Senate Executive Committee

May 26, 2025

3:30 p.m.

Needles Hall

NH 3308

Waterloo Campus

Think Differently | Act with Purpose | Work Together

UNIVERSITY OF WATERLOO | Senate

2025 05 26 Senate Executive Meeting

AGENDA

Link to Governance Resources
https://uwaterloo.ca/secretariat/governing-bodies/senate/executive-committee

OPEN SESSION

3:30 p.m.	1. Approval of the Minutes		
	1.1 Minutes of the April 21, 2025 Meeting	Decision	3
	1.2 Business Arising from the Minutes		5
3:35 p.m.	2. Report to Senate Executive Committee		
	2.1 Senate Executive Committee: Elections to Senate Committees and Councils	Decision	6
3:45 p.m.	3. Senate Agenda Preparation		
	3.1 Draft Senate Meeting Book for June 9, 2025	Decision	12
	4. Report of the University Secretary		
	4.1 Senate Governance Review - Remaining activity through 2026	Discussion	
	4.2 Update on Senate Visitor Guidelines	Discussion	
	Memo re Report of the University Secretary		170
	5. Other Business	Input	

CONFIDENTIAL SESSION

	6. Annual Senate Self-Evaluation		
	6.1 Senate Effectiveness Survey 2024-25, Initial Observations and Next Steps (Senate)	Discussion	171
	7. Other Business	Input	

Next Meeting - Monday September 8, 2025 from 3:30-4:30 p.m.

Membership and Expected Attendance
Members Attending (as of May 23): Laura Deakin; Mark Ferro; Vivek Goel [chair]; Mike Grivicic [secretary]; Carol Ann MacGregor; David Porreca; Mary Robinson; James Rush; Rida Sayed; Mark Seasons; James Skidmore; Sharon Tucker; Clarence Woudsma
Resources (or Guests): Ashley Day; David DeVidi; Jenny Flagler-George; Gen Gauthier-Chalifour; Diana Goncalves; Andrea Kelman
Regrets: Avery Akkerman; Christiane Lemieux

University of Waterloo
SENATE EXECUTIVE COMMITTEE
Minutes of the April 21, 2025 Meeting
[in agenda order]

Present: Laura Deakin, Mark Ferro, Vivek Goel (chair), Mike Grivicic (secretary), Christiane Lemieux, Carol Ann MacGregor, David Porreca, Mary Robinson, James Rush, Rida Sayed, Sharon Tucker, Clarence Woudsma

Guests: Ashley Day, David DeVidi, Jenny Flagler-George, Genevieve Gauthier-Chalifour; Diana Goncalves, Andrea Kelman

Regrets: Avery Akkerman, Judy Castaneda, Mark Seasons, James Skidmore

1. Approval of the Minutes

1.1 Minutes of the March 24, 2025 Meeting. A motion was heard to approve the minutes as presented. Porreca and Deakin. Carried.

1.2 Business Arising.

1.2.1 Proposal to Amend Senate Bylaw 4. This item was deferred from the last Senate meeting, and since that time the Secretariat has carried out an environmental scan which shows that about 60% of U15 institutions have staff representation on Senate (or equivalent body), while slightly over half of Ontario universities have such staff representation. A preliminary legal opinion was obtained which does not support the University adding elected staff representation to Senate due to the constraints of the *University of Waterloo Act*. The Senate does have the ability to add *ex officio* members, while maintaining an appropriate balance of elected faculty representation.

Members discussed the report and update. Outreach to the staff groups that are to be considered for representation will be carried out by the Secretariat. This consultation would be extended to all non-faculty employee groups at the University. A member noted that not all staff are involved in academic work, and care should be taken to ensure that any outreach is not to be confused with an invitation for staff to join the collegium.

Separately, it was observed that the mandate and terms of reference for the Senate Executive Committee will be reviewed as part of the continued implementation of recommendations from the Senate Governance Review, and that this work is anticipated in Fall 2025.

2. Proposals for Restructuring of Senate Committees/Councils

2.1 New Committee Proposal: Senate Planning and Finance Committee

This proposal unifies planning and budgeting within the Senate committee structure and combines the current Long Range Planning and Finance committees of Senate. The membership of the new committee is structured to mimic that seen in proposed updates to other bodies of Senate, and the remit of the committee retains that of the progenitor committees with some new responsibilities or expansion of existing responsibilities. A fulsome review of the committee's operations and the adequacy of the terms of reference will be planned after one year's time. Members discussed the report and obtained clarifications. University administration will prepare and present for reporting on key performance indicators. Regular annual nominating processes through Senate allow for annual review of the membership to pursue broad and inclusive representation. While no single definition of 'long term' exists, it is worth observing that the Waterloo at 100 document was discussed by the Long Range Planning Committee . A motion was heard to recommend that Senate establish a new committee, the Senate Planning and Finance Committee, as described in the accompanying report and effective September 1, 2025. Deakin and Porreca. Carried.

