGE	ACTION
4:30p.m.	15. Report - Vice-President, Research & International a. Awards, Distinctions, Grants, Waterloo International Engagements	75	Information
	16. Report of the Provost – Faculty Appointments, Leaves	81	Information
	17. Other Business	Oral	Input
	CLOSED SESSION Senators, Vice-Presidents, Deans, Secretariat and Technical Staff as required		
	18. Minutes of the: a. 17 April 2023 Meeting	83	Decision
	b. 26 April 2023 Special Meeting	85	Decision
	19. Business Arising from the Minutes	Oral	Input
	20. Report of the President	Oral	Information
	21. Other Business	Oral	Input
	22. Adjournment	Oral	Input

/twk

Andrea Kelman
University Secretary (Acting)
Secretary to Senate

Important Dates

13-17 June 2023	Convocation
19 June 2023	Senate Meeting

This page intentionally left blank.

University of Waterloo
SENATE
Minutes of the Monday 17 April 2023 Meeting
[in agenda order]

Present: John Abraham, Sheila Ager, Marc Aucoin, Lisa Aultman-Hall, Sandra Banks, Michael Beauchemin, Jeff Casello, Trevor Charles, Joan Coutu, Neil Craik, Laura Deakin, Charmaine Dean, Jack DeGooyer, David DeVidi, Nenone Donaldson, Catherine Dong, Wendy Fletcher, Mark Giesbrecht, Vivek Goel (chair), Rob Gorbet, Kelly Grindrod, David Ha, Nadine Ibrahim, Natalie Hutchings, Narveen Jandu, Martin Karsten, Andrea Kelman (secretary), Achim Kempf, Jennifer Kieffer, Veronica Kitchen, Alysia Kolentsis, Christiane Lemieux, Robert Lemieux, Lili Liu, Brad Lushman, Jennifer Lynes Murray, Ellen MacEachen, Carol Ann MacGregor, Blake Madill, Ceileigh McAllister, Kristiina Montero, Richard Myers, Graham Murphy, Beth Namachchivaya, Cathy Newell Kelly, Erin O’Connell, Troy Osborne, Nicholas Pfeifle, Luke Potwarka, Cynthia Richard, Mary Robinson, James Rush, Marcus Shantz, Siva Sivoththaman, James Skidmore, Sharon Tucker, Diana Vangelisti, Johanna Wandel (for Bruce Frayne), Paul Ward, Dan Weber, Mary Wells, Stan Woo, Changbao Wu, Annie Yang, Stephanie Ye-Mowe

Guests: Jean Becker, Catherine Burns, Aldo Caputo, Bernard Duncker, Donna Ellis, Diana Goncalves, Jenny Flagler-George, Sarah Hadley, Michele Hollis, Diane Johnston, Michaela Lewis, Ian Milligan, Fayaz Noormohamed, Dario Peralta, David Porreca, Chris Read, Ian Rowlands, Daniela Seskar-Hencic, Nadia Singh, Diana Skrzydlo, Allan Starr, Sherri Sutherland, Brandon Sweet, Nickola Voegelin, Tim Weber-Kraljevski, Sarah Willey-Thomas, Katy Wong-Francq

Absent: Dominic Barton*, Kim Cuddington, Kristine Dalton*, Aiman Fatima, Cindy Forbes*, Onurcan Gokkaya, Kevin Hare, Sonia Ismail, Mary Hardy, Scott Kline*, Xianguo Li, Peter Meehan, Nasser Mohieddin Abukhdeir*, Chris Nielsen*, Oudy Noweir, Daniel O’Connor, Jacinda Reitsma*, Naima Samuel, Matthew Schwarze*, Siv Sivaloganathan, Julian Surdi, Graeme Turner*, Clarence Woudsma, En-Hui Yang*

*regrets

OPEN SESSION

CHAIR’S REMARKS

The chair thanked Senators whose terms are ending on 30 April 2023. He reminded Senators of the first Annual Senate Effectiveness survey from Watson Advisors and encouraged them to participate. The chair also reminded Senators of the upcoming convocation taking place from 13-17 June 2023. He observed that convocation is such a significant time of celebration for the entire campus community and in order to host these twelve ceremonies, over 100 staff and another 100 paid student roles are engaged. Senators were encouraged to volunteer, and Faculty were strongly encouraged to take part in the stage party.

1. 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.

2. APPROVAL OF THE AGENDA

The chair noted two revisions to the agenda: the removal of items 9b and 9c; and the addition of a motion under item 10. to approve revisions to the inactive status definition to include information about medical leave and the inactive status process for the Mathematics for Teachers (MMT) program, for which material was included in the package but the motion was not listed in the agenda.

A motion was heard to approve the agenda as distributed, with the two revisions. Beauchemin and Gorbet. Carried.

3. MINUTES OF THE 27 MARCH 2023 MEETING

A motion was heard to approve the minutes as distributed. Beauchemin and Gorbet. Carried with one abstention.

4. BUSINESS ARISING FROM THE MINUTES

Following discussion at the April meeting of Senate about timing of Senate meetings, Goel informed members that Senate Executive Council had further discussed the matter and, after considering input from students, concluded to leave the timing of Senate meetings at 3:30pm for the time being.

Goel also informed members that following discussion at the March meeting of Senate, the proposed amendments to Bylaw 4 around ex-officio membership has been revised to address feedback from Senators and has been resubmitted as item 11c for first reading.

5. SENATE WORKPLAN

This item was received for information.

6. REPORT OF THE PRESIDENT

a. President's Update

Goel provided his report:

- The passing of Professor Emeritus Paul Derksin, who is considered one of the founders of computing at the University of Waterloo.
- On 27 March 2023, the university was presented with an Eagle Staff, dedicated for the university. Waterloo's Eagle Staff represents another important and necessary step in the institution's journey towards reconciliation, Indigenization and decolonization and follows from the commitment ceremony of last year, to walk together towards Indigenization here at Waterloo. The Staff will be integrated into institutional ceremonies including convocation, serving as an important symbol and reminder of our commitments today and for future generations. Following a question, it was clarified that the Eagle Staff will be housed in the Office of Indigenous Relations.
- The International Transgender Day of Visibility was on 31 March 2023, where the university recognizes and celebrates Two-Spirit, Trans, Non-Binary, and Gender Non-Conforming people, who are integral and valued members of the campus community. Waterloo now offers at least one washroom in almost every building on main campus, as an all-gender washroom. This is an important step in making the campus more inclusive and accessible for all, but it is acknowledged that there is still more to be done.
- The University of Waterloo and Velocity officially expanded their presence in downtown Kitchener with a groundbreaking ceremony for the new Innovation Arena building on Waterloo's Health Sciences campus. The new site is part of Waterloo's expanding pipeline for health innovation in Southwestern Ontario, thanks to funding from FedDev Ontario, Ontario's provincial government, the City of Kitchener and philanthropic gifts. Ontario Premier Doug Ford attended the groundbreaking ceremony.
- On April 14th UWaterloo was visited by Daniel Tumpal S. Simanjuntak, Indonesian Ambassador to Canada as part of the launch of the FINCAPES International Research Partnership. A representative of Global Affairs Canada was also present. Flood Impacts, Carbon Pricing and Ecosystem Sustainability (FINCAPES) is a multi-stakeholder, gender responsive initiative and a collaboration in Indonesia supporting that nation's priorities with respect to climate change and building capacity at university partners. Through this initiative, Waterloo works with local partners to support Indonesian goals and objectives to develop dynamic, equitable and sustainable socioeconomic growth.
- On 21 April 2023 the University of Waterloo, in partnership with MaRS Discovery District, will be hosting the Waterloo Innovation Submit, bringing together some of the world's leading experts on sustainable aeronautics, electric and autonomous vehicles, clean energy and urban planning to reimagine the future of local and global transportation.
- Following Senate's recommendation to the Board of Governors to endorse the vision document, Waterloo at 100 was endorsed at the Board meeting on 4 April 2023. At last

week's President's Forum, situated within the Staff Conference, Waterloo 100 was shared with the community.

b. Strategic Plan Thematic Discussion – Communities (Sustainability user Panel)

Mat Thijssen introduced the panel, which focuses on sustainability at the University of Waterloo. Ealy Fong, an undergraduate student in BES Planning, spoke on her Sustainable Future Campus in 2050 project. Laura Deakin spoke to the inaugural Faculty of Engineering Sustainable Development Capstone Design Award. Michelle Angkasa spoke to her experience as the inaugural WUSA Sustainability Commissioner, and in role as the Communications & Outreach Assistant (Co-o) within the Sustainability Office.

Members discussed: sustainability challenges for the university; and opportunities for intersectional partnerships between Faculties to utilize sustainability expertise on campus.

7. REPORT FROM THE PROVOST

a. University Appointments Review Committee

Gerry Schneider spoke to the report provided for information with the agenda, and presented: highlighted data about the proposals reviewed by the committee in 2021-22; an overview of the committee's processes and membership; and summary data.

Members discussed: how gender statistics have been traditionally collected and suggestions for improving the process going forward; if the USRC tracks the number of international candidates with PhD's from Canadian institutions; and the university's progress on achieving gender parity for Faculty members.

8. REPORT – TEACHING AWARDS COMMITTEE

Jeff Casello and David DeVidi acknowledged the winners of the Amit & Meena Chakma Awards for Exceptional Teaching by a Student and the Distinguished Teacher Awards (DTA). Those present were asked to stand to be recognized with a round of applause. The winners were:

a. Amit & Meena Chakma Wards for Exceptional Teaching by a Student Committee

- Abigale O'Reilly, Chemistry
- Justin Schrier, Physics and Astronomy
- Mikaela Lewis, Mechanical and Mechatronics Engineering
- Tandeep Sidhu, Sociology and Legal Studies

b. Distinguished Teacher Awards Committee

- Keith Delaney, Earth and Environmental Sciences
- Nardine Nakhla, School of Pharmacy
- Zara Rafferty, Recreation and Leisure Studies
- Diana Skrzydlo, Statistics and Actuarial Science

Goel offered his congratulations to all of the winners and thanked them for their contributions. He also thanked the individuals who nominated them and encouraged nomination for external awards as well.

9. ASSOCIATION ANNUAL UPDATES

a. Faculty Association

David Porreca, incoming president of the FAUW, provided Senators with an update on FAUW, highlighting: its organizational structure; recent leadership changes; ongoing policy work, and current priorities.

Members inquired about the timeline for the Policy 76/77 revisions and the reasons for CAUT undertaking a governance review of FAUW.

10. REPORT FROM COMMITTEES AND COUNCILS

a. Senate Graduate and Research Council

- i. A motion was heard to approve revisions to the Grading scheme text in the Grades and grading section of the Graduate Studies Academic Calendar, as presented and effective Spring 2023. Casello and Beauchemin. Carried.
- ii. A motion was heard to approve revisions to the inactive status definition to include information about medical leave and the inactive status process for the Mathematics for Teachers (MMT) program, as presented and effective Spring 2023. Casello and Ward. Carried with one opposed.

11. REPORTS – SENATE EXECUTIVE COMMITTEE

a. Elections to Senate Committees & Councils and to Board of Governors

- i. A motion was heard to acclaim the membership of Senate committees and councils and the Board of Governors as provided on the list of nominees.

Goel asked for further nominations from the floor. No nominations were received. Goel called for a mover and a seconder. Beauchemin and Kitchen. With the understanding that all individuals named in the report abstained, the question was called and the motion carried.

- ii. A motion was heard to delegate approval to the Senate Executive Committee for any vacancies which exist. Beauchemin and Ye-Mowe. Carried.

b. Delegation of Authority for Approval of Roster of Graduands

A motion was heard 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 2023 and October 2023 and that a full report on the complete roster of graduands be presented for information to the Senate meeting following the relevant convocation. Skidmore and Newell Kelly. Carried.

c. Amendment to Bylaw 4 – Ex-Officio Membership

Goel spoke to the amendment, noting that it has been revised based on feedback received by Senators at the March 2023 Senate meeting, and that this is the first reading.

A motion was heard That Senate gives first reading to the amendments to Senate Bylaw 4 as presented in this report, with said amendments to effect:

1. Removal of the Vice-President, Advancement, the Vice-President University Relations, and the Deputy Provost, Integrated Planning and Budgeting as ex-officio members of Senate
2. Addition of the Associate Vice-President, Equity, Diversity, Inclusion and Anti-Racism, the Associate Vice-President, Indigenous Relations, and the Associate Vice-President Academic Operations as ex-officio members of Senate

Casello and Beauchemin. Carried with one opposed.

Goel provided an update that the Chancellor Nominating Committee met on 3 April 2023, and discussed the timeline and process of the search, and the qualifications for the next Chancellor. A call out to seek nominations from the community will be broadly shared and Senators were encouraged to submit nominations.

12. AMENDMENT TO BYLAW1 – SENATE MEETING SCHEDULE AND FORMAT

Goel spoke to the amendment and reminded members that SEC had decided to leave the timing of Senate meetings at 3:30pm for the time being. A motion was heard that Senate gives second and final reading to the amendments to Senate Bylaw 1, and ensures the guidelines for the annual schedule of meetings and approve the changes to the annual work plan, all as presented in the report's recommendation. Casello and DaVidi. Carried with two abstentions.

CONSENT AGENDA

A motion was heard to approve or receive for information the items on the consent agenda, listed as items 13-16 of the Senate agenda. Aucoin and Coutu. Carried with one abstention.

13. REPORT – SENATE GRADUATE & RESEARCH COUNCIL

Received for information.

14. REPORT – SENATE UNDERGRADUATE COUNCIL

Received for information.

15. REPORT – VICE PRESIDENT, RESEARCH & INTERNATIONAL

a. Awards, distinctions, Grants, Waterloo International Engagements

Received for information.

16. REPORT OF THE PROVOST – FACULTY APPOINTMENTS, LEAVES

Received for information.

17. OTHER BUSINESS

There was no other business.

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

21 April 2023
AK/twk/dg

Andrea Kelman
University Secretary (Acting)
Secretary to Senate

This page intentionally left blank.