2.2 Senate Graduate & Research Council Restructuring Proposal

The Senate Graduate & Research Council formally discussed the restructuring item twice in recent months and the proposal secured a positive reaction and ultimately the council's endorsement at the April meeting, such that this recommendation is brought forward. The addition of faculty senators to the membership is an outcome of the governance review, which sought more opportunities for senators to serve on committees/councils, and which also is an excellent opportunity to develop governance experience outside of the Senate proper. Joint meetings between the two new bodies may be special meetings or may coincide with regular meetings; a review is planned after one year's time and these practices may evolve based on the experience of the new bodies. Depending on the given mix of members on the new bodies, new appointments can be made to augment representation or expertise. A motion was heard to recommend that Senate approve the restructuring of the Senate Graduate & Research Council into two separate councils of Senate – the Senate Graduate Council and the Senate Research and Innovation Council – as described in the accompanying report and effective September 1, 2025. Woudsma and Deakin. Carried.

2.3 Amendments to Senate Bylaw 2
This report executes changes to the existing Senate Bylaws to remove the appropriate committees/ councils' terms of reference, subject to approval of those at Senate. Senate already has several bodies that are formed under approved terms of reference separate from the bylaws, and this approach is being adopted broadly to allow governance processes to be nimbler. A motion was heard to that the Senate Executive Committee accept and recommend that Senate approve and give first reading to the amendments to Senate Bylaw 2 as presented in this report and effective September 1, 2025; and that Senate Executive Committee recommend to Senate that said bylaw amendments be subject to Senate approval of the proposals to establish the Senate Planning and Finance Committee and the Senate Graduate Council and the Senate Research and Innovation Council. Porreca and Deakin. Carried.

2.4 Committee Appointment Process
To support this committee's annual recommendation of committees/council slates of membership, the Secretariat will conduct outreach to ascertain what bodies that members would prefer to serve on (or not) to help inform the slate that will be brought forward.

3. Senate Agenda Preparation

3.1 Draft Senate Meeting Book for May 5, 2025
The committee reviewed the draft meeting book and highlighted major items of business, including the recommendation of amendments to Policy 40, announcement of the teaching award winners, and the inclusion of the reports from this committee following the decisions at this meeting. The agenda item to update the Senate on university task forces will be moved to earlier in the agenda, to follow the teaching awards item. A motion was heard to approve the May 5, 2025 Senate agenda, as amended. Porreca and Deakin. Carried.

4. Other Business

4.1 Follow up from April 7 Senate Meeting - Discussion of Senate governance processes
This item will be brought back to Senate, and the University Secretary will aim to liaise with the proponent.

4.2 Results - Senate Elections to Board of Governors
The elections are now concluded, and results will be reported to Senate, with one further vacancy (graduate student senator) remaining to fill.

4.3 Interruptions at meetings of governance bodies
The chair related happenings around the April meeting of the Board of Governors, where online postings from a student group called for that meeting to be shut down; that meeting was moved fully to a virtual format to mitigate any negative outcomes, particularly for the numerous other users of the building, including accessible exam services. This occurrence highlights the importance of balancing the right to free expression and protest with the continuation of the business of the University. For Senate meetings, existing Visitor Guidelines will continue to be enforced.

With no further business, the meeting was adjourned. The next meeting of the committee is scheduled for Monday May 26, 2025 from 3:30 p.m. to 4:30 p.m.

May 9, 2025

Mike Grivicic
Associate University Secretary

UNIVERSITY OF WATERLOO | Senate

For Information **Open Session**

To:	Senate Executive Committee
From:	Gen Gauthier-Chalifour, University Secretary
Agenda Item:	**1.2 Business Arising from the Minutes**

Summary

Two items of business arising:

i. 1.2.1 Consultation for Staff Representation on Senate

The University Secretary will discuss prospective consultations with staff groups regarding appropriate representation of staff on Senate.

ii. 1.2.2 Second Reading of Amendments to Senate Bylaw 2

The amendments to Senate Bylaw 2 that received first reading at the May Senate meeting will be brought forward to the June Senate meeting for second and final reading.

UNIVERSITY OF WATERLOO | Senate

For Approval **Open Session**

To:	Senate Executive Committee
From:	Secretariat
Date of Meeting:	May 26, 2025
Agenda Item:	**2.1 Senate Executive Committee: Elections to Senate Committees and Councils**

Recommendation/Motion

That Senate Executive Committee accept and recommend that Senate approve the membership of Senate committees and councils for 2025-26, as presented on the list of nominees, and,

That Senate Executive Committee recommend that Senate delegate approval for any remaining or subsequent vacancies to the Senate Executive Committee.

Summary

Enclosed is the proposed membership for Senate committees and councils for the 2025-26 governance year. Several factors were considered in establishing the proposed slate, including a balance of continuity and refreshed membership, diversity considerations including gender balance, and senator preferences as provided through the committee preference survey issued to all elected faculty and student senators.

The deans have also been asked to recommend names of faculty member nominees where required, and the presidents of the Waterloo Undergraduate Student Association and Graduate Student Association have been asked to recommend names of student nominees to fill vacant seats on Senate committees and councils.

As is Senate's usual practice for Senate ballots and slates, those senators meeting the eligibility criteria may submit their nomination from the Senate floor at the meeting. Where there is more than one name for a position, an election will be conducted electronically following the meeting.

The approval of recommendations received after the June 9, 2025 Senate meeting by the Senate Executive Committee helps to ensure that all committees will have complete membership prior to the beginning of the governance cycle on September 1, 2025. Such approvals are feasibly completed by the committee via electronic ballot.

Jurisdictional Information

As provided for in Senate Bylaw 2, section 1.04, the executive committee will make recommendations to Senate on a variety of operational matters:

e. To present to Senate, normally at the last regular meeting in the year, a list of nominations for the committees and councils of Senate.

Governance Path

Senate Executive Committee: May 26, 2025

Senate: June 9, 2025

Documentation Provided

- Attachment: List of nominees for committees and councils of Senate

List of nominees for committees and councils of Senate

Senate Executive Committee

Faculty Senators (One from each Faculty)	Faculty of Arts – James Skidmore Faculty of Engineering – *To be determined* Faculty of Environment – Mark Seasons Faculty of Health – *To be determined* Faculty of Mathematics – *To be determined* Faculty of Science – Laura Deakin
Faculty from AFIW (One)	Carol-Ann MacGregor
Undergraduate Students (Two)	Rida Sayed *To be determined*
Graduate Student (One)	*To be determined*
Alumni (One)	Vikas Gupta

Senate Planning and Finance Committee – New for 2025/26

Faculty (One from each Faculty)	Faculty of Arts – Shana MacDonald Faculty of Engineering – *To be determined* Faculty of Environment – Rob Gorbet Faculty of Health – Martin Cooke Faculty of Mathematics – Cecilia Cotton Faculty of Science – Kirsten Muller
AFIW Faculty Senator (One)	*To be determined*
Student Senators (At least 1 Undergraduate and at least 1 Graduate)	Andrew Change (Undergraduate) *To be determined* *To be determined*
Alumni Senator (One)	Diana Vangelisti
Member of the Board from FAUW (One)	Nasser Abukhdeir

Senate Research and Innovation Council – New for 2025/26

Two (2) heads of a research center/institute that is governed under Policy 44	*To be determined*
Up to four (4) additional members holding regular faculty appointments	*To be determined*
Faculty Senators (One from each Faculty)	Faculty of Arts – Neil Randall Faculty of Engineering – Sushanta Mitra Faculty of Environment – *To be determined* Faculty of Health – Peter Hall Faculty of Mathematics – Raouf Boutaba Faculty of Science – Stan Woo
One (1) faculty member from the Affiliated and Federated Institutions of Waterloo	*To be determined*
Three (3) students, two graduate and one undergraduate, *who may or may not be student members of Senate*	Nicholas Pelligrino (Graduate) Yasmeen Almomani (Graduate) Katie Traynor (Undergraduate)
One (1) postdoctoral scholar	*To be determined*

Honorary Degrees Committee

Faculty Senators (One from each Faculty)	Faculty of Arts – Veronica Kitchen Faculty of Engineering – En-Hui Yang Faculty of Environment – *To be determined* Faculty of Health – *To be determined* Faculty of Mathematics – *To be determined* Faculty of Science – *To be determined*
1 AFIW Faculty Senator	*To be determined*
2 Undergraduate Student Senators	Misha Khan Arya Razmjoo
1 Graduate Student Senator	Meray Sadek
1 Alumni Senator	Sharon Tucker

Senate Graduate Council – New for 2025-26

Faculty Senators (One from each Faculty)	Faculty of Arts – Neil Carter Faculty of Engineering – Christopher Nielson Faculty of Environment – Clarence Woudsma Faculty of Health – *To be determined* Faculty of Mathematics – Christiane Lemieux Faculty of Science – *To be determined*
Up to four (4) additional members holding regular faculty appointments	*To be determined*
One (1) faculty member from the Affiliated and Federated Institutions of Waterloo	*To be determined*
Three (3) graduate students, one of whom is the Graduate Student Association President or designate	Nicholas Pelligrino Meray Sadek (or designate) *To be determined*
One (1) postdoctoral scholar	*To be determined*

Senate Undergraduate Council

A Faculty member from each faculty (2-year terms)	Faculty of Arts – Rob Stark Faculty of Engineering – William Wong Faculty of Environment – James Nugent Faculty of Health – *To be determined* Faculty of Mathematics – Faisal Al-Faisal Faculty of Science – Cynthia Richard
1 faculty member from St. Jerome's (2-year term)	Carol Ann MacGregor
1 faculty member from one of the other AFIWs (2-year term)	Veronica Austen
Executive member appointed from the Federation of Students (WUSA)	Damian Mikhail (or designate)

Academic Quality Enhancement Committee

3 Faculty, from members of Undergraduate Council (2-year terms)	Carol Ann MacGregor Cynthia Richard James Nugent
3 Faculty, from members of Graduate & Research Council (2-year terms)	*To be determined*
1 Undergrad student Senator	Christopher Lim
1 Graduate student Senator	Meray Sadek

Board of Governors (as elected)

Three Faculty Senators	Laura Deakin Stan Woo David Porreca
Three Undergraduate Senators	Jordan Bauman Rida Sayed Damian Mikhail
One Graduate Senator	Meray Sadek

University Committee on Student Appeals

Faculty – One from each Faculty (2-year term from September 1, 2025 to August 31, 2027)	Faculty of Arts – *To be determined* Faculty of Engineering – *To be determined* Faculty of Health – *To be determined* Faculty of Mathematics – *To be determined* *Previously approved (2024-2026):* *Faculty of Environment – Brendon Larson* *Faculty of Science – Rick Marta*
4 Undergraduate Students (2-year term from September 1, 2025 to August 31, 2027)	Faculty of Engineering - Nush Majra Faculty of Health - Merochini Manohar Faculty of Mathematics - E-Therng Lee *Previously approved (2024-2026):* *Faculty of Environment - Tianna Bhavin Parmar*
2 Graduate Students (2-year term from September 1, 2025 to August 31, 2027)	Faculty of Arts - Curtis Crandall Brown Faculty of Science – *To be determined*

Senate

June 9, 2025

3:30 p.m.