Senate Agenda Items • expected *as needed	15 May 2023	19 June 2023	18 September 2023	23 October 2023 <i>Strategic Plan Annual Update / Waterloo at 100</i>	27 November 2023	29 January 2024	4 March 2024	8 April 2024
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				▪		▪		▪
Joint Report of GRC & UC on 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							▪	
Delegation of Roster of Graduands								▪
Report of Roster of Graduands		▪		▪				
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				▪				
PART Annual Update		▪						
Faculty Update (6x/year)			ENG	▪	▪			

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	15 May 2023	19 June 2023	23 September 2023	23 October 2023 <i>Strategic Plan Annual Update / Waterloo at 100</i>	27 November 2023	29 January 2024	4 March 2024	8 April 2024
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	▪							
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		▪						
Joint SENATE/BOARD Strategic Plan Focus Sessions 3-4:30					Joint SENATE/BOARD Continuing Education Sessions 3-4:30			
<ul style="list-style-type: none"> To be determined 					<ul style="list-style-type: none"> To be determined 			

Special Topics for 2023-2024 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 and Research Council

For Approval

Open Session

To: Senate

Sponsor: Charmaine Dean
Contact Information: Vice-President, Research & International

Sponsor: Jeff Casello
Contact Information: Associate Vice-President, Graduate Studies and Postdoctoral Affairs

Presenter: Jeff Casello
Contact Info: jcasello@uwaterloo.ca

Date of Meeting: May 15, 2023

Agenda Item Identification: 7a. Report – Senate Graduate & Research Council:
Major Program Modification to the Master of Engineering
(MEng) in Mechanical and Mechatronics Engineering – Co-
operative Program

Recommendation/Motion:

To approve adding a direct entry Co-operative program/option to the MEng in Mechanical and Mechatronics Engineering Program, effective 1 September 2023, as presented.

Summary:

[Senate Graduate & Research Council](#) met on 10 April 2023 and agreed to forward the following item 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:

Department approval date (mm/dd/d\yy): 02/02/23
Graduate Studies and Postdoctoral Affairs review date (mm/dd/d\yy): 02/01/23
Faculty approval date (mm/dd/yy): 03/21/23
Senate Graduate & Research Council approval date (mm/dd/yy): 04/10/23

Highlights/Rationale:

The direct entry co-op MEng program aligns with the University's and Province's vision and policy on "Work Integrated Learning" (WIL). The new program will allow the selected MEng students to apply their knowledge gained in their coursework and reinforce their professional development. It also builds upon the success of the GDip in Design Engineering with co-op available in the Department of Mechanical and Mechatronics Engineering (MME) that will be discontinued in Fall 2023. The new MEng program will offer co-op opportunities to a wider group of MEng students.

The new program will be highly selective to maintain high quality and reputation among employers. Initially, the program capacity 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.

MME has collected feedback from their graduate students through different surveys and informal discussions. Access to co-op and better preparation for the job market are regular requests from MEng students. Thus, the new program will respond to the student desire of WIL in their MEng.

This direct entry co-op MEng program will attract the best applicants to the MEng program in MME including domestic students who graduated from a program without co-op in Canada. International students will be able to take co-op jobs without impacting their Post Graduate Work Permit (PGWP).

The co-op program/option will be supported by Co-operative Education.

Documentation Provided:

Program Revision Template – Appendix A

[Co-operative Education Feasibility Report](#)



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 Mechanical and Mechatronics Engineering – Co-operative Program

Program contact name(s): Cecile Devaud

Form completed by: Cecile Devaud

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 Mechanical and Mechatronics Engineering program.

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

Rationale for change(s):

The direct entry co-op MEng program aligns with the University's and Province's vision and policy on "Work Integrated Learning" (WIL). The new program will allow the selected MEng students to apply their knowledge gained in their coursework and reinforce their professional development. It also builds upon the success of the GDip in Design Engineering with co-op available in the Department of Mechanical and Mechatronics Engineering (MME) that will be discontinued in Fall 2023. The new MEng program will offer co-op opportunities to a wider group of MEng students.

The new program will be highly selective to maintain high quality and reputation among employers. Initially, the program capacity 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.

MME has collected feedback from their graduate students through different surveys and informal discussions. Access to co-op and better preparation for the job market are regular requests from MEng students. Thus, the new program will respond to the student desire of WIL in their MEng.

This direct entry co-op MEng program will attract the best applicants to the MEng program in MME including domestic students who graduated from a program without co-op in Canada. International students will be able to take co-op jobs without impacting their Post Graduate Work Permit (PGWP).

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: 2023

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-mechanical-and-mechatronics-engineering>

Current MEng in Mechanical and Mechatronics Engineering Graduate Studies Academic Calendar content:	Proposed MEng in Mechanical and Mechatronics Engineering – Co-operative Program Graduate Studies Academic Calendar content:
<p>MASTER OF ENGINEERING (MENG) IN MECHANICAL AND MECHATRONICS ENGINEERING</p> <p>Graduate specializations</p> <ul style="list-style-type: none"> • Green Energy <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 Mechanical and Mechatronics Engineering students, and the candidates are expected to be self-supporting. <p>Admission requirements</p>	<p>MASTER OF ENGINEERING (MENG) IN MECHANICAL AND MECHATRONICS ENGINEERING - <u>CO-OPERATIVE PROGRAM</u></p> <p>Graduate specializations</p> <ul style="list-style-type: none"> • Green Energy <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: 5-6 terms (20-24 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 • 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 Mechanical and Mechatronics Engineering students, and the candidates are expected to be self-supporting. <p>Admission requirements</p>

Current MEng in Mechanical and Mechatronics Engineering Graduate Studies Academic Calendar content:	Proposed MEng in Mechanical and Mechatronics Engineering – Co-operative Program Graduate Studies Academic Calendar content:
<ul style="list-style-type: none"> • Minimum requirements <ul style="list-style-type: none"> ○ The Department of Mechanical and Mechatronics Engineering requires either (i) a 75% overall standing in the last two years, or equivalent, in a relevant four-year Honours Bachelor's degree or equivalent or (ii) a 75% overall standing or equivalent, in a relevant four-year Honours Bachelor's degree or equivalent, as the minimum requirement for admission to a Master's program for applicants educated at a Canadian institution. A 75% overall standing or equivalent, in a relevant four-year Honours Bachelor's degree or equivalent is the minimum requirement for admission to a Master's program for applicants educated outside of Canada. ○ Graduate Record Examination (GRE) test scores (requirement only for applicants who completed their undergraduate degree from an institution located outside of Canada or the United States of America). • 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 ○ Type of references: academic • 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 (0.50 unit weight) graduate level courses (or courses acceptable for graduate credit). ○ A maximum of 2 500-level courses may be counted for credit. 	<ul style="list-style-type: none"> • Minimum requirements <ul style="list-style-type: none"> ○ The Department of Mechanical and Mechatronics Engineering requires either (i) a 75% overall standing in the last two years, or equivalent, in a relevant four-year Honours Bachelor's degree or equivalent or (ii) a 75% overall standing or equivalent, in a relevant four-year Honours Bachelor's degree or equivalent, as the minimum requirement for admission to a Master's program for applicants educated at a Canadian institution. A 75% overall standing or equivalent, in a relevant four-year Honours Bachelor's degree or equivalent is the minimum requirement for admission to a Master's program for applicants educated outside of Canada. ○ Graduate Record Examination (GRE) test scores (requirement only for applicants who completed their undergraduate degree from an institution located outside of Canada or the United States of America). • 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 ○ Type of references: academic • English language proficiency (ELP) (if applicable) <p>Degree requirements</p> <p><u>The MEng in Mechanical and Mechatronics 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</u></p>

Current MEng in Mechanical and Mechatronics Engineering Graduate Studies Academic Calendar content:	Proposed MEng in Mechanical and Mechatronics Engineering – Co-operative Program Graduate Studies Academic Calendar content:
<ul style="list-style-type: none"> ○ An English for Multilingual Speakers (EMLS) technical/professional course is normally required for all students who were not English Language Proficiency (ELP) exempt at the time of admission. This course is normally taken in the first term of the program. ○ The EMLS communication course can be waived at the discretion of the Department. ○ At least 2 out of the 8 required courses must be taken from the following list of ME graduate core courses: <ul style="list-style-type: none"> ▪ ME 620 Mechanics of Continua ▪ ME 621 Advanced Finite Element Method ▪ ME 631 Mechanical Metallurgy ▪ ME 632 Experimental Methods in Materials Engineering ▪ ME 640 Autonomous Mobile Robotics ▪ ME 649 Control of Machines and Processes ▪ ME 651 Heat Conduction ▪ ME 652 Convective Heat Transfer ▪ ME 653 Radiation Heat Transfer ▪ ME 662 Advanced Fluid Mechanics ▪ ME 664 Turbulent Flow ○ MEng students completing 1 of the 2 Graduate Diploma (GDip) program options or the Graduate Specialization are allowed to use the mandatory courses from the GDips or Graduate Specialization to count toward 2 of the 8 core courses. ○ MEng students must attend at least 4 MME research seminars. ○ Additional Faculty regulations concerning Master's degree requirements are: <ul style="list-style-type: none"> ▪ 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 and the other half need to be 	<p><u>program are encouraged to complete COOP 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 (0.50 unit weight) graduate level courses (or courses acceptable for graduate credit). ○ A maximum of 2 500-level courses may be counted for credit. ○ An English for Multilingual Speakers (EMLS) technical/professional course is normally required for all students who were not English Language Proficiency (ELP) exempt at the time of admission. This course is normally taken in the first term of the program. ○ The EMLS communication course can be waived at the discretion of the Department. ○ At least 2 out of the 8 required courses must be taken from the following list of ME graduate core courses: <ul style="list-style-type: none"> ▪ ME 620 Mechanics of Continua ▪ ME 621 Advanced Finite Element Method ▪ ME 631 Mechanical Metallurgy ▪ ME 632 Experimental Methods in Materials Engineering ▪ ME 640 Autonomous Mobile Robotics ▪ ME 649 Control of Machines and Processes ▪ ME 651 Heat Conduction ▪ ME 652 Convective Heat Transfer ▪ ME 653 Radiation Heat Transfer ▪ ME 662 Advanced Fluid Mechanics ▪ ME 664 Turbulent Flow ○ MEng students completing 1 of the 2 Graduate Diploma (GDip) program options or the Graduate Specialization are allowed to use the mandatory courses from the GDips or Graduate Specialization to count toward 2 of the 8 core courses.

Current MEng in Mechanical and Mechatronics Engineering Graduate Studies Academic Calendar content:	Proposed MEng in Mechanical and Mechatronics Engineering – Co-operative Program Graduate Studies Academic Calendar content:
<p>Mechanical and Mechatronics Engineering courses.</p> <ul style="list-style-type: none"> ○ Students in the MEng in Mechanical and Mechatronics Engineering program may choose to pursue the following Graduate Specialization: <ul style="list-style-type: none"> 1. Green Energy ○ A Graduate Specialization is a University credential that is recognized on the student’s transcript but not on the diploma and is intended to reflect that a student has successfully completed a set of courses that together provide an in-depth study in the area of the Graduate Specialization. A student will only obtain the Graduate Specialization on their transcript if they have completed the requirements associated with the MEng degree and the requirements associated with the Graduate Specialization. ○ All MEng Graduate Specializations in Mechanical and Mechatronics Engineering consist of a set of at least 4 graduate (0.50 weight) level courses and this set is comprised of a mix of compulsory and elective courses. Compulsory courses are those that are prescribed as part of the Graduate Specialization. Elective courses are those that are on a list of courses designated as electives for a given Graduate Specialization. The requirements for the Graduate Specialization are described below. <ul style="list-style-type: none"> 1. Graduate Specialization in Green Energy <ul style="list-style-type: none"> ○ To receive the Graduate Specialization in Green Energy, students must successfully complete 1 compulsory course and 3 elective courses: <ul style="list-style-type: none"> ▪ Compulsory course: <ul style="list-style-type: none"> ▪ ME 659 Energy and Environment ▪ Elective courses (choose 3 from the following list): 	<ul style="list-style-type: none"> ○ MEng students must attend at least 4 MME research seminars. ○ Additional Faculty regulations concerning Master's degree requirements are: <ul style="list-style-type: none"> ▪ 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 and the other half need to be Mechanical and Mechatronics Engineering courses. ○ Students in the MEng in Mechanical and Mechatronics Engineering program may choose to pursue the following Graduate Specialization: <ul style="list-style-type: none"> 1. Green Energy ○ A Graduate Specialization is a university credential that is recognized on the student’s transcript but not on the diploma and is intended to reflect that a student has successfully completed a set of courses that together provide an in-depth study in the area of the Graduate Specialization. A student will only obtain the Graduate Specialization on their transcript if they have completed the requirements associated with the MEng degree and the requirements associated with the Graduate Specialization. ○ All MEng Graduate Specializations in Mechanical and Mechatronics Engineering consist of a set of at least 4 graduate (0.50 weight) level courses and this set is comprised of a mix of compulsory and elective courses. Compulsory courses are those that are prescribed as part of the Graduate Specialization. Elective courses are those that are on a list of courses designated as electives for a given Graduate Specialization. The

Current MEng in Mechanical and Mechatronics Engineering Graduate Studies Academic Calendar content:	Proposed MEng in Mechanical and Mechatronics Engineering – Co-operative Program Graduate Studies Academic Calendar content:
<ul style="list-style-type: none"> ▪ ME 738 Special Topics in Materials: Hydrogen Storage Materials ▪ ME 751 Fuel Cell Technology ▪ ME 753 Solar Energy ▪ ME 760 Special Topics in Thermal Engineering: Low Energy Building Systems ▪ ME 760 Special Topics in Thermal Engineering: Building Energy Performance ▪ ME 760 Special Topics in Thermal Engineering: Air Pollution and Greenhouse Gases ▪ ME 760 Special Topics in Thermal Engineering: Wind Energy 	<p>requirements for the Graduate Specialization are described below.</p> <p>1. Graduate Specialization in Green Energy</p> <ul style="list-style-type: none"> ○ To receive the Graduate Specialization in Green Energy, students must successfully complete 1 compulsory course and 3 elective courses: <ul style="list-style-type: none"> ▪ Compulsory course: <ul style="list-style-type: none"> ▪ ME 659 Energy and Environment ▪ Elective courses (choose 3 from the following list): <ul style="list-style-type: none"> ▪ ME 738 Special Topics in Materials: Hydrogen Storage Materials ▪ ME 751 Fuel Cell Technology ▪ ME 753 Solar Energy ▪ ME 760 Special Topics in Thermal Engineering: Low Energy Building Systems ▪ ME 760 Special Topics in Thermal Engineering: Building Energy Performance ▪ ME 760 Special Topics in Thermal Engineering: Air Pollution and Greenhouse Gases ▪ ME 760 Special Topics in Thermal Engineering: Wind Energy <ul style="list-style-type: none"> • <u>Graduate Studies Work Report</u> <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 Co-operative 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 MME program will not be impacted, as this will only be offered to students starting in Fall 2023.

Department/School approval date (mm/dd/yy): 02/02/23

Reviewed by GSPA (for GSPA use only) date (mm/dd/yy): 02/01/23

Faculty approval date (mm/dd/yy): 03/21/23

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

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

This page intentionally left blank.

Senate Graduate and Research Council

For Approval

Open Session

To: Senate

Sponsor: Charmaine Dean
Contact Information: Vice-President, Research & International

Sponsor: Jeff Casello
Contact Information: Associate Vice-President, Graduate Studies and Postdoctoral Affairs

Presenter: Jeff Casello
Contact Info: jcasello@uwaterloo.ca

Date of Meeting: May 15, 2023

Agenda Item Identification: **7b. Report – Senate Graduate & Research Council:
Major Program Modification to the Graduate Diploma (GDip)
in Design Engineering and Graduate Diploma (GDip) in
Design Engineering – Co-operative Program**

Recommendation/Motion:

To approve discontinuing the type 2 GDip in Design Engineering and the type 2 GDip in Design Engineering – Co-operative Program, effective 1 September 2023, as presented.