Needles Hall

NH 3407

Waterloo Campus

Think Differently | Act with Purpose | Work Together

UNIVERSITY OF WATERLOO | Senate

2025 06 09 Senate Meeting

AGENDA

Link to Governance Resources
https://uwaterloo.ca/secretariat/governing-bodies/senate

OPEN SESSION

3:30 p.m.	1. Territorial Acknowledgement [Marc Jerry]		
3:35 p.m.	2. Approval of the Agenda and minutes [Goel]		
	2.1 Conflict of Interest	Declaration	
	2.2 Approval of the Agenda and Consent Items	Decision	
	2.3 Minutes of the May 5, 2025 Meeting - open and confidential	Decision	
	2.4 Business Arising from the Minutes	Information	
	Memo, item 2.1-2.4		4
	Minutes of the May 5, 2025 Meeting		5
3:40 p.m.	3. Report of the President [Goel]		
	3.1 General Update		10
4:00 p.m.	4. Presentation - Waterloo Student Experience & Engagement (WatSEE) [Marlee Spafford]		
	Covering report, WatSEE presentation	Information	11
4:20 p.m.	5. Annual Report of the COU Academic Colleague [Scott Kline]	Information	
	5.1 Report from COU Academic Colleague		12
4:30 p.m.	6. Report of Senate Graduate & Research Council		
	6.1 Senate Graduate and Research Council: Graduate Certificate in Work-Integrated Learning	Decision	16
4:40 p.m.	7. Report of Senate Undergraduate Council		
	7.1 Honours Bachelor of Medical Sciences (BMSci)	Decision	25
4:50 p.m.	8. Report of Senate Executive Committee		
	8.1 Elections to Senate Committees and Councils	Decision	
	8.2 Amendments to Bylaw 2	Decision	105
4:55 p.m.	9. Report of the Faculty of Mathematics		
	9.1 Amendments to the Faculty of Mathematics Constitution	Decision	116
5:00 p.m.	10. Report of the University Secretary		
	10.1 Senate Governance Processes [to be determined]	Discussion	

5:10 p.m.	11. CONSENT AGENDA		
	11.1 Senate Work Plan		130
	11.2 Senate Graduate & Research Council		132
	11.3 Senate Long Range Planning Committee [to be distributed separately]	Information	
	11.4 Academic Quality Enhancement Committee		134
	11.5 University Appointments Review Committee	Information	135
	11.6 Report of the Provost - Faculty Appointments, Leaves	Information	
	11.7 Graduate Work-integrated Learning (GradWIL) Initiative: Final Report	Information	141
	11.8 Report of the Vice-President, Research and International - Awards, Distinctions, Grants, Waterloo International Engagements, Commercialization Activity	Information	147
5:15 p.m.	12. Items Removed from the Consent Agenda		
	13. Other Business	Input	
5:20 p.m.	CONFIDENTIAL SESSION Senators, Vice-Presidents, Secretariat and Technical Staff as required		
	14. Approval of the Minutes [Goel]		
	14.1 Minutes of the May 5, 2025 Meeting (confidential session)	Decision	153
	14.2 Business Arising from the Minutes	Information	
5:25 p.m.	15. Report of the Vice-President, Advancement & External Relations [to be distributed]		
	15.1 Annual Report of New Gifts and Pledges $250,000+ received (May 1, 2024 to April 30, 2025)	Information	154
5:35 p.m.	16. Annual Senate Self-Evaluation		
	16.1 Annual Senate Survey Results, 2024-25	Discussion	
	17. Other Business	Input	
	18. Adjournment		

Non-senators interested in attending a Senate meeting can find meeting dates, registration details, and guidelines for visitors through the link
https://uwaterloo.ca/secretariat/senate-meeting-dates

UNIVERSITY OF WATERLOO | Senate

For Information **Open Session**

To:	**Senate**
From:	Gen Gauthier-Chalifour, University Secretary
Agenda Item:	**2. Approval of the Agenda and Minutes**

2.1 Conflict of Interest

Senators are invited to declare any conflicts related to the open session agenda at this time. Should a conflict of interest arise during discussion, senators are asked to declare a conflict of interest as it arises.

The Secretariat can provide guidance regarding potential conflicts of interest in advance of or during the Senate meeting.

2.2 Approval of the Agenda, and Approval of the Consent Agenda

Motion: To approve the agenda as presented/amended, and to approve or receive for information the items on the consent agenda, listed as items 11.1-11.8 of the Senate agenda.

Senators wishing to have an item removed from consent to the regular agenda are asked to contact the University Secretary in advance of the meeting. Senators may also request to have items moved to the regular agenda immediately prior to the approval of the agenda.

2.3 Minutes of the May 5, 2025 Meeting – open and confidential

Motion: To approve the minutes of the meeting (open session), and to approve the minutes of the meeting (confidential session), as distributed/amended.