Summary:

[Senate Graduate & Research Council](#) met on 10 April 2023 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:

Department approval date (mm/dd/yy): 02/02/23
Graduate Studies and Postdoctoral Affairs review date (mm/dd/d\yy): 02/01/23
Faculty approval date (mm/dd/yy): 03/21/23
Senate Graduate & Research Council approval date (mm/dd/yy): 04/10/23

Highlights/Rationale:

The GDip in Design Engineering and GDip in Design Engineering - Co-operative Program have relied on the availability of one faculty member with unique expertise in design, responsible for selecting students and teaching the three core courses (ME 680, ME 681 and ME 682). This faculty member is retiring in July 2023. The Department of Mechanical and Mechatronics Engineering does not have adequate teaching resources to continue the GDip in the same mode of operation and there is no plan in the short-term of hiring a new faculty member capable of teaching ME 680, ME 681 and ME 682 on a regular basis.

Further, the Department of Mechanical and Mechatronics Engineering is in the process of restructuring its Meng program with new graduate specializations and a direct entry co-op option that will offer alternatives to applicants interested in mechanical and mechatronics engineering MEng and co-op.

Documentation Provided:

Program Revision Template – Appendix A



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) Graduate Diploma (GDip) in Design Engineering
2) Graduate Diploma (GDip) in Design Engineering - Co-operative Program

Program contact name(s): Cecile Devaud

Form completed by: Cecile Devaud

Description of proposed changes:

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

Discontinuing the Type 2 GDip in Design Engineering and the Type 2 GDip in Design Engineering - Co-operative Program.

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

Rationale for change(s):

The GDip in Design Engineering and GDip in Design Engineering - Co-operative Program have relied on the availability of one faculty member with unique expertise in design, responsible for selecting students and teaching the three core courses (ME 680, ME 681 and ME 682). This faculty member is retiring in July 2023. The Department of Mechanical and Mechatronics Engineering does not have adequate teaching resources to continue the GDip in the same mode of operation and there is no plan in the short-term of hiring a new faculty member capable of teaching ME 680, ME 681 and ME 682 on a regular basis. Further, the Department of Mechanical and Mechatronics Engineering is in the process of restructuring its MEng program with new graduate specializations and a direct entry co-op option that will offer alternatives to applicants interested in mechanical and mechatronics engineering MEng and co-op.

Proposed effective date: Term: Fall Year: 2023

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-mechanical-and-mechatronics-engineering/graduate-diploma-gdip-design-engineering>

<https://uwaterloo.ca/graduate-studies-academic-calendar/engineering/department-mechanical-and-mechatronics-engineering/graduate-diploma-gdip-design-engineering-co-operative-program>

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:
<p>GRADUATE DIPLOMA (GDIP) IN DESIGN ENGINEERING</p> <p>Program information</p> <ul style="list-style-type: none"> ● Delivery mode <ul style="list-style-type: none"> ○ On-campus ● Program type <ul style="list-style-type: none"> ○ Diploma ● Study option(s) <ul style="list-style-type: none"> ○ Coursework <p>Admission requirements</p> <ul style="list-style-type: none"> ● Minimum requirements <ul style="list-style-type: none"> ○ Students in the Master of Engineering (MEng) in Mechanical and Mechatronics Engineering program may complete the requirements for the GDip in Design Engineering in conjunction with their MEng requirements. <p>Degree requirements</p> <p>Coursework option:</p> <ul style="list-style-type: none"> ● Courses <ul style="list-style-type: none"> ○ Students must complete the following courses: ○ Mandatory courses: <ul style="list-style-type: none"> ▪ ME 680 Advanced Design Engineering ▪ ME 681 Advanced Design Engineering – Design Project 1 ▪ ME 682 Advanced Design Engineering – Design Project 2 ○ Specific courses: 1 from the following list: <ul style="list-style-type: none"> ▪ ME 538 Welding Design, Fabrication and Quality Control ▪ ME 555 Computer-Aided Design ▪ ME 559 Finite Element Methods ▪ ME 561 Fluid Power Control Systems ▪ ME 566 Computational Fluid Dynamics for Engineering Design ○ General courses: 4 additional Faculty of Engineering graduate courses (subject to the approval of the Department). 	

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:
<ul style="list-style-type: none"> ○ All courses are 600 and 700 level courses and students are not allowed to take more than 2 500 level courses (courses open to both undergraduates and graduates) out of their 8 required courses. <p>GRADUATE DIPLOMA (GDIP) IN DESIGN ENGINEERING – CO-OPERATIVE PROGRAM</p> <p>Program information</p> <ul style="list-style-type: none"> ● Delivery mode <ul style="list-style-type: none"> ○ On-campus ● Length of program <ul style="list-style-type: none"> ○ Students enrolled in this diploma option are granted one additional term to complete the requirements set by the Master of Engineering (MEng) in Mechanical and Mechatronics Engineering program: <ul style="list-style-type: none"> ▪ Full-time: 5 terms (20 months) ▪ Part-time: 10 terms (40 months) ● Program type <ul style="list-style-type: none"> ○ Co-operative ○ Diploma ● Study option(s) <ul style="list-style-type: none"> ○ Coursework <p>Admission requirements</p> <ul style="list-style-type: none"> ● Minimum requirements <ul style="list-style-type: none"> ○ Students in the Master of Engineering (MEng) in Mechanical and Mechatronics Engineering program may complete the requirements for the GDip in Design Engineering – Co-operative Program in conjunction with their MEng requirements. ○ Qualified students interested in the co-op option must submit an application by August 1st for 4-stream and by December 1st for the 8-stream and meet the following requirements: <ul style="list-style-type: none"> ▪ Students will be interviewed by the Department before they are recommended to Co-operative and Experiential Education (CEE) for approval. Interviews will take place prior to the end of August or December for 4- 	

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:
<p style="text-align: center;">stream and 8-stream options, respectively.</p> <ul style="list-style-type: none"> ▪—Students should submit the following with their application and prior to their interviews: <ul style="list-style-type: none"> ▪—a. any previous Professional Engineering Licensure documents or licensure status ▪—b. design portfolio (past design project experiences including capstone projects....) ▪—An excellent command of the English language. <p>Degree requirements</p> <p>Coursework option:</p> <ul style="list-style-type: none"> •—Courses <ul style="list-style-type: none"> ○—Students must complete the following courses: ○—Mandatory courses: <ul style="list-style-type: none"> ▪—ME 680 Advanced Design Engineering ▪—ME 681 Advanced Design Engineering - Design Project 1 ▪—ME 682 Advanced Design Engineering - Design Project 2 ○—Specific courses: 1 from the following list: <ul style="list-style-type: none"> ▪—ME 538 Welding Design, Fabrication and Quality Control ▪—ME 555 Computer-Aided Design ▪—ME 559 Finite Element Methods ▪—ME 561 Fluid Power Control Systems ▪—ME 566 Computational Fluid Dynamics for Engineering Design ○—General courses: 4 additional Faculty of Engineering graduate courses (subject to the approval of the Department). ○—All courses are 600 and 700 level courses and students are not allowed to take more than 2 500 level courses (courses open to both undergraduates and graduates) out of their 8 required courses. 	

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:
<ul style="list-style-type: none"> • Graduate Studies Work Report 	

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

Students currently pursuing the GDips will not be impacted by the changes. In Fall 2023 and Winter 2024, ME 681 and ME 682, which are project-based courses, will be offered to existing GDip students to complete their degree.

Department/School approval date (mm/dd/yy): 02/02/23

Reviewed by GSPA (for GSPA use only) date (mm/dd/yy): 02/01/23

Faculty approval date (mm/dd/yy): 03/21/23

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

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

This page intentionally left blank.

Senate Graduate and Research Council

For Approval

Open Session

To: Senate

Sponsor: Charmaine Dean
Contact Information: Vice-President, Research & International

Sponsor: Jeff Casello
Contact Information: Associate Vice-President, Graduate Studies and Postdoctoral Affairs

Presenter: Jeff Casello
Contact Info: jcasello@uwaterloo.ca

Date of Meeting: May 15, 2023
Agenda Item Identification: 7c. Report – Senate Graduate & Research Council:
Major Program Modification to the Master of Mathematics
(MMath) in Statistics

Recommendation/Motion:

To approve discontinuing the coursework study option from the MMath in Statistics program, effective 1 September 2023, as presented.

Summary:

[Senate Graduate & Research Council](#) met on 10 April 2023 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:

Graduate Studies and Postdoctoral Affairs review date (mm/dd/d\yy): 08/25/22
Faculty approval date (mm/dd/yy): 02/28/23
Senate Graduate & Research Council approval date (mm/dd/yy): 04/10/23

Highlights/Rationale:

The coursework study option, which includes a required specialization in Data Science, is being discontinued because the option has been replaced by a) the MMath in Data Science, and b) the Master of Data Science and Artificial Intelligence (MDSAI) programs (note: these Data Science programs are supported by the Department of Statistics and Actuarial Science, the Department of Combinatorics and Optimization, and the School of Computer Science). The Department of Statistics and Actuarial Science has not accepted applications to the coursework study option since Spring 2019 and has directed applicants to the Data Science programs.

Documentation Provided:

Program Revision Template - Appendix A.



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: Mathematics

Program: Master of Mathematics (MMath) in Statistics

Program contact name(s): Shoja'eddin Chenouri, Mary Lou Dufton

Form completed by: Mary Lou Dufton

Description of proposed changes:

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

Discontinue the coursework study option from the MMath in Statistics program.

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

Rationale for change(s):

The coursework study option, which includes a required specialization in Data Science, is being discontinued because the option has been replaced by a) the MMath in Data Science, and b) the Master of Data Science and Artificial Intelligence (MDSAI) programs (note: these Data Science programs are supported by the Department of Statistics and Actuarial Science, the Department of Combinatorics and Optimization, and the School of Computer Science). The Department of Statistics and Actuarial Science has not accepted applications to the coursework study option since Spring 2019 and has directed applicants to the Data Science programs.

Proposed effective date: Term: ~~Spring~~ Fall Year: 2023

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/mathematics/department-statistics-and-actuarial-science/master-mathematics-mmath-statistics>

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:
<p>Graduate research fields</p> <ul style="list-style-type: none"> • Computational Statistics • Finance • Industrial Statistics • Probability • Statistical Theory and Methods 	<p>Graduate research fields</p> <ul style="list-style-type: none"> • Computational Statistics • Finance • Industrial Statistics • Probability • Statistical Theory and Methods

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:
<p>Program information</p> <ul style="list-style-type: none"> • Admit term(s) <ul style="list-style-type: none"> ○ Fall • Delivery mode <ul style="list-style-type: none"> ○ On-campus • Program type <ul style="list-style-type: none"> ○ Master's ○ Research • Registration option(s) <ul style="list-style-type: none"> ○ Full-time ○ Part-time • Study option(s) <ul style="list-style-type: none"> ○ Thesis ○ Master's Research Paper ○ Coursework <p>Admission requirements</p> <ul style="list-style-type: none"> • Minimum requirements <ul style="list-style-type: none"> ○ A four-year Honours Bachelor degree with a significant statistics and/or actuarial science component. ○ An overall 78% average from a Canadian university (or its equivalent). ○ An interview may be required. • Application materials <ul style="list-style-type: none"> ○ Résumé ○ Supplementary information form ○ Transcript(s) • References <ul style="list-style-type: none"> ○ Number of references: 3 ○ Type of references: normally from academic sources • English language proficiency (ELP) (if applicable) <p>Degree requirements</p> <p>Thesis option:</p> <ul style="list-style-type: none"> • Graduate Academic Integrity Module (Graduate AIM) • Courses 	<p>Program information</p> <ul style="list-style-type: none"> • Admit term(s) <ul style="list-style-type: none"> ○ Fall • Delivery mode <ul style="list-style-type: none"> ○ On-campus • Program type <ul style="list-style-type: none"> ○ Master's ○ Research • Registration option(s) <ul style="list-style-type: none"> ○ Full-time ○ Part-time • Study option(s) <ul style="list-style-type: none"> ○ Thesis ○ Master's Research Paper <p>Admission requirements</p> <ul style="list-style-type: none"> • Minimum requirements <ul style="list-style-type: none"> ○ A four-year Honours Bachelor degree with a significant statistics and/or actuarial science component. ○ An overall 78% average from a Canadian university (or its equivalent). ○ An interview may be required. • Application materials <ul style="list-style-type: none"> ○ Résumé ○ Supplementary information form ○ Transcript(s) • References <ul style="list-style-type: none"> ○ Number of references: 3 ○ Type of references: normally from academic sources • English language proficiency (ELP) (if applicable) <p>Degree requirements</p> <p>Thesis option:</p> <ul style="list-style-type: none"> • Graduate Academic Integrity Module (Graduate AIM) • Courses

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:
<ul style="list-style-type: none"> ○ Students must complete 4 one-term (0.50 unit weight) courses with an overall average of at least 70%. ○ The 4 courses must include STAT 850 Estimation and Hypothesis Testing and at least 2 900-level STAT courses. <ul style="list-style-type: none"> • Graduate Skills Workshop • Master's Thesis <ul style="list-style-type: none"> ○ Students must complete a thesis and an oral presentation. <p>Master's Research Paper option:</p> <ul style="list-style-type: none"> • Graduate Academic Integrity Module (Graduate AIM) • Courses <ul style="list-style-type: none"> ○ Students must complete 7 one-term (0.50 unit weight) courses with an overall average of at least 70%. ○ 3 of the 7 required courses should include: <ul style="list-style-type: none"> ▪ STAT 830 Experimental Design or STAT 835 Statistical Methods for Process Improvement ▪ STAT 850 Estimation and Hypothesis Testing ▪ STAT 854 Sampling Theory and Practice ○ Exemptions can be made to these required courses at the discretion of the Associate Chair for Graduate Studies. • Graduate Skills Workshop • Master's Research Paper <ul style="list-style-type: none"> ○ Students must complete a research paper that will be given a numeric grade which appears on the transcript beside the milestone. <p>Coursework option:</p> <p>The coursework option includes a specialization in Data Science.</p> <p>Note: The Department of Statistics and Actuarial Science is not currently accepting applications for the coursework option.</p>	<ul style="list-style-type: none"> ○ Students must complete 4 one-term (0.50 unit weight) courses with an overall average of at least 70%. ○ The 4 courses must include STAT 850 Estimation and Hypothesis Testing and at least 2 900-level STAT courses. <ul style="list-style-type: none"> • Graduate Skills Workshop • Master's Thesis <ul style="list-style-type: none"> ○ Students must complete a thesis and an oral presentation. <p>Master's Research Paper option:</p> <ul style="list-style-type: none"> • Graduate Academic Integrity Module (Graduate AIM) • Courses <ul style="list-style-type: none"> ○ Students must complete 7 one-term (0.50 unit weight) courses with an overall average of at least 70%. ○ 3 of the 7 required courses should include: <ul style="list-style-type: none"> ▪ STAT 830 Experimental Design or STAT 835 Statistical Methods for Process Improvement ▪ STAT 850 Estimation and Hypothesis Testing ▪ STAT 854 Sampling Theory and Practice ○ Exemptions can be made to these required courses at the discretion of the Associate Chair for Graduate Studies. • Graduate Skills Workshop • Master's Research Paper <ul style="list-style-type: none"> ○ Students must complete a research paper that will be given a numeric grade which appears on the transcript beside the milestone.