Documentation Provided:

- Minutes of the May 5, 2025 Meeting – Open Session

2.4 Business Arising from the Minutes

i. Item 8.2, Amendments to Bylaw 2 – the amendments to Senate Bylaw 2 are brought for second reading/final approval

ii. Item 10.1, Senate Governance Processes – to be determined

University of Waterloo
Senate
Minutes of the May 5, 2025 meeting
[in agenda order]

Present: John Abraham, Nasser Abukhdeir, Bilal Ahmed, Avery Akkerman, Veronica Austen, Aubrey Basdeo, Jordan Bauman, Jean Becker, Andrew Chang, Martin Cooke, Cecilia Cotton, Kim Cuddington, Hans De Sterck, Laura Deakin, Charmaine Dean, David DeVidi, Catherine Dong, Mark Ferro, Paul Fieguth, Teresa Fortney, Genevieve Gauthier-Chalifour (Secretary), Mark Giesbrecht, Vivek Goel (Chair), Mike Grivicic (Associate Secretary), Vikas Gupta, David Ha, Peter Hall, Kevin Hare, Meray Sadek, Natalie Hutchings, Nadine Ibrahim, Marc Jerry, Acey Kaspar, Achim Kempf, Veronica Kitchen, Scott Kline, Sachin Kotecha, Christiane Lemieux, Ondrej Lhotak, Lili Liu, Brad Lushman, Jennifer Lynes, Stephanie Maaz, Shana MacDonald, Carol Ann MacGregor, Blake Madill, Colleen Maxwell, Kristiina Montero, Richard Myers, Cathy Newell Kelly, Christopher Nielsen, James Nugent, Troy Osborne, Nicholas Pellegrino, Damian Mikhail, David Porreca, Jacinda Reitsma, Mary Robinson, James Rush, John Saabas, Beth Sandore Namachchivaya, Asher Scaini, Mark Seasons, Marcus Shantz, Jagdeep Singh Bachher, James Skidmore, Christopher Taylor, Alexie Tcheuyap, Sharon Tucker, Diana Vangelisti, Johanna Wandel, Mary Wells, Clarence Woudsma, Changbao Wu, En-Hui Yang

Regrets: Marc Aucoin, Judy Castaneda, Bruce Frayne, Murray Gamble, Rob Gorbet, Chris Houser, Ellen MacEachen, Peter Meehan, Kirsten Muller, Neil Randall, Rida Sayed, Siva Sivoththaman, Katie Traynor, Stanley Woo

Guests: Graham Brown, Aldo Caputo, Ashley Day, Nenone Donaldson, Bernard Duncker, Donna Ellis, Melanie Figueiredo, Jenny Flagler-George, Richard Florizone, Katy Fulfer, Jennifer Gillies, Diana Goncalves, Janine Graham, Sarah Hadley, Marc Hurwitz, Samantha Hurwitz, Diane Johnston, Andrea Kelman, Alex Kunert, Tony Ly, Nick Manning, Jon Mason, Norah McRae, Christine McWebb, Ian Milligan, Elena Neiterman, Josh Neufeld, Fayaz Noormohamed, Nicholas Pfeifle, Nick Pfeifle, Daniela Seskar-Hencic, Nadia Singh, Kathy Smidt, Greg Smith, Allan Starr, Kerry Stryker, Brandon Sweet, Tim Weber-Kraljevski, Maris Weiss, Kate Windsor, Esther Wingate, Katy Wong-Francq

OPEN SESSION

The chair welcomed senators to the meeting and offered remarks. Today is Red Dress Day, which is a National Day of Remembrance for Missing and Murdered Indigenous Women, Girls, and Two-Spirit People (MMIWG2S+). Earlier today, there was a celebration of life for Professor Siv Sivaloganathan, and members of the community may contribute to the Siv Sivaloganathan Memorial Scholarship which will fund graduate studies in his area of mathematical medicine research. The chair welcomed two new members of Senate: Damian Mikhail as the new president of WUSA, and Meray Sadek as the new GSA president.

1. Territorial Acknowledgement
The territorial acknowledgement was given by the chair.

2. Approval of the Agenda and Minutes

2.1 Conflict of Interest.
No conflicts of interest were declared.

2.2 Approval of the Agenda, and Approval of the Consent Agenda.
A motion was heard to approve the agenda as presented, and to approve or receive for information the items on the consent agenda, listed as items 10.1-10.7 of the Senate agenda. Seasons and Lynes. Carried.

2.3 Minutes of the March 3, 2025 Meeting – open and confidential.
One senator noted a few minor amendments, and the Secretariat will liaise with them following the meeting to confirm the suggested amendments. A motion was heard to approve the minutes of the meeting (open session) as amended. Bauman and Gupta. Carried.

2.4 Business Arising from the Minutes.
Various business items were noted in the memo included with the agenda.

3. Report of the President

3.1 General Update
President and Vice-Chancellor Vivek Goel provided his report. He noted the recent federal election which resulted in several new MPs from the Waterloo area, and observed that none of the platforms of the leading parties paid significant attention to postsecondary education – in this context, the sector continues to advocate on a variety of issues. Slower study permit renewal processing times are being observed (around 220 days) which move the prospective approvals past the start of fall term. The province has announced $750 million in STEM program investment over five years, and while this is welcome support the increment does not fully address funding gaps. The University continues to monitor the situation in the USA, with issues of relevance including changes to agency funding. Recently, the Vice-President, Research and International issued a memo providing guidance on international travel to reflect the shifting geopolitical situation.

3.2 Amendment to Policy 40 – The Chair
Goel provided a short overview of the report and recommendation. Vice-President, Academic and Provost James Rush observed that these amendments were initiated by the Faculty Relations Committee to update language that was gendered and anachronistic, to update titles, and to align language around new appointments to clarify current practices for internal/external searches. FAUW President David Porreca indicated that further amendments have been identified since this initially was recommended, but that those amendments will be held in abeyance to not hold up the current approvals. Members noted that reference to St. Paul's should instead refer to United College, and the minor amendment to correct this reference will be reflected in the version that proceeds to the Board of Governors for final approval. A motion was heard that Senate recommend the Board of Governors approve the proposed revisions to Policy 40 – The Chair, as amended. Porreca and Hare. Carried.

4. Report – Teaching Awards Committee

4.1 Teaching Award Winners. Associate Vice-President Academic David DeVidi announced the winners of the Distinguished Teacher Awards: Chad Wriglesworth (St. Jerome's), Elena Neiterman (School of Public Health Sciences), Marc Hurwitz (Conrad School) and Martin Pei (Combinatorics & Optimization), with an honorable mention of Katy Fulfer (Philosophy) in recognition of her extraordinary courage and care in the face of targeted classroom violence that occurred in June 2023. Interim Co-Associate Vice-President, Graduate Studies and Postdoctoral Affairs Clarence Woudsma announced the winners of the Amit & Meena Chakma Awards for Exceptional Teaching by a Student: Alexandra Kunert (Earth and Environmental Sciences), Ali Syed (Pharmacy), Jeremy Cohen (Kinesiology & Health Sciences), and Serena McDiarmid (Psychology).

Senate invited Elena Neiterman and Alexandra Kunert to offer comment in relation to the awards. Neiterman and Kunert spoke to the importance of making connections with students, the impact that teachers have on students' lives, being able to create space for growth and thriving, being able to learn from students, having tremendous support from colleagues including exemplary mentorship from other teachers. They thanked the members of the selection committees, the nominator, and the award donors.

5. University Task Force Updates

5.1 Reports from the Task Force on Principles for Institutional Partnerships and the Task Force on Social Responsibility in Investing
Associate Vice-President, Chief Financial Officer Sarah Hadley and Associate Vice-President, Research Oversight and Analysis Ian Milligan provided a slide presentation to convey the key findings and recommendations of the two task forces along with outlining prospective activity arising from those reports through the end of 2025. Discussion questions were provided to foster conversation at Senate. Hadley and Milligan relayed some of the challenges pertaining to these task forces' recommendations, including measurement issues for certain investments, what engagements would be considered to be institutional partnerships, the relative complexity of having to make assessments of partnerships in the context of human rights issues, and the potential need for a mechanism to review partnerships.

Discussion was invited. A senator observed that the existing Responsible Investment Policy is not a numbered policy, and perhaps this should be considered. The language in the task force reports is not necessarily binding and there is less comfort among some senators if implementation is done through the establishment of guidelines whereas a policy would be a stronger response. The prospective action on investments would apply to the endowment and pension plan funds. A question was raised as to whether the policy could be applied to the Student Venture fund run through the School of Accounting and Finance. In reviewing partnerships, it would be advisable to review the partner institution's record on human rights. The move to increase investment disclosure is laudable. There was question of how credible evidence would be defined for the purpose of investigating partnerships, and who specifically would be involved in any potential review mechanism. An active process of continual review of partnerships would be beneficial. The cited UN conventions are relatively old and may not be germane. Senate may establish ad hoc committees, and a senator suggested that this could be a mechanism for

Senate to be engaged on these matters. There are differing levels of investment flexibility for the endowment and the pension plan, which may suggest that differing approaches ought to be applied to each fund. Institutional neutrality applies to institutional communications, but not necessarily for operational considerations.

5.2 Statement on Institutional Neutrality, Institutional Restraint and Communications – Guidelines for Collective Bodies
Goel provided a short introduction and Associate Vice-President, Faculty Planning and Policy Christine McWebb spoke to the report. It is proposed that when a body want to take a collective position, that body should make the greatest possible effort to emphasize that the position is taken only by the body and not by the University. The aim today is to obtain feedback from Senate to be combined with feedback from others in the campus community toward a recommendation that is anticipated to be brought in Fall 2025.

Discussion was invited. It was noted that while Faculty Relations Committee is observed on the governance path, that body did not formally endorse this. The approach seen here for implementing task force recommendations has been commonly taken in recent years, however some senators believe this would be better implemented as a policy. In response to a concern raised regarding guidance on social media and for non-unit informal collectives, it was confirmed that bodies are not barred from using social media but would not be able to utilize University communications brand assets since amplification of this collective message in that way could be seen as an institutional position, which in turn could abridge the academic freedom of colleagues who may not agree with the collective position that was taken. Questions were raised around clarification between the applicability of policies which require upholding, and guidelines which aim to provide guidance without enforcement. For digital assets, it may be helpful to delineate which assets' use would be construed as the University's endorsement of the position. A senator expressed concern at the prospect of selective application of guidelines, and at the absence of policy guidance in the formulation of guidelines.