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:
<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 (0.50-unit weight) graduate courses [with an overall average of at least 70%] from the Data Science lists of courses. ○ Students should take a minimum of 4 STAT courses, and no courses which are neither STAT nor Computer Science (CS). ○ Students must satisfy the following course requirements: ○ Foundation course: <ul style="list-style-type: none"> ▪ CS 600 Fundamentals of Computer Science for Data Science ○ Students with a STAT major degree are expected to take the foundation course CS 600. However, STAT major students will be exempted from taking CS 600 if they have a sufficient background in Computer Science; instead they will be required to take another CS course from the elective course list. ○ Required core courses: <ul style="list-style-type: none"> ▪ STAT 847 Exploratory data analysis ▪ CS 631 Data-Intensive Distributed Analytics ○ 1 of the following required breadth courses: <ul style="list-style-type: none"> ▪ STAT 841 Statistical Learning: Classification ▪ STAT 842 Data Visualization ▪ STAT 844 Statistical Learning: Advanced Regression ○ 4 elective courses from the following list: <ul style="list-style-type: none"> ▪ STAT 840 Computational Inference ▪ STAT 841 Statistical Learning: Classification ▪ STAT 842 Data Visualization ▪ STAT 844 Statistical Learning: Advanced Regression ▪ STAT 946 Topics in Probability and Statistics ▪ CS 638 Principles of Data Management and Use 	

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:
<ul style="list-style-type: none"> ▪ CS 648 Database Systems Implementation ▪ CS 654 Distributed Systems ▪ CS 658 Computer Security and Privacy ▪ CS 680 Introduction to Machine Learning ▪ CS 685 Machine Learning Theory: Statistical and Computational Foundations ▪ CS 686 Introduction to Artificial Intelligence ▪ CS 740 Database Engineering ▪ CS 741 Parallel and Distributed Database Systems ▪ CS 743 Principles of Database Management and Use ▪ CS 786 Probabilistic Inference and Machine Learning ▪ CS 798 Advanced Research Topics ▪ CS 848 Advanced Topics in Databases ▪ CS 856 Advanced Topics in Distributed Computing ▪ CS 858 Advanced Topics in Cryptography, Security and Privacy ▪ CS 870 Advanced Topics in Scientific Computing ▪ CS 886 Advanced Topics in Artificial Intelligence ○ Note: CS 798: CS courses at the 800 level, and STAT courses at the 900 level should be on a topic in Data Science; they are subject to the approval of the Graduate Officer. ▪ Data Science Requirement <ul style="list-style-type: none"> ○ Students must complete the required core data science courses in order to satisfy the Data Science Requirement milestone. 	

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

There are no students currently registered in MMath Statistics Data Science Specialization and therefore there is no impact with these changes.

Department/School approval date (11/25/22):

Reviewed by GSPA (for GSPA use only) date (mm/dd/yy):08/25/22

Faculty approval date (mm/dd/yy):02/28/23

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

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

For Approval**Open Session****To:** Senate**Sponsor:** David DeVidi, Associate Vice-President, Academic
Contact Information: david.devidi@uwaterloo.ca**Presenter:** David DeVidi, Associate Vice-President, Academic
Contact Information: david.devidi@uwaterloo.ca**Date of Meeting:** May 15, 2023**Agenda Item Identification:** **8a. Report – Senate Undergraduate Council:
Closure of Application to Part-Time On-Campus Three-Year
General Science Program****Summary:**

[Senate Undergraduate Council](#) met on April 11, 2023 and agreed to forward the following items to Senate for approval as part of the consent agenda.

Recommendation/Motion:

That Senate approve the closure of application to part-time on-campus Three-Year General Science program, effective 1 September 2023, as presented.

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:

- (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:

Science Undergraduate Studies Committee approval date (mm/dd/yy): 7/03/23

Faculty approval date (mm/dd/yy): 14/03/23

Senate Undergraduate Council approval date (mm/dd/yy): 04/11/23

Background and Rational:

Effective Fall 2019, the Faculty of Science approved closing applications to online only completion of the Three-Year General Science program (due to a shortage of available online Science courses). Ending applications to this academic plan via online only study did not affect applications to the program, via part-time on-campus study. Effective Fall 2023, the Faculty of Science is closing applications to the latter option, as there has been little interest from students in part-time on-campus studies. The Three-Year General

Science program itself is not being inactivated; therefore, no changes to Science Calendar pages are required.

For Recommendation

Open Session

To: Senate

Sponsor: Vivek Goel, President and Vice-Chancellor
Contact Information: president@uwaterloo.ca

Presenter: Vivek Goel, President and Vice-Chancellor
Contact Information: president@uwaterloo.ca

Date of Meeting: May 15, 2023

Agenda Item Identification: 9. Amendments to Policy 33 – Ethical Behaviour

Recommendation/Motion:

Motion: That Senate approve the amendments to Policy 33 – Ethical Behaviour (Policy 33), as presented in the attachment to this report, and that Senate recommends the amendments to the Board of Governors for approval.

Summary:

Bill 26 – *Strengthening Post-secondary Institutions and Students Act, 2022* (Bill 26) received Royal Assent on 8 December 2022. Bill 26 requires the University to have a policy that describes the rules about employee-student sexual behaviour and provides examples of disciplinary measures that may arise if such rules are violated. Outside of the policy-related requirements, some of the changes brought about by Bill 26 include:

- new powers regarding discipline, including termination and the prohibition of rehiring of employees who have been found to have engaged in employee-student sexual misconduct;
- new limits on the use of non-disclosure agreements that usually prohibit the University from disclosing employee-student sexual misconduct; and
- new prohibitions on the ability of any subsequent decision-maker (for example, where a grievance is filed) to substitute disciplinary measures imposed after a finding employee-student sexual misconduct.

It was determined that Policy 33 required amendment in order to meet the policy-related requirements arising out of Bill 26.

Policy 1 details the process to be followed to initiate, develop and seek approval on amendments to existing policies, including Policy 33. In this case, the FRC and SRC agreed to jointly consider the amendments to the Policy arising out of the passing of Bill 26. As the joint FRC/SRC committee was already in the process of considering larger revisions to the Policy, it was not necessary or efficient to establish a Faculty/Staff Policy Drafting Committee (FSPDC).

Office of the President

The recommended amendments were considered separately by the FRC and the SRC (at meetings held by each on 23 March 2023 and 6 April 2023) and jointly at a meeting held on 3 April 2023. The amendments were reviewed by Human Resources and Legal and Immigration Services.

Outside of the amendments arising out of Bill 26, the joint committee agreed to an additional change to the language of existing Policy 33, recommending that the paragraph that read “*It is recognized that harassment is often context dependent and that, while sexual harassment typically takes place in a situation of power differential between the persons involved, it may occur between peers.*” found at the closing of section 2 of Policy 33 (Specific Principles) be removed. The joint committee unanimously agreed that the paragraph did not accurately reflect the realities of sexual harassment.

The amendments to Policy 33, meant to address the requirements arising out of Bill 26 and the additional concern from the joint committee discussed above are respectfully submitted to Senate, requesting Senate’s approval and recommendation to the Board of Governors. The amendments are noted in the attached redlined version of Policy 33. Discussions on broader changes to Policy 33 undertaken by the joint FRC/SRC committee will continue, and may include further amendments, beyond the legislated requirements, to the changes proposed at this time.

FRC and SRC members supported the proposed amendments, which were submitted to the President in April 2023 and were approved as presented. To affect the final approval of the policy amendment under Policy 1, the amendments are now recommended to Senate for approval and for further recommendation to the Board of Governors.

Jurisdictional Information:

This item is submitted to Senate in accordance with Policy 1 – Initiation and Review of University Policies, section 4, Class F:

Class FS

Jurisdiction - The responsibility for policy development is vested in the FRC and the SRC.

Initiation - A request for initiation of a new policy or amendment of an existing policy can be considered by the FRC, by the SRC, or by the two committees. Either committee may decide to proceed. If the request to initiate comes from Senate or the Board of Governors, the decision will be to proceed.

Development – An FSPDC will be established with two members appointed by the President, two by the Faculty Association, and two by the Staff Association (and if considered necessary by President, one by CUPE Local 793 and/or one by the Waterloo Undergraduate Student Association (UWSA). Terms of reference for the FSPDC will be set by a joint meeting of the FRC and the SRC.

The draft policy will be sent to both the FRC and the SRC, who will send it through their usual consultative processes for feedback. If necessary, the policy will be sent back to the FSPDC for a second draft.

The FRC and the SRC will consider the draft policy. If approved by each, then the draft policy will be sent to the appropriate bodies for approval. If the draft policy is approved by one of the

Office of the President

committees but not the other, then a joint meeting shall be held in an attempt to reach a consensus. In the event that consensus cannot be reached, the joint committee shall consider whether the subject matter of the draft policy could be and perhaps should be split, and covered by separate Class F and Class S policies.

Approvals – Depending upon the nature of the policy, Senate and the Board of Governors may or may not be involved in the approval process. The terms of reference of the FSPDC shall specify the approval process to be used in each case.

Governance Path:

Faculty Relations Committee (approval on 6 April 2023)

Staff Relations Committee (approval on 6 April 2023)

Approval by President and Vice-Chancellor (approval 19 April 2023)

Senate (prospective approval on 15 May 2023)

Board of Governors (prospective approval on 6 June 2023)

Previous Action Taken:

Not applicable.

Next Steps:

If approved, Senate is asked to recommend the Policy amendments to the Board of Governors for approval.

Documentation Provided:

- Policy 33 – redline version to display recommended amendments



University of Waterloo Policy 33

Ethical Behaviour

Established: 19 May 1982
Last Updated: 30 June 2010
Class: FS

1. GENERAL PRINCIPLES

The University is an autonomous community which exists to further the pursuit and dissemination of knowledge and understanding through scholarship and teaching. The University aims to ensure an environment of tolerance and respect and believes that the right of individuals to advance their views openly must be upheld throughout the University. The realization of these intentions requires respect for the following general principles:

- That each member of the University endeavour to contribute to the existence of a just and supportive community based on equality and respect for individual differences.
- That the University of Waterloo is committed to providing an environment which supports and rewards its members on the basis of such relevant factors as work performance and achievement. Harassment, discrimination and the abuse of supervisory authority, for example, are inimical to this environment. Further, as required by the Ontario Human Rights Code and the Occupational Health and Safety Act, the University has a responsibility to provide an environment free from harassment and discrimination, and accordingly must deal effectively, quickly and fairly with any situation involving claims of harassment or discrimination that come to its attention.
- That services, benefits, opportunities, and facilities offered by the University be compatible with its purposes and be provided to all persons in the University community with the relevant qualifications. Thus, such provisions shall not be denied wholly or partly on irrelevant or prohibited grounds.

[*Note:* Under the Ontario Human Rights Code, a person has the right to equal treatment in a number of areas (i.e., services, goods and facilities, accommodation/housing, employment, contracts, membership in trade unions and vocational associations), free from discrimination based on the following prohibited grounds: race; ancestry; place of origin; colour; ethnic origin; citizenship; creed/religion; sex; sexual orientation; age; record of offences; marital status; same-sex partnership status; family status; receipt of public assistance; mental or physical handicap.] The Accessibility for Ontarians with Disabilities Act prescribes accommodation for those with mental or physical handicaps.

- That the University supports academic freedom for all members of the University community. Academic freedom carries with it the duty to use that freedom in a manner consistent with the

scholarly obligation to base teaching and research on an honest and ethical quest for knowledge. In the context of this policy, 'academic freedom' refers to academic activities, including teaching and scholarship, as is articulated in the principles set out in the Memorandum of Agreement between the FAUW and the University of Waterloo, 1998 (Article 6). The academic environment which fosters free debate may from time to time include the presentation or discussion of unpopular opinions or controversial material. Such material shall be dealt with as openly, respectfully and sensitively as possible.

- That no member of the University community (faculty, staff, student) unduly interfere with the study, work or working environment of other members of the University or any aspect of another's University activity. This shall be taken to apply to the campus of the University and to official off-campus functions of the University, such as course- or program-related field trips and co-op employment.
- That those with supervisory authority (academic or employment) use such authority, both on campus and off, solely for the purposes explicitly stated or implied in University policies and with regard to the overall aims and purposes of the University.

2. SPECIFIC PRINCIPLES

Without limiting the generality of Section I above, the following shall be taken as violations of this policy, and may also be in contravention of the Ontario Human Rights Code:

- **Discrimination** is defined as any action or behaviour that results in adverse or preferential treatment related to those grounds prohibited under the Ontario Human Rights Code.
- **Harassment** is defined as engaging in a course of vexatious comment or conduct that is known, or ought reasonably to be known, to be unwelcome.
- **Sexual Harassment** includes comment or conduct where acceptance of sexual advances is a condition of education or employment, or where rejection of sexual advances negatively impacts decisions that concern the recipient (e.g., grades, performance evaluation or any academic or employment decisions) or where unwelcome sexual advances, comment, conduct or communications interfere with the recipient's work or study.

- **Sexual Misconduct by an Employee Toward a Student*** means, in relation to a student of the University

(a) Physical sexual relations with the student, touching of a sexual nature of the student or behaviour or remarks of a sexual nature toward the student by an employee of the University where:

- (i) The act constitutes an offence under the *Criminal Code* (Canada) (including, but not limited to sexual assault, aggravated sexual assault, sexual assault with a weapon, voyeurism, sexual exploitation, sexual exploitation of a person with a disability, sexual interference, child pornography, criminal harassment/stalking, and invitation to sexual touching as examples); or
- (ii) The act infringes the right of the student under clause 7(3)(a) of the *Human Rights Code* to be free from a sexual solicitation or advance by a person in a position to confer, grant or deny a benefit or advancement to the student; or
- (iii) The act constitutes sexual misconduct as defined in this policy, or contravenes this policy or any other rule or other requirement of the University respecting sexual relations between employees and students; or

(iv) The act constitutes Sexual Harassment or Sexual Violence as defined in Policy 42 – Prevention of and Response to Sexual Violence.