6. Report of the Senate Executive Committee

6.1 New Committee Proposal: Senate Planning and Finance Committee
Goel provided a short overview of the proposal, and senators discussed the report. The version brought forward to Senate includes minor amendments which were not included in the versions recommended by the two bodies, and the terms of reference proposed do not have any reduced scope but rather increases the scope of the combined committee. The combination of the two committees will help to increase synergy and support the integrated planning approach through generative discussions. A motion was heard that Senate establish a new committee, the Senate Planning and Finance Committee, as described in this report and effective September 1, 2025. DeVidi and Woudsma. Carried.

6.2 Senate Graduate & Research Council Restructuring Proposal
Goel observed that this proposal arises from the Senate Governance Review, with considerable discussion having occurred at the council over several years. A motion was heard that Senate approve the restructuring of the Senate Graduate & Research Council into two separate councils of Senate – the Senate Graduate Council and the Senate Research and Innovation Council – as described in this report and effective September 1, 2025. Dean and Woudsma. Carried.

6.3 Amendment to Senate Bylaw 2
Goel indicated that this report will reconcile the removal of the progenitor bodies to the new bodies approved in 6.1 and 6.2 of the agenda, and that in keeping with modern practices Senate has been approving new terms of reference outside of bylaws and this approach is reflected here. A motion was heard that Senate approve and give first reading to the amendments to Senate Bylaw 2 as presented in this report and effective September 1, 2025. Lynes and DeVidi. Carried.

6.4 Submission Received – Proposal to Amend Senate Bylaw 4
Goel noted that the Senate Executive Committee agreed in principle with the merits of adding staff representation to Senate, with further investigation and consultation as described in the report. Senator James Nugent indicated that he would elect to withdraw his motion on the basis that the staff association is currently reviewing its structure.

7. Report of Senate Undergraduate Council

7.1 Senate Undergraduate Council: Faculty of Science – Major Modifications
DeVidi provided an overview of the report and recommendation, noting that this new program will provide more flexibility and replace a program that has been seeing increasing attrition. A senator asked whether the BScFM is too similar and may be confused with the Bachelor of Sustainability and Financial Management (BSFM), and it was clarified that the latter program's marketing is sufficiently differentiated. A motion was heard that Senate approve the creation of a Bachelor of Science and Financial Management (BScFM) program with three new science and three new business specializations, and, to retire the Bachelor of Science, Biotechnology/Chartered Professional Accountancy program at the same time, effective September 1, 2026, as presented. DeVidi and Deakin. Carried.

8. Report of the Faculty of Health
8.1 Amendments to the Faculty of Health Constitution
Dean of Health Lili Liu provided a short overview of the report. A motion was heard that Senate approve the amended Constitution for the Faculty of Health at the University of Waterloo, as described in this report. Liu and Giesbrecht. Carried.

9. Report of the University Secretary
9.1 Election of Graduate Student Senator to Board of Governors
With no further nominations forthcoming after a call from the floor, a motion was heard that Senate elect Meray Sadek as the graduate student senator for a two-year term to August 31, 2027. Maxwell and Porreca. Carried.

9.2 Election Results - Senators to Board of Governors
This item was received for information.

9.3 Senate Governance Processes
Nugent takes issue with the approach taken by the Senate Executive Committee (SEC) in considering how to integrate his submission [see item 6.4] into the Senate agenda, asserting that the submission ought to have been brought for a potential first reading. Nugent agreed with the committee's ability to comment on the submission, but not with the committee placing the report on the agenda for information and argued that action exceeded the committee's role in preparing the Senate agenda.

Senators discussed the matter. Senate may consider ways to foster discussions/debates initiated by senators. The role of SEC in preparing the Senate agenda also includes examining the soundness of all reports/submissions to Senate. A senator suggested the Senate agenda might add a new section to offer a forum where senators may raise potential new business, which thereon may be taken up or declined. SEC has established processes in the context of an appropriate agenda development function for the Senate. One perception could be that SEC was acting in a paternalistic manner in referring said submission to Senate in the form that it was, rather than as the submission was received. There are many ways to debate items of interest, and the format of debate that is frequently taken up by Senate does not invite all types of input. University Secretary Gen Gauthier-Chalifour indicated that the submission in question was not necessarily out of order but rather that SEC was of the view that not enough information had been provided, and this is appropriate in the context of SEC's responsibilities under section 1.04(g) of Senate Bylaw 1 "To receive and review the reports and recommendations of all committees and councils, prior to their presentation to Senate and to make at its discretion recommendations to Senate thereon". She further observed that most Senate operations are carried out through its committees and councils, and that SEC's terms of reference would be slated for review in the coming year. It was noted that Gauthier-Chalifour and Nugent will meet following the meeting, and that this item may come forward for discussion again at a future meeting.

10. CONSENT AGENDA
The following items were received for approved / received for information.

10.1 Senate Work Plan

10.2 Senate Graduate & Research Council

10.3 Senate Undergraduate Council

10.4 Senate Long Range Planning Committee

10.5 Academic Quality Enhancement Committee

10.6 Report of the Provost: Faculty Appointments, Leaves

10.7 Report - Vice President, Research and International: Awards, Distinctions, Grants, Waterloo International Engagements

11. Items Removed from the Consent Agenda
No items removed from the consent agenda.

12. Other Business
12.1 Report – Honorary Degrees Committee: 2025 Spring Convocation List of Honorands
This item was received for information.