Or,

(b) Any conduct by a University employee that infringes the right of the student under clause 7(3)(b) of the Human Rights Code to be free from reprisal or threat of reprisal for the rejection of a sexual solicitation or advance.

- A ***'poisoned environment'*** (or one that is intimidating, hostile or offensive) can be created based on any of the prohibited grounds under the Ontario Human Rights Code, and can be described as comment or conduct that is contrary to the aims of maintaining a supportive, respectful and tolerant environment.

And the following may be in contravention of the Occupational Health and Safety Act:

- ***Workplace Harassment*** is defined as engaging in a course of vexatious comment or conduct against a worker in a workplace that is known, or ought reasonably to be known, to be unwelcome.

~~It is recognized that harassment is often context dependent and that, while sexual harassment typically takes place in a situation of power differential between the persons involved, it may occur between peers.~~

3. VIOLATIONS, REDRESS

Members of the University community have the right to lodge complaints and to participate in proceedings without reprisal or threat of reprisal for so doing. Those with supervisory authority (academic or employment) are expected to be proactive in promoting respect for the general principles articulated in Section I and, with assistance and guidance from the Conflict Management and Human Rights Office (CMAHRO), are responsible for dealing with alleged violations of those principles. Such authority shall be taken to include permanent, temporary or delegated supervision of any faculty or staff member or student.

Those who receive complaints or who perceive what they believe to be violations of this policy shall act promptly to notify an appropriate administrative officer, normally one's immediate supervisor, the department Head, Chair or Director, to provide or initiate the appropriate remedial or disciplinary measures. If the complaint pertains to that individual, it should be directed to the next administrative level (Dean, Associate Provost, Vice-President). Those dealing with alleged violations of this policy shall be guided by principles of fairness and natural justice. Complaints that are found after investigation to be of a frivolous and/or vexatious nature will not be pursued.

Disciplinary measures resulting from ~~alleged~~ infringements of this policy (other than a finding of Sexual Misconduct by an Employee Toward a Student) may be appealed under the grievance processes for staff (Policy 36), students (Policies 70/71), faculty (Article 9 of the Memorandum of Agreement). Members of CUPE 793 should refer to Article 16 of their Collective Agreement.

Disciplinary processes resulting from a finding of Sexual Misconduct by an Employee Toward a Student are outlined in Policy 18 for staff, Article 8 of the Memorandum of Agreement between the Faculty Association of the University of Waterloo and the University of Waterloo (MOA) for

faculty, the CUPE 793 Collective Agreement and the OPSEU Collective Agreement. In these circumstances, where a decision is made to investigate, careful consideration of whether an internal or external investigator with expertise on the subject-matter, will be retained, giving thought to the complexity of the complaint, potential impacts on procedural timelines and the expressed wishes of the parties to the complaint. Both the complainant and the respondent to the complaint will have the opportunity to challenge the appointment of the investigator with reasons.

Disciplinary measures resulting from a finding of Sexual Misconduct by an Employee Toward a Student range, up to and including the termination of employment. Where disciplinary measures resulting from a finding of Sexual Misconduct by an Employee Toward a Student include the termination of employment, or where resignation occurs as a result of a finding of Sexual Misconduct by an Employee Toward a Student, the employee shall not be entitled to notice of termination, termination pay, or other compensation or restitution as a result of the discharge or disciplinary measure, and the employee shall not be subsequently re-employed by the University. Disciplinary measures resulting from a finding of Sexual Misconduct by an Employee Toward a Student are final.

Individuals who believe they have been treated in violation of the Ontario Human Rights Code have the right to proceed directly to the Human Rights Tribunal of Ontario. If taken, such a step does not relieve or alter UW's responsibility to take appropriate administrative action to address the alleged violation.

[*Note:* Complainants may find it helpful to consult the University Secretariat (Needles Hall) or refer to organization charts on its website for assistance in identifying the immediate supervisor of a particular individual. Regarding courses taught at, or programs, facilities and residences administered by the Federated & Affiliated Colleges, faculty, staff and students should consult the individual designated by the appropriate College.]

4. **ADVICE AND SUPPORT**

Any member of the University community who has reason to believe that he/she has been treated in violation of a principle stated in this policy is urged to contact one of the primary on-campus resources identified below for information or advice.

Conflict Management and Human Rights Office. The CMAHRO serves as the focal point and primary resource to all members of the University community on matters involving ethical behaviour and human rights issues. That Office sponsors the University Conflict Resolution Support Program, comprised of the:

- Resolution Support Program (RSP), which provides one-on-one support and advice by trained volunteers to those considering or initiating a complaint under UW policies;
- Conflict Intervention Program (CIP), whose members work with parties to a dispute, in an attempt to mediate and resolve problems informally and as close to source as possible.

AccessAbility Services. The office has a mandate to ensure equitable opportunity for students with disabilities. In accordance with the *Accessibility for Ontarians with Disabilities Act* and in partnership with all university departments, the office promotes access to all programs, services, and facilities at the university.

University of Waterloo Special Constable Service. In situations involving unwanted touching or aggressive and threatening behaviour, complainants are strongly advised to consider contacting UW Special Constable Service (ext. 22222, or 519-888-4911; Commissary), preferably at the outset.

Sexual Violence Prevention and Response Office. The Sexual Violence Prevention and Response Office supports all members of the University of Waterloo campus community who have experienced or been impacted by sexual violence.

A ***person of responsibility*** (e.g., Head, Chair or Director) within one's own department or school.

Members of the University community may also wish to consult the organizations that represent their interests: the Faculty Association; the Staff Association; CUPE Local 793; the Waterloo Undergraduate Student Association; the Graduate Student Association. A comprehensive list of on-campus resources, including contact names, locations and telephone numbers, is available from the University Secretariat and posted on the Human Rights, Equity and Inclusion website.

*** The portions of this policy related to the passage of Bill 26, *Strengthening Post-secondary Institutions and Students Act, 2022* will be reconsidered and revised (if deemed necessary) in accordance with the FS Class policy process outlined in Policy 1 – Initiation and Review of University Policies on or before 1 July 2024.**

Senate Executive Committee

For Approval

Choose an item.

Open Session

To: Senate

Sponsor: Vivek Goel, President and Vice-Chancellor, and Chair of Senate
Contact Information: Office of the President

Presenter: Vivek Goel, President and Vice-Chancellor, and Chair of Senate
Contact Info: Office of the President

Date of Meeting: May 15, 2023

Agenda Item Identification: **10. Reports - Senate Executive Committee:
Amendment to Bylaw 4 – Ex-Officio Membership**

Recommendation/Motion:

That Senate gives second and final reading to the amendments to Senate Bylaw 4 as presented in this report, with said amendments to effect:

- a. Removal of the Vice-President, Advancement, the Vice-President, University Relations, and the Deputy Provost, Integrated Planning and Budgeting as *ex-officio* members of Senate
- b. Addition of the Associate Vice-President, Equity, Diversity, Inclusion & Anti-Racism, the Associate Vice-President, Indigenous Relations, and the Associate Vice-President, Academic Operations as *ex-officio* members of Senate

Summary:

Second and final reading of the proposal to amend the *ex-officio* membership of Senate to reflecting requirements for Senate operations and considerations for equity, diversity, and inclusion in the membership of Senate. The original proposal was presented at the 27 March 2023 Senate meeting and was withdrawn following discussion. The proposal was revised to address feedback from Senators and first reading of the revision was brought forward and discussed at the 17 April 2023 Senate meeting. The second reading of the proposal to amend Senate Bylaw 4 is now brought forward for final consideration.

The University has made clear commitments toward positive action in the space of equity, diversity, inclusion and anti-racism (EDI-R), as well as having made a full commitment to decolonization, Indigenization and reconciliation. In the context of these commitments, and in line with the President's Anti-Racism Taskforce (PART) recommendation 78, it is important that the membership of Senate be reflective of the community that it serves. Currently there are five *ex-officio* members of Senate designated in Senate Bylaw 4 that are specific members of Executive Council. It is proposed that the Associate Vice-President, Equity, Diversity, Inclusion & Anti-Racism, the Associate Vice-President, Indigenous Relations, and the Associate Vice-President, Academic Operations are added as *ex-officio* members of Senate, and that the Vice-President, Advancement, the Vice-President, University Relations, and the Deputy Provost, Integrated Planning and Budgeting are removed.

Senate

1

Senate Executive Committee

With this amendment the University will fill specific gaps in representation on Senate in congruence with the University's commitments. It is emphasized that those appointed under this provision are full-fledged members of Senate and will take a broad interest in all matters brought forward to that body, as is expected for all Senators.

The proposed bylaw amendments as presented will effect no change to overall number of Senate members (92), and will keep intact the majority membership of faculty representatives on Senate as well as the present ratios of representation between the elected members of Senate from the Board of Governors, the undergraduate students, the graduate students and the alumni.

Jurisdictional Information:

Senate is empowered under section 22(o) of the *University of Waterloo Act, 1972*:

"...to enact by-laws and regulations for the conduct of its affairs."

Section 18(a) of the *University of Waterloo Act, 1972* describes the *ex-officio* membership of Senate, including article 9 of the section:

"9. Such other *ex-officio* members as the Senate by by-law may, from time to time, designate."

Under Senate Bylaw 1, section 14 "Bylaws – general":

- 14.01 The passage of a new bylaw or amendment(s) to an existing bylaw is accomplished in two readings by Senate. At the first reading, such discussion as is deemed appropriate by Senate shall take place. At the second reading, further discussion may take place and the vote on the document shall be taken. The two readings shall take place at different, but not necessarily consecutive, meetings of Senate.
- 14.02 No proposed bylaw or amendment(s) will be given reading unless it has been bound into or accompanies the agenda portfolio distributed in advance of the meeting.
- 14.03 Any proposed bylaw or amendment(s) shall include the proposed wording of the bylaw or amendment(s), and where appropriate, a summary of the reasons for such bylaw or amendment(s).
- 14.04 In order to be approved by Senate, any new bylaw or amendment(s) to bylaws must receive the affirmative vote of at least two-thirds of the members of Senate present and voting at the meeting.

Highlights:

Recommended amendments to Senate Bylaw 4 are as follows:
(strikethrough = deleted text, underline = new text)

"...

BE IT THEREFORE enacted as a bylaw of Senate of the University of Waterloo as follows:

Senate Executive Committee

That the following be named as *ex-officio* members of Senate:

- a. ~~The vice-president, advancement.~~ The associate vice-president, equity, diversity, inclusion & anti-racism.
- b. ~~The vice-president, university relations.~~ The associate vice-president, Indigenous relations.
- c. The vice-president, research and international.
- d. The associate vice-president, academic.
- e. ~~The deputy provost, integrated planning and budgeting.~~ The associate vice-president, academic operations.
- f. The president of the Faculty Association of the University of Waterloo.
- g. The president of the Federation of Students, University of Waterloo.
- h. The president of the Graduate Student Association - University of Waterloo.

...”

Previous Action Taken:

A motion was brought forward to Senate to at the 27 March 2023 that Senate gives first reading to the amendments to Senate Bylaw 4 as presented. Following discussion, the motion was withdrawn. The proposed amendments have been revised to address feedback from Senators. The revised motion was brought forward to Senate on 17 April 2023 for first reading to the amendments to Senate Bylaw 4 as presented, and was approved.

Governance Path:

Senate Executive Committee, 6 March 2023

Senate, 27 March 2023 (withdrawn)

Senate Executive Committee, 3 April 2023 (revised)

Senate, 17 April 2023 (first reading)

Senate, 15 May 2023 (planned second reading)

This page intentionally left blank.

Senate Graduate and Research Council

For Information

Open Session

To: Senate

Sponsor: Charmaine Dean
Contact Information: Vice-President, Research & International

Sponsor: Jeff Casello
Contact Information: Associate Vice-President, Graduate Studies and Postdoctoral Affairs

Presenter: Jeff Casello
Contact Info: jcasello@uwaterloo.ca

Date of Meeting: May 15, 2023

Agenda Item Identification: 11. Report - Senate Graduate & Research Council

Summary:

[Senate Graduate & Research Council](#) met on 10 April 2023 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. Curricular Submissions

Council approved new courses, course revisions, course inactivations, milestone revisions, and minor program revisions for:

- a. [Faculty of Arts](#) (Political Science, Global Governance, Peace and Conflict Studies, English Language and Literature, Psychology, Sociology)
- b. [Faculty of Engineering](#) (Chemical Engineering, Systems Design, Electrical and Computer)
- c. [Faculty of Environment](#) (Public International Law)
- d. [Faculty of Health](#) (School of Public Health Sciences, Kinesiology & Health Sciences)
- e. [Faculty of Math](#) (Computer Science)
- f. [Faculty of Science](#) (Academic Integrity Workshop)

2. Graduate Awards

[Council approved](#) the following:

- a. Waterloo Architecture Award in Community Studies – trust
- b. KIRKOR architects + Planners Graduate Scholarship in Entrepreneurship – trust
- c. Graduate Award for the Black and Indigenous Students

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:

Senate

(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.

For Information**Open Session**

To: Senate

Sponsor: David DeVidi, Associate Vice-President, Academic
Contact Information: david.devidi@uwaterloo.ca

Presenter: David DeVidi, Associate Vice-President, Academic
Contact Information: david.devidi@uwaterloo.ca

Date of Meeting: May 15, 2023

Agenda Item Identification: 12. Report – Senate Undergraduate Council**Summary:**

[Senate Undergraduate Council](#) met on April 11, 2023 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:

Minor Plan & Curricular Modifications

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

- a. [Faculty of Arts](#) (dean of arts; classical studies, Conrad Grebel university college; fine arts; French studies; Germanic & Slavic studies; medieval studies; philosophy; religious studies; Renison university college; school of accounting & finance; Spanish & Latin American studies; St Jerome university;)
- b. [Faculty of Health](#) (aging studies option; bachelor of public health, honours; bachelor of science, diploma in gerontology; gerontology minor; health research specialization; honours health sciences; honours kinesiology co-op sequence; kinesiology and health sciences; rehabilitation sciences specialization; school of public health science)
- c. [Faculty of Mathematics](#) (admissions; computer science; computer science software engineering specialization; mathematics minor; pure math)
- d. [Faculty of Science](#) (chemistry; honours science and aviation; pharmacy; physics)

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.



Senate Undergraduate Council

For Approval

Open Session

To: Senate

Sponsor: David DeVidi, Associate Vice-President, Academic
Contact Information: david.devidi@uwaterloo.ca

Presenter: David DeVidi, Associate Vice-President, Academic
Contact Information: david.devidi@uwaterloo.ca

Date of Meeting: May 15, 2023

Agenda Item Identification: **12a. Report – Senate Undergraduate Council:
Academic Regulation Revision of the Second Degree and
Degree Upgrades for the Faculty of Health**

Summary:

[Senate Undergraduate Council](#) met on April 11, 2023 and agreed to forward the following items to Senate for approval as part of the consent agenda.

Recommendation/Motion:

That Senate approve the proposed academic regulation revision to the second degree and degree upgrades for the Faculty of Health, effective 1 September 2024, as presented.

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:

- (a) Make recommendations to Senate with respect to rules and regulations for the governance, direction and management of undergraduate studies in the university.

Governance Path:

Health Undergraduate Studies Committee approval date (mm/dd/yy): 01/06/23

Faculty approval date (mm/dd/yy): 01/27/23

Senate Undergraduate Council approval date (mm/dd/yy): 04/11/23

Background and Rational:

The proposed change is to streamline the process and align with practices in other faculties (those who allow degree upgrades).

Proposed Changes:

Current calendar text: <http://ugradcalendar.uwaterloo.ca/page/HEA-Second-Degree-and-Degree-Upgrade>

Proposed calendar text: (underlined and bolded = new, strikethrough = deletion)

Second Degree

Applicants who have previously completed a three-year or four-year undergraduate degree from the University of Waterloo or at another post-secondary institution will be considered for entry to one of the bachelor's degrees offered by the Faculty of Health.

This option is intended for students exploring a new and distinct area of study.

- a Bachelor of Science degree in Kinesiology
- a Bachelor of Arts degree in one of the following honours majors:
 - Recreation and Leisure Studies
 - Recreation and Sport Business
 - Therapeutic Recreation
- a Bachelor of Public Health, Honours degree
- a Bachelor of Science, Honours Health Sciences degree

Students completing a second degree will not be eligible to participate in the co-operative (co-op) system of study.

The amount of time that has lapsed since the completion of the first degree will be a factor in determining admissibility to a plan and it may impact the number of transfer credits awarded. Normally, transfer credits will be awarded for courses meeting the [transfer credit criteria](#).

- For Kinesiology and Health Sciences transfer credits, courses must have been taken within the previous five years.
- For Public Health transfer credits, courses must have been taken within the previous eight years.

Once admitted, a minimum of 10.0 units (20 courses) must be completed beyond the first degree; including 10 REC courses for Recreation and Leisure Studies majors. These additional courses must include all requirements specified for the new degree and all required courses must be completed at Waterloo. The amount of time required to fulfil all requirements of this second degree will be dependent on the number of transfer credits awarded. If equivalents to core requirements are not assigned, then it will take longer than two years to complete all degree requirements.

Degree Upgrade

Recreation and Leisure Studies general students may pursue a degree upgrade from general to honours. Graduates with a general degree who wish to upgrade will be admitted on a case-by-case basis. Normally, applications to upgrade a degree must be completed within eight years following completion of the general degree. ~~Students wishing an upgrade are required to return the earlier degree in order to be granted the upgraded degree.~~

Information on common degree requirements is outlined in the [Common Degree Requirements](#) section of this Calendar.

Senate Nominating Committee for Honorary Degrees

For Information

Open Session

To: Senate

Sponsor: Vivek Goel, President and Vice-chancellor
Contact Information: president@uwaterloo.ca

Sponsor: Jim Rush, Vice-President Academic & Provost
Contact Information: provost@uwaterloo.ca

Presenter: Vivek Goel, President and Vice-chancellor
Contact Info: president@uwaterloo.ca

Date of Meeting: May 15, 2023

Agenda Item Identification: 13. Report – Honorary Degree Committee

Summary:

The Senate Honorary Degree Committee announces the 2022 Spring Convocation List of Honorands.

Faculty of Health: Tuesday, June 13, 2023, 10:00am

- Scott Leatherdale – invited guest speaker (S)
- Terry Stewart - Honorary Member of the University

Faculty of Environment: Tuesday, June 13, 2023, 2:30pm

- Raphael Ayambire – invited guest speaker (S)
- Barbara Schumacher - Honorary Member of the University

Faculty of Mathematics: Wednesday, June 14, 2023, 10:00am

- No honorands

Faculty of Mathematics: Wednesday, June 14, 2023, 2:30pm

- Trevor Hastie – Honorary Doctor of Mathematics (S)

Faculty of Mathematics: Wednesday, June 14, 2023, 6:30pm

- Arlie Petters – Honorary Doctor of Mathematics (S)
- Edwin Anderson - Honorary Member of the University
- Kenneth R. Davidson - Distinguished Professor Emeritus
- Steven Furino - Honorary Member of the University

Faculty of Arts: Thursday, June 15, 2023, 10:00am

- Seana McKenna – Honorary Doctor of Letters (S)
- Sharon Lamont - Honorary Member of the University

Senate Nominating Committee for Honorary Degrees

Faculty of Arts: Thursday, June 15, 2023, 2:30pm

- John Borrows – Honorary Doctor of Letters (S)
- Lorne Dawson - Distinguished Professor Emeritus
- Jo-Anne Woods - Distinguished Professor Emerita

Faculty of Arts: Thursday, June 15, 2023, 6:30pm

- Debra Pepler – Honorary Doctor of Letters (S)

Faculty of Science: Friday, June 16, 2023, 10:00am

- Yanxin Wang – Honorary Doctor of Science (S)

Faculty of Science: Friday, June 16, 2023, 2:30pm

- Mark Willcox – Honorary Doctor of Science (S)

Faculty of Engineering: Friday, June 16, 2023, 6:30pm

- Cristina Amon – Honorary Doctor of Engineering (S)

Faculty of Engineering: Saturday, June 17, 2023, 10:00am

- Rola Dagher – Honorary Doctor of Engineering (S)
- George Freeman – Honorary Member of the University

Faculty of Engineering: Saturday, June 17, 2023, 2:30pm

- Lisa Aultman-Hall – invited guest speaker (S)

Faculty of Engineering: Saturday, June 17, 2023, 6:30pm

- John Buzacott – Honorary Doctor of Engineering (S)

S = speaker

Biographies:

Scott Leatherdale (Invited Guest Speaker, Health)

Dr. Scott Leatherdale is a Professor in the School of Public Health Sciences. He is a Cancer Care Ontario Research Chair, a CIHR-PHAC Chair in Applied Public Health Research, and a University Research Chair at the University of Waterloo. Prior to coming to UW, he was a Scientist at Cancer Care Ontario where he was responsible for leading Ontario's cancer prevention system. For the past 15 years since joining UW, Dr. Leatherdale has developed and lead the COMPASS System; the world's largest and most comprehensive youth-focused cancer prevention and mental health learning system. Dr. Leatherdale was an inaugural winner of the Canadian Institutes of Health Research (CIHR) Trailblazer Award in Population Health Solutions and is the first (and only) Canadian researcher to be awarded Fellow status in the American Academy of Health Behavior. His proudest achievement is being the father of two fun and energetic little boys, Thomas and James.

Terry Stewart (HM, Health)

Mr. Terry Stewart's involvement with the University of Waterloo spanned nearly 50 years. He completed BA and MA degrees in Recreation and Leisure Studies in 1975 and 1976 respectively. He started his role as a Research Associate in the Department of Recreation and Leisure Studies in 1981, followed by

Senate Nominating Committee for Honorary Degrees

Microcomputer Laboratory Manager and Coordinator of the Leisure Studies Bank in 1984. His roles changed to Coordinator of Computing in 1991, followed by Manager of Information Technology in 2005, and finally Director of Information Technology in 2012. Mr. Stewart retired in 2015.

Raphael Ayambire (Invited Guest Speaker, Environment)

As the University of Waterloo's 2021 Caivan International Experience Postdoctoral Fellow, Raphael Ayambire brings a unique perspective to the challenge of planning and building the future cities of the world. After growing up in rural Ghana supporting his parents' agricultural activities, he graduated with a BSc. in development planning in Ghana, then journeyed to Canada to complete a planning PhD at Waterloo. His lived experience as well as his education in two continents has shaped his passionate vision for future cities that can respond to the climate crisis and transformative new technologies, while ensuring social equity makes these communities truly sustainable. Ayambire will continue working toward this goal as an assistant professor in the University of Manitoba's Faculty of Architecture, Department of City Planning.

Barbara Schumacher (HM, Environment)

The University of Waterloo is a healthier place in every way thanks to the caring, committed leadership of Dr. Barbara Schumacher. During an exemplary 39-year career at Waterloo, she shepherded the campus community through serious health challenges including cases of tuberculosis and outbreaks of meningitis and Swine Flu while championing progressive and equitable programs that enhanced the lives of thousands of students, faculty and staff. Promoting mental well-being, tackling sexual harassment, and establishing the Occupational Health Unit for staff were just three of her initiatives. In addition, Dr. Schumacher's efforts in promoting better health went beyond Waterloo and benefitted people at universities across Ontario. And, after retiring as Waterloo's Medical Director of Health Services in 2015 she established a fund to help refugees continue their university education.

Trevor Hastie (DMath, Mathematics)

Trevor Hastie is John A. Overdeck Professor of Mathematical Sciences at Stanford University, and a member of the United States National Academy of Sciences. He has made seminal contributions to statistical computing, modeling, and machine learning, with over 200 research articles and six books. He helped develop the statistical modeling environment behind the R computing system that we all use today, invented or co-invented many important tools in modern statistics, and authored numerous highly-acclaimed statistical software. Having guided several generations of statisticians and data scientists with his work, Professor Hastie is one of the most influential statisticians of our time.

Arlie Petters (DMath, Mathematics)

Arlie Petters received his PhD in mathematics from MIT in 1991. At Duke University (1998-2019), he was the Benjamin Powell Professor of Mathematics, and a Professor of Physics, Economics, and Business. Since 2020, he has served as the Provost at New York University Abu Dhabi. His outstanding scholarship resulted in numerous honors, including the inaugural Blackwell-Tapia Prize (2002). He was selected by the National Academy of Sciences to be part of a permanent Portrait Collection of Outstanding African-Americans in Science, Engineering, and Medicine (2006), and named by the Queen of England to membership in the Most Excellent Order of the British Empire (2008).

Senate Nominating Committee for Honorary Degrees

Edwin Anderson (HM, Mathematics)

Edwin (Ed) Anderson's career in education began as a secondary school mathematics teacher in Wingham, ON from 1956 until 1970, when he moved to the University of Waterloo as a Lecturer in the Faculty of Mathematics, where he worked until his retirement in 1991. He helped to lead the expansion of mathematics contests that now see more than 250 000 registrations annually from more than 80 countries, and was integral to the success of the Mathematics/Teaching undergraduate program. For almost 30 years after his retirement, Prof. Anderson remained active in outreach activities, assisting with contests, student workshops, and strategic direction.

Kenneth R. Davidson (DPE, Mathematics)

Professor Davidson is one of the most accomplished mathematicians in Canada. After completing his undergraduate degree at Waterloo and his PhD at Berkeley, he spent two years as a Moore Instructor at MIT before returning to Waterloo as faculty in 1978. He has been awarded a substantial proportion of the research prizes available to Canadian mathematicians, beginning with the the Israel Halperin Prize in Operator Algebras in 1985. This was followed by an E.W.R. Steacie Fellowship in 1988 and a Killam Research Fellowship in 1995. In 2014 he received the David Borwein Distinguished Career Award from the Canadian Mathematical Society for his "exceptional, broad, and continued contributions to Canadian mathematics." He has been a Fellow of the Royal Society of Canada since 1992, a Fields Institute Fellow since 2006 and a Canadian Mathematical Society Fellow since 2018. Professor Davidson is also an highly esteemed instructor and supervisor, with 18 Master's students and 14 PhD students.

Steven Furino (HM, Mathematics)

Dr. Steven Furino was a faculty member, first in the Department of Mathematics at St. Jerome's University and then in the Centre for Education in Mathematics and Computing at the University of Waterloo, from 1989 until 2020. An excellent teacher, Professor Furino won the Distinguished Teacher Award in 1989 and was a champion of online education in the Faculty of Mathematics. He was also an outstanding administrator, serving as Associate Dean, Undergraduate and Assistant Dean, Online. Prof. Furino's distinguished service also included educational work in Africa and leadership in the Faculty Association and the University's undergraduate communication initiatives.

Seana McKenna (DLitt, Arts)

Seana McKenna is a Canadian artist and director in theatre, television, and film. She has been a company member with the Stratford Festival for 30 seasons, performing in over 50 roles. McKenna is a Member of the Order of Canada and is the recipient of three Dora Awards, a Jessie Award, and a Genie Award. McKenna shows great versatility in the roles she performs and has challenged conventional Shakespearean theatre norms as one of only a few female performers to take on the roles of Richard III, Lear, and Julius Caesar. She has also received the Tyrone Guthrie Award in recognition of her contributions to mentorship.

Sharon Lamont (HM, Arts)

A UW alum, Sharon Lamont's (BA, '80) career spanned four decades, culminating in a Library senior leadership position, and noteworthy University-level achievements. During her career, Sharon's leadership and contributions to Library, University, community service and philanthropy advanced the University's progress toward building a culture of inclusivity and excellence. Sharon's leadership extended across campus, most notably with the Waterloo Staff Association, United Way staff campaign,

Senate Nominating Committee for Honorary Degrees

and Joint Health and Safety Committee. One of her key achievements was leading the Library to achieve Silver Certification from Excellence Canada. Sharon retired in May 2021 after nearly 40 years of service.

John Borrows (DLitt, Arts)

John Borrows is a member of the Chippewas of Nawash First Nation in Ontario and is Professor and Loveland Chair of Indigenous Law at the University of Toronto. He is an internationally recognized scholar of Indigenous legal rights. Professor Borrows is an Officer of the Order of Canada. He is also a Fellow of the Royal Society of Canada, a Trudeau Fellow, and recipient of a Killam Prize and Molson Prize. Borrows also received the Indigenous Peoples Counsel designation from the Indigenous Bar Association for honour and integrity in service to Indigenous peoples, the National Aboriginal Achievement Award in Law and Justice, and the Governor General's Innovation Award.

Lorne Dawson (DPE, Arts)

Lorne Dawson retired at the rank of Professor from the departments of Religious Studies as well as Sociology and Legal Studies. During his tenure at Waterloo, he served as Chair for each department. Dawson is a Research Fellow at the Balsillie School of International Affairs, and a Senior Associate at the Munk School of Global Affairs and Public Policy (University of Toronto). He is best known for his contributions to the fields of sociology of religion and more recently for his work on terrorism and the process of radicalization that leads to violence. In 2012, he co-founded the “Canadian Network for Research on Terrorism, Security, and Society,” funded by SSHRC and several government agencies.

Jo-Anne Woods (DPE, Arts)

Joanne Wood retired at the rank of University Professor from the Department of Psychology after 33 years of service. Wood is recognized as one of the foremost experts in the world for understanding how personality influences relationships – in particular, how self-esteem and agreeableness in one partner affects interpersonal interactions and relationship quality. She is also an expert on self-disclosure. In recognition of her work, she has received the Faculty of Arts Award for Excellence in Research as well as two University of Waterloo Outstanding Performance Awards. She is a Fellow of the Association for Psychological Science, the American Psychological Association – Division 8, and the Society for Personality and Social Psychology.

Debra Pepler (DLitt, Arts)

Debra Pepler received her Ph.D. in Clinical Psychology from the University of Waterloo and is a Registered Psychologist in Ontario. She is a Distinguished Research Professor in the Department of Psychology at York University and a Senior Adjunct Scientist at the Hospital for Sick Children. As a Clinical and Research Psychologist, she has contributed to psychology through her groundbreaking work in the areas of bullying, aggression, and other forms of violence experienced by marginalized youth. Her work has changed the way in which professionals understand the frequency, intensity, and impacts of children's experiences of aggression and violence, helping to shape and inform Canadian public policy on violence reduction within schools.

Yanxin Wang (DSc, Science)

Dr. Yanxin Wang is a Professor of Hydrogeology and Environmental Engineering at the China University of Geosciences (CUG) in Wuhan. Dr. Wang has served as president of CUG since 2011. His vision and exceptional administrative skills are behind CUG's rapid rise in international rankings. Wang leads a

Senate Nominating Committee for Honorary Degrees

world-class research program on the sources, fate, and transport of hazardous substances in groundwater systems. He is also a pioneer in developing innovative and cost-effective technologies for treating contaminated aquifers. Dr. Wang has spearheaded many major initiatives to foster scientific collaborations between China and the rest of the world, in areas as diverse as hydrogeology, ecohydrology, environmental microbiology, medical geology, green chemistry, geological hazards, and resource economics.

Mark Willcox (DSc, Science)

Dr. Mark Willcox is world-renowned researcher, educator and academic in the field of microbial infection with contact lenses. He is currently a Professor at the School of Optometry and Vision Science, University of New South Wales (UNSW). His main areas of interest include ocular microbiology, ocular immunology, tear film biochemistry and novel antimicrobials and their action. Since 1985 he has published over 400 peer-reviewed articles and from 2015 to now he has published almost 80 papers. Internationally recognized, he has played a critical role in advancing the understanding of the pathophysiology behind contact lens infection and has worked tirelessly to develop safer contact lens materials.

Cristina Amon (DEng, Engineering)

Cristina Amon is the Distinguished Alumni Professor and former Dean at the University of Toronto's Faculty of Applied Science & Engineering. Under her visionary leadership, U of T's engineering program has become a global hub for interdisciplinary research and education and a shining example of diversity and inclusion for women, people of colour and Indigenous peoples in the engineering profession. She has been elected a fellow or honorary member of all major professional societies in her field. A pioneer in Computational Fluid Dynamics for thermal designs subject to multidisciplinary constraints, Amon's research is in thermal transport in nanoscale semiconductors, energy systems, EV batteries and biomedical devices.

Rola Dagher (DEng, Engineering)

Dagher, a leading figure in the Canadian technology sector, has made it her mission to empower those around her. Immigrating to Canada from war-torn Lebanon with an infant in the 1990s, Dagher worked as a retail salesclerk before becoming the president of Cisco Systems Canada and currently as Dell Technologies' Global Channel Chief. Rola sees diversity as the foundation for building a high-performance workforce and is a vanguard of inclusive excellence. Dagher has been named a WXN Top 100 Most Powerful Women in Canada, the Women in Communications and Technology (WCT) Woman of the Year and is an RBC Top 25 Canadian Immigrant Award winner.

George Freeman (HM, Engineering)

Dr. George Freeman is a retired electrical and computer engineering professor at the University of Waterloo. Freeman established a sterling reputation as an outstanding engineering educator throughout his career. He served as electrical and computer engineering's teaching and learning champion from 2018 until his retirement in 2022. Freeman's work in this role promoted evidence-based practices for improved learning outcomes, mental health and community building. He also received the Dedicated Service Award from the Canadian Association of University Teachers for his exceptional service to their academic staff associations. Freeman's research interests include signal processing for digital communications, optimal

Senate Nominating Committee for Honorary Degrees

lossless data compression algorithms, and storage and recognition applications in speech and image coding.

Lisa Aultman-Hall (Invited Guest Speaker, Engineering)

Dr. Lisa Aultman-Hall is Professor and Chair of Systems Design Engineering. Before joining the University of Waterloo faculty, she served as a Professor of Civil Engineering at the Universities of Kentucky, Connecticut, and Vermont. Aultman-Hall's research focuses on sustainable transportation systems, especially methods to collect unique databases for modelling and analysis of long-distance travel, transportation sector emissions, network resiliency, streetscape design, and non-motorized transportation. A common thread in her work is the pursuit of accessibility metrics that speak to equity. She served several leadership roles at the interdisciplinary University of Vermont Transportation Research Center and as the Associate Director of the National Center for Sustainable Transportation with the University of California Davis.

John Buzacott (DEng, Engineering)

John Buzacott, a former management sciences engineering professor, is a pioneering figure in production and operations management. Buzacott's work in developing a unified framework and rigorous scientific foundation of the approaches currently used in the design, planning and control of manufacturing and service systems has inspired scholars worldwide. His innovative use of stochastic models to explain many phenomena occurring in manufacturing and service organizations has also distinguished him in the profession as an exceptional researcher and educator. As a founding member of the Waterloo Management of Integrated Manufacturing Systems research group at the University of Waterloo, his contributions to manufacturing analysis and modelling work continues to be globally recognized.

This page intentionally left blank.

For Information**Open Session**

To: Senate

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

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

Date of Meeting: May 15, 2023

Agenda Item Identification: 14. Report - COU Academic Colleague

In Fall 2022, I was elected by Senate to serve a three-year term as the University of Waterloo's Academic Colleague to the Council of Ontario Universities. I am following Prof. Johanna Wandel (Environment; Associate Dean, Undergraduate), who served from 2019 to 2022.

Since being formally elected, I have attended three meetings of the COU Academic Colleagues (December 2022, February 2023, and April 2023) and a Meeting of Council (April 2023), in which Colleagues presented on the topic of developments in artificial intelligence (AI) and its impact on the university. The following is my summary of these four meetings.

Summary of Meetings**1. Academic Colleagues Meeting, December 13-14, 2022**

Discussion Theme: The meeting's primary theme was student success and student accessibility as we move toward a post-pandemic reality. The guest speaker was Dr. Kim Clark, Professor, Department of Anthropology, and Assistant Dean (Equity, Diversity, Inclusion & Decolonization), Faculty of Social Science, Western University. Dr. Clark shared preliminary findings of her research on accessibility and the experiences of students with disabilities. Many of these findings were first presented in an [essay](#) published by *The Conversation* (Nov. 22, 2022).

Dr. Clark posed the question: Although many university students were eager for [in-person elements of the university experience](#) they missed early in the pandemic, what, if anything, have universities overlooked in the rush to "return to normal"? One of her concerns is that, after over two years of responding innovatively to the various challenges presented by the pandemic, if the main lesson universities [take away](#) from this period is that students miss being on campus, universities risk squandering new skills and insights that have arisen since March 2020.

Drawing on the voices of students who participated in a survey and/or interviews, Dr. Clark provided examples that could foster student accessibility. The following examples (and text) are from her presentation and from her essay (Nov. 22, 2022)

- Flexible [assignment deadlines](#). Students with diverse disabilities reported that they experience unpredictable flare-ups of their symptoms that interfere with their ability to meet rigid deadlines and cause them to be penalized. The pandemic made clear that other students also benefit from some flexibility, including those with a range of family responsibilities due to sick children or siblings, elder care or school closures that disrupted schedules.
- Delivering courses in a hybrid manner, where it's possible to choose whether to attend lectures in-person or virtually. Students were grateful when, depending on their symptoms, they could access content otherwise delivered in-person via either recorded or streamed lectures (achieved by acts as simple as instructors pressing record when a PowerPoint presentation started or allowing students to join on Zoom). Participants also valued being able to review recorded sessions even if they attended in person. Access to these options can reinforce and deepen learning.
- Lecture slides or outlines [posted in advance to facilitate note-taking](#). This practice helps students keep track of the lecture if they are briefly distracted or when their auditory processing speed doesn't match the instructor's pace. It also helps students whose first language is not the teaching language.
- Captioning of audiovisual materials, whether shown in class or assigned for asynchronous (independent) viewing, helps students who are [D/deaf](#) or hard of hearing and those with some learning disabilities. Again, it helps non-first language students and any students viewing in conditions where the volume cannot be turned up or where there are noise distractions. Research shows "[captioning a video improves comprehension of attention to and memory for the video.](#)"

A key theme that emerged in the discussion was the importance of engagement from senior leadership in advancing accessibility at an institutional level, through the provision of resources and support for faculty members. Dr. Clark highlighted that, in tandem with efforts to encourage the development of institution-wide supports, there are many small changes faculty members can make that both improve accessibility and reduce workload, such as a "late-days bank" for assignment due dates. Colleagues reiterated that, even "small changes" by faculty to increase student accessibility often means additional work for faculty, including additional time for skill training. To be broadly successful and sustainable, initiatives must have an appropriate level of formal structure and student-services support.

Updates and Reports--Highlights

Steve Orsini, President of COU, highlighted several recent matters being monitored by the COU. One item stood out: The Auditor General released her [Special Report on Laurentian University](#) on November 17, 2022. The report summarized the key causes that led to the University filing for CCAA protection; these were not reflected in this update, which focused on the recommendations, potential impacts on the whole sector, and COU's proposed next steps. Similar to the [Preliminary Perspectives](#) report, the Special Report acknowledged the importance of academic independence of universities, notes that universities in Ontario are increasingly relying on revenue from international students, and that University Board members serve on a volunteer basis. The report makes 48 recommendations, many of which mirror those in the Preliminary Perspectives Report.

Recommendations are grouped into four categories—recommendations directed at Laurentian University, the Board of Laurentian University, the Ministry of Colleges and Universities (MCU), and the Office of the Integrity Commissioner. While the recommendations are directed to Laurentian and

its Board, the Auditor General notes that “other universities in Ontario should also review and implement these recommendations where appropriate.” (p. 67)

The Standing Committee on Relationships with Other Postsecondary Institutions reported on its meeting of November 17, 2022. The COU continues to advocate for (a) universities playing integral roles in training the labour force and engaging in cutting edge research that helps the economy; (b) financial sustainability, which is not possible when both grant and tuition have been cut and frozen; and (c) institutional autonomy and academic freedom.

Under the heading of “Relationships with the Broader Education Sector,” the Committee noted three areas of concern:

- *Entering average grade inflation* has cost implications related to entrance scholarships, increased counselling and accommodation needs, deferrals, and so on, as well as mental health implications for students who think they are prepared for university, but then struggle at university. For example, entrance averages were in the low-to-mid 70% range in 2013. By 2020, the entrance averages are in the mid-to-high 80% range (specific data was shared among Colleagues).
- *Students have reduced experience and requirements* writing exams/tests. Methods of student evaluation at the university level are a concern. Additionally, standardized tests and exams are not best practice, but that some disciplines continue to need to have tests and exams.
- *There has been a growth of private high schools* in Ontario that have limited accountability standards. This has contributed to fraudulent activities associated with Ontario private secondary schools in the admissions process, particularly in undergraduate applications, where fraudulent activities are being used to improve students’ chances of admission. International universities are increasingly aware of private Ontario high schools using fraudulent means to increase student marks and to award degrees, which ultimately undermine the value of an Ontario Secondary School Diploma (OSSD) and damage Ontario’s reputation as a global leader in education.

Related to the above item, during the information sharing part of the meeting, Colleagues identified concerns regarding gaps in student knowledge and skills not only for incoming students but also current senior-level students. The pandemic seems to have highlighted and exacerbated trends that existed prior to March 2020. Many Colleagues reported that these concerns had been raised at their respective universities, often at the Faculty level, and in some cases at their senate meetings. Colleagues identified this topic as an area of possible emphasis in upcoming meetings.

2. Academic Colleagues Meeting, February 7-8, 2023

Discussion Theme: The meeting’s primary theme was Mental Health and Wellness in the University Context. The guest speaker was Dr. Benoit-Antoine Bacon, President and Vice-Chancellor, Carleton University. Through the sharing of his personal mental health journey, President Bacon highlighted the important distinction between being functional and being well/thriving as a frame for our understanding of mental health and wellness. He also conveyed three core principles to keep front of mind in conversations about mental health and wellness: (1) anyone who is suffering is not alone, (2) everyone deserves help, and (3) healing is always possible. In terms of guidance for faculty members,

Dr. Bacon expressed the view that healing and the acknowledgement of faculty members' own inner fears will position them to better support students' mental health and wellbeing.

During the discussion, Colleagues provided examples from their respective universities that could help students in crisis. Colleagues also discussed the bounds of faculty members' expertise and the difficult balance of providing a compassionate approach to students within the constraints of university policies and practices and the professional expectations of faculty members. Colleagues shared information about the mental health training practices at their institutions and mental health resources available to students, including [Good2Talk](#) and the [Centre for Innovation in Campus Mental Health](#).

Updates and Reports—Highlights

Steve Orsini, President of COU, briefed the Colleagues on several priority items, including COU's efforts to advocate for strengthening the financial sustainability of the university sector, the overturning of Bill 124, emerging national security risks with respect to university research, efforts to bring COU into compliance with the Ontario Not-for-Profit Corporations Act, and the provincial government's forthcoming "blue-ribbon panel."

Colleagues received an update on the recommendations of the Working Group on International Education, established in Summer 2022, to provide Executive Heads with recommendations on policy and advocacy issues to ensure Ontario universities remain a destination of choice. The recommendations, endorsed by Executive Heads on January 26, 2023, are as follows:

- Ontario universities will commit to leading practices related to agent management.
- Ontario universities will commit to helping international student applicants make informed choices by following leading practices in transparency and predictability regarding tuition and related costs over the course of their program.
- COU will support Universities Canada's advocacy with Immigration, Refugees and Citizenship Canada to expedite student visa processing for university applicants.
- COU will call on the provincial government review its International Student Recovery (ISR) fee policy and its impact on institutional financial sustainability and supports to international students.
- COU will encourage the provincial and federal governments to enhance alignment of policies on immigration and economic growth by expanding eligibility for experiential and work-integrated learning opportunities to international students to support their transition into the Ontario labour market.
- COU will play a role in enhancing sector data collection and analysis to support better understanding of international student success and graduate outcomes.

COU posted [Leading Practices in Supporting Ontario's International Students](#) on its and written a letter in support of Universities Canada's advocacy with the federal government.

Dr. Jennifer Bethune, Senior Quality Assurance Officer, Ontario Universities Quality Council (OUCQA) provided introduced the [2021-2022 Annual Report](#) of the Quality Council, which is in compliance with the new [Quality Assurance Framework](#).

3. Academic Colleagues Meeting, April 4-5, 2023

Discussion Theme: The meeting’s primary theme was Developments in Artificial Intelligence (AI). The guest speaker was Dr. Isabel Pedersen, Professor, Faculty of Social Science and Humanities, Ontario Tech University, and Founding Director, Digital Life Institute. One of the many challenges with “AI” is defining it. In general terms, AI simulates human intelligence. As a technological tool, it comprises three main technological categories: (1) AI techniques: e.g., “machine learning”; (2) AI Functional Applications: e.g., “predictive analytics”; and (3) Infrastructures for Human-Computer Interaction: e.g., “smart cities” or “AI-assisted medical science”.

It is important to note that university researchers have been working at various levels of development with AI for decades. In mathematics, computer science, and engineering, for example, researchers have been exploring ways to integrate AI into various functional and user-engaged applications to achieve more positive outcomes (e.g., wayfinding, medical reporting, and troubleshooting). As these fields have developed, ethical concerns have begun to play a greater role in the development of AI. With the recent development of Generative AI, through a large language model known as Generative Pretrained Transformer (GPT), AI can generate new text based on the input received. It is “pretrained” because it “learns” or is “trained” by feedback it previously received. The “transformer” is a type of architecture that facilitates AI’s learning and capacity to process input text and generate output text.

It is with GPT, which became widely available in Fall 2022, that industry, government, professional organizations, and the educational sector, to name only a few, are finding themselves in a position to respond quickly (and hopefully prudently) to the rapid adoption of GPT technology. Based on her previous AI work and her more recent observations of generative AI, Dr. Pederson provided the following assessment of GPT adoption as of early April 2023:

- Users of emergent technology like generative AI go through a process of adaptation before settling into purposeful usage of it.
- The generative AI market will expand, and the focus in Education should be on learning frameworks first, not on specific products (e.g., ChatGPT, Microsoft Bing Conversational Experiences, DALL-E 2).
- Students should be involved in tools discovery and their feedback should be included in course policy making.
- Adaptation to autonomous content generation tools will be determined by instructors’ points of view as teachers as well as their multiple professional roles as non-teachers.
- Writing currently serves different professional roles and it makes sense that the adaptation to generative AI will be heterogeneous.
- AI Literacy, digital literacy, critical media literacy, civic engagement, ethically-aligned adoption and assessment of writing tools will be needed. [Drafted in part from Isabel Pedersen, *Adapting to AI Writing: Artificial Intelligence, Generative AI, and Education* (Version 1, 6 April 2023)]

The Colleagues recognized that GPT has created immediate challenges for academic integrity at all levels of the university. A few Colleagues expressed concerns related to basic research and AI’s (current) inability to make highly nuanced decisions that might be social, political, or economic in nature. Colleagues discussed what GPT could mean for assessment and pedagogy (e.g., moving away from written assessment and toward more dialogical assessment), all of which could create budgetary pressures. Colleagues agreed that a discussion of AI that cuts across the university should recognize that generative AI will be part of university life (e.g., it will be integrated into Word and other office-related tools used routinely by members of the community). AI literacy, digital literacy, critical media literacy, and a clear ethical framework for adoption and assessment will be primary ways in which

universities establish cultural and ethical norms around the use of AI. Several Colleagues argued that university leadership should create space to engage in a broad, public discussion of AI in society—the thinking here is that universities can and should provide not only technical leadership but also leadership when it comes to the social, political, economic, and ethical consequences of increased AI in our lives.

Updates and Reports—Highlights

Steve Orsini, President of COU, briefed Colleagues on several matters, including the provincial government’s creation of a “blue-ribbon panel” of experts that will provide advice and recommendations on financial sustainability within the post-secondary education sector, positive student experiences, and economic growth and innovation. Members of the panel are

- Alan Harrison, chair (former provost at Carleton and Queen’s; former executive director, Quality Council)
- Cindy Forbes (Chair, University of Waterloo Board of Governors)
- Bonnie Patterson (former President of Trent University and of COU)
- Mary Lynn West-Moynes (President, Georgian College-retired)
- Maxim Jean-Louis (CEO, Contact North)
- Robert Luke (CEO, eCampus Ontario)
- Brent Tookenay (CEO, Seven Generations Education Institute)
- Eddy Avila (Senior Associate, Springboard Policy; former OUSA executive director)

The government noted that the panel’s engagements over the coming months will be guided by the following principles:

- Enhancing student experiences and access
- Rewarding excellence and financial sustainability
- Improving labour alignment
- Promoting economic growth and prosperity
- Keeping education affordable for lower and middle-income families

COU posted a [response to the announcement](#) on its website, calling for immediate government financial supports and the fast-tracking of the panel’s report on the multi-year tuition framework. COU will be working with members and affiliates to support the university sector’s response to the blue-ribbon panel.

COU continues to advocate for sustainable university funding, which entails increasing government grant and removing the tuition freeze. Other areas of concern include the recruitment and support of international students, developing a sector-wide educational to help incoming first-year undergraduate student better understand sexual violence; principles and practices relating to microcredentials; updating the high school curriculum, including graduation requirements, course types, and pathways to PSE; and developing a sector-wide discussion of university space.

4. 315th Meeting of Council, April 6, 2023

Academic Colleagues typically provide at least one presentation per year to Council on a topic that Academic Colleagues and the Executive Committee have identified as particularly timely or pressing. This year, the topic was the development of AI and how AI might impact university life. Over the course of the hour-long presentation, Colleagues provided a precis of the issues raised by Dr. Isabel Pedersen and by Colleagues during the ensuing discussion (see above). A particular focus was given

to the potential changes in pedagogy, changes in student assessment, and changes in curricular outcomes (e.g., AI literacy, digital literacy, critical media literacy, and ethical use of AI). Colleagues flagged the potential issue of increased costs associated with, for example, new assessment methods that require more labour, the development of new curricula and corresponding teaching expertise, and revised/enhanced student services support (e.g., writing centres, AI literacy workshops).

The remainder of the meeting addressed COU membership criteria, an application from Université de l'Ontario for COU membership, a governance review of COU and COU's compliance with the Ontario Not-for-Profit Act, and various appointments to COU committees.

This page intentionally left blank.

Office of the Vice President, Research and International

For Discussion

Open Session

To: Senate

Sponsor: Charmaine Dean, Vice President Research and International
Contact Information: vpri@uwaterloo.ca

Presenter: Charmaine Dean, Vice President Research and International
Contact Information: vpri@uwaterloo.ca

Date of Meeting: May 15, 2023

Agenda Item Identification: **15a Report - Vice-President, Research & International:
Awards, Distinctions, Grants, Waterloo International
Engagements**

Summary:

Presenting the Vice-President, Research and International Report to Senate for May 2023. This report to Senate highlights successful research and international outputs and outcomes for the period March – April 2023 by the thematic areas as outlined in Waterloo’s Strategic Plan 2020-25.

Documentation Provided:

- Vice-President, Research and International Report to Senate for May 2023

Vice-President, Research & International Report to Senate May 2023

Introduction

This report to Senate highlights successful research and international outputs and outcomes for the period March – April 2023 by the thematic areas as outlined in Waterloo’s Strategic Plan 2020-25.

ADVANCING RESEARCH FOR GLOBAL IMPACT

R2 - Propel Waterloo's global leadership in innovation, entrepreneurship and social impact

Waterloo Ventures – Velocity

Velocity held a successful ground-breaking ceremony at the **Innovation Arena** in downtown Kitchener at the University of Waterloo Health Science campus on April 13th 2023. Investments in this space include **\$8.5 million** from the City of Kitchener, **\$1.5 million** from local investor Mike Stork, **\$10 million** from Federal Economic Development Agency (FedDev) and **\$7.5 million** from the Province of Ontario. “The new purpose-built space will fast-track entrepreneurs and accelerate commercialization.”

R1 - Research strengths to solve real-world problems.

Awards and Distinctions

Keith Hipel (Systems Design Engineering) – Lifetime Member of the Royal Society of Canada.

- Fellows to the Royal Society of Canada are distinguished Canadians who have made remarkable contributions to learning within their field. Dr. Keith Hipel, having served as a former president of the Academy of Science within the Royal Society of Canada and having a distinguished career in Systems Design Engineering, exemplifies this award.

Canada's National Quantum Strategy

Waterloo was awarded a total of **\$10,228,885** in funding to support the Canadian National Quantum Strategy. This accounts for **20% of the total** funding awarded, nationally. Note that one of the five awarded grants was reported in the April Senate report.

NSERC Alliance Quantum Consortia Grants

- **Douglas Stebila (Combinatorics & Optimization)**, “Accelerating the transition to quantum-resistant cryptography,” NSERC award **\$4,150,155** over 5 years, + **\$250,000** from UWaterloo and **\$1,534,425** in-kind from partner contributions. Partners: City of Calgary, Entrust Canada, Royal Bank of Canada, TELUS
- **Thomas Jennewein (Physics & Astronomy)**, “Qeyssat User Investigation Team (QUINT),” NSERC award **\$5,000,000**, plus **\$250,000** from UWaterloo and **\$2,433,524** in-kind from partner contributions. Partners: Canadian Space Agency, City of Calgary, Ciena Canada Inc.

NSERC Alliance International Quantum Grants (Catalyst)

- **Jonathan Baugh (Chemistry)**, “Improved scalability of silicon quantum computing with ambipolar devices,” **\$25,000**.
- **Adrian Lupascu (Physics and Astronomy)**, “Quantum Information processing with multilevel systems,” **\$25,000**.

Social Science and Humanities Research Council (SSHRC) Grants

SSHRC New Frontiers in Research Fund (NFRF) Exploration Grants 2022

The NFRF Exploration Grants fund research projects focus on bringing disciplines together in novel ways to form bold, innovative perspectives. Waterloo received **seven** of 127 **awards** totaling **\$1,717,500**. This represents **5% of the total national funding**.

- **Mohamad T. Araji (Architecture)**, “Monitoring energy flow of urban buildings using aerial multi-modality imaging audits,” **\$217,500**.
- **Arash Arami (Mechanical and Mechatronics Engineering)**, “Optimizing the recovery after spinal cord injury: A personalized assistive neuro-robotic paradigm,” **\$250,000**.
- **Jean Duhamel (Chemistry)**, “Blob-based characterization of polypeptide dynamics towards a better understanding of protein folding mechanisms,” **\$250,000**.
- **Juewen Liu (Chemistry)**, “Artificial intelligence aided disease diagnoses using single-round aptamer selection in complex samples,” **\$250,000**.

- **Nima Maftoon (Systems Design Engineering)**, “Eliminating tympanostomy, the most common surgery performed on children,” **\$250,000.**
- **John Wen (Mechanical and Mechatronics Engineering and cross-appointed to Chemical Engineering)**, “Lunar regolith as a source of metal fuel,” **\$250,000.**
- **Xiaoyu Wu (Mechanical and Mechatronics Engineering)**, “Ammonia as an energy “currency” to connect the food, energy and trade sectors,” **\$250,000.**

SSHRC New Frontiers in Research Fund (NFRF) Special Call 2022

The NFRF Special Call 2022 – Research for Post-pandemic Recovery is meant to mobilize research efforts in support of a more equitable, sustainable and resilient post-pandemic recovery. Waterloo received **six** of 61 **awards** totalling **\$1,240,250**. This represents **4% of the total national funding**.

- **Dustin Garrick (Environment, Resources and Sustainability)**, “Beyond the informal water paradox: Integrating formal and informal water systems for inclusive development” **\$500,000.**
- **Ellen MacEachen (Public Health Sciences)**, “Economic recovery policies for sustainable and equitable digital school teaching and tutoring in Canada and Bangladesh” **\$498,750.**
- **Jangho Yang (Management Sciences)**, “Does COVID deteriorate gender inequality in technological innovation?” **\$241,500.**

SSHRC Connection Grants

Waterloo received three of 128 Connection Grants, totalling **\$71,212**. This represents **2% of the national total** and a **success rate of 75%** which exceeded the national success rate of 70%.

- **Brian Doucet (Planning)**, “Thinking beyond the market: a film about genuinely affordable housing” **\$25,119.**
- **Ian Milligan (History)**, “Building an Inter-Institutional and Cross-Functional Research Data Management Community: From Strategy to Implementation,” **\$22,258.**
- **Adam Molnar (Sociology and Legal Studies)**, “Workshop on Interdisciplinary Approaches to Cybersecurity and Privacy,” **\$23,835.**

SSHRC Knowledge Synthesis Grants

Waterloo was successful in securing two of 25 Knowledge Synthesis Grants, totalling **\$59,862**. This represents **8% of the national total** and a **success rate of 100%** which exceeded the national success rate of 53%.

- **Gerald Voorhees (Communication Arts)**, “Games of/against Privilege and Marginalization,” **\$29,862.**

- **Patricia Van Katwyk (Renison)**, “Policies and the construction of inequity: Racialized, gendered migrant personal support workers navigating policy,” **\$30,000.**

SSHRC Partnership Development Grants

Waterloo was awarded three of 76 Partnership Development Grants, totalling **\$596,614.** This represents **4% of the national total** and a **success rate of 75%** which exceeded the national success rate of 48%.

- **Heather Mair (Recreation and Leisure Studies)**, “Partners in Transforming Sport,” **\$197,988.**
- **Susan Roy (History)**, “Dancers for life: HIV/AIDS and dance in Canada,” **\$199,791.**
- **Cameron McCordic (Environment, Enterprise and Development)**, “Sustainable Cities Under a Changing Climate: Assessing the contribution of climate change impacts to sustainable urban development,” **\$198,835.**

SSHRC Partnership Engagement Grants

Waterloo was awarded five of 101 Partnership Engagement Grants, totalling **\$122,306.** This represents **5% of the national total** and a **success rate of 100%** which exceeded the national success rate of 90%.

- **Brent Doberstein (Geography and Environmental Management)**, “Collaborating with water: cross-cultural conversations exploring amphibious architecture in a First Nation prone to flooding,” **\$24,080.**
- **Sean Geobey (Environment, Enterprise and Development)**, “Enabling Resilience by Adapting Municipal Strategic Management Practices in Response to Complexity,” **\$24,868.**
- **Heather Henderson (Psychology)**, “CYPT Youth Belonging in the Community,” **\$23,420.**
- **Katherine Misener (Recreation and Leisure Studies)**, “Understanding the landscape of club rowing in Canada: An investigation of capacity for growth,” **\$24,938.**
- **Hannah Neufeld (Public Health Sciences)**, “Cultivating Space and Place for Land-based Learning,” **\$25,000.**

This page intentionally left blank.

Office of the Vice-President, Academic and Provost

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 15, 2023

Agenda Item Identification: 16. Report of the Provost – Faculty Appointments, Leaves

Summary:

The Faculty Reports for Senators' information regarding the variety of appointments, reappointments, special appointments, leaves, and other matters of interest about individuals in the Faculties are available at the [Senate agenda page](#)¹.

¹ <https://uwaterloo.ca/secretariat/sites/default/files/uploads/documents/all-faculties-may-2023-2.pdf>

This page intentionally left blank.