There was no other business. Senate proceeded into confidential session.

May 14, 2025

Mike Grivicic
Associate University Secretary

CONFIDENTIAL SESSION

University of Waterloo
Senate
Minutes of the May 5, 2025 meeting
[in agenda order]

13. Report of Decanal Nominating Committee

13.1 Report of the Dean of Mathematics Nominating Committee
Rush provided an overview of the report and recommendation as well as on the process undertaken by the nominating committee in conducting the search and identifying the leading candidate. This included stakeholder consultations and the development of a candidate brief with wide advertising. The leading candidate was introduced to the Faculty in an open forum and an electronic ballot thereafter showed strong support for their recommendation.

A motion was heard that Professor Jochen Koenemann be appointed Dean of the Faculty of Mathematics for an initial five-year term commencing 1 July 2025 and ending 30 June 2030, subject to Board of Governors approval. Porreca and Dong. Carried.

14. Other Business
There was no other business.

15. Adjournment
With no further business, the meeting was adjourned.

May 14, 2025

Mike Grivicic
Associate University Secretary

UNIVERSITY OF WATERLOO | Senate

For Information **Open Session**

To:	Senate
From:	Gen Gauthier-Chalifour, University Secretary
Presenter:	Vivek Goel President and Vice-Chancellor

Agenda Item: **3.1** **General Update**

Summary

Dr. Vivek Goel, President and Vice-Chancellor, will provide an update on matters of interest to Senate.

UNIVERSITY OF WATERLOO | Senate

For Information **Open Session**

To:	Senate
From:	Gen Gauthier-Chalifour, University Secretary
Presenter:	Marlee Spafford Special Advisor to the Provost on Student Experience
Agenda Item:	**4. Presentation - Waterloo Student Experience & Engagement (WatSEE)**

Summary

Marlee Spafford, special advisor to the Provost on student experience, will provide a presentation on Waterloo Student Experience & Engagement (WatSEE).

UNIVERSITY OF WATERLOO | Senate

For Information **Open Session**

To:	Senate
From:	Scott Kline
	Chair, Religious Studies, and COU Academic Colleague
Date of Meeting:	June 9, 2025
Agenda Item:	**5.1 Report from COU Academic Colleague**

The following is a summary of meetings since my last report in June 2024.

Summary of Meetings

1. Academic Colleagues Meeting, August 13-14, 2024

Discussion Theme: The Future of Higher Education in Ontario

Glen Jones, Professor of Higher Education at the University of Toronto, identified six key themes relevant to the future of higher education in Ontario: responding to the truth and reconciliation commission; international engagement; expanding credentials; leadership and stability; increasing politicization; and comparatively general positive views of postsecondary education in Ontario. A number of key themes emerged from the discussion, including communicating the value of universities; leadership and governance; and advancing both the recommendations of the TRC, but also EDI more broadly, such as Scarborough Charter. Colleagues identified additional themes, including internationalization; differentiation within the sector; and the foundations that make Canadian universities desirable.

Updates and Reports—Highlights

Steve Orsini, COU President, provided an update on key issues affecting the sector. He noted that the government is starting the process of negotiating the SMA 4 agreements. He also provided an overview of the current financial situation of the sector: (1) Because of chronic underfunding and the extension to the 10% tuition cut and freeze, all universities are facing significant financial pressures. COU estimates that ten universities are expected to report more than $300 million in operating deficits in 2023-2024; (2) Universities are seeing historic negative operating income as a sector and the February 26, 2024, funding announcement fell far short of sector needs. The COU continues to push the government to implement the Blue-Ribbon Panel's recommendations and that it is critical that the sector remains united in its call for increased funding.

2. Academic Colleagues Meeting, October 2-3, 2024

Krista Orendorff, VP Public Affairs at COU, presented COU's Advocacy Strategy in advance of the next provincial election. COU has identified key decision-making milestones, including the Fall Economic Statement, the Budget, and a potential early election. The COU strategy is focused on three components: advocacy, stakeholder engagement, and communications.

Key messaging includes the following: (1) Ontario's universities are essential to building the workforce and the economy of the future. They are preparing graduates with the skills and experience necessary to meet Ontario's growing labour market demands today and lay the foundation for tomorrow's prosperity. (2) Ontario's universities are graduating job-ready students. In fact, the latest Graduate Survey from the Ministry of Colleges and Universities shows that 95.1% of university graduates are not only employed within two years of graduating, but they are successfully finding employment in some of Ontario's most in-demand areas, aligning with Ontario's workforce needs. (3) Investing in long-term, stable funding for Ontario's universities means investing in the high-quality programs, services and resources students need to graduate job-ready while also ensuring they have the supports they need to succeed in today's rapidly changing job market. Government, business, community partners, and universities must work together to ensure universities have the resources they need to continue support students, lead innovation, and drive economic growth for the benefit of Ontario.

Updates and Reports—Highlights

The COU Chief of Staff and Acting Corporate Secretary provided an update on key issues affecting the sector. She noted that the government is continuing the process of negotiating the SMA 4 agreements and that government directives on the Strengthening Accountability and Student Supports Act had been released. She further noted, that the recent federal government announcement of an additional 10% cut to international student study permits, as well as the inclusion of Masters and PhD programs in the cap, would add to the continuing financial challenges that the sector is currently facing and that was noted in a public response to government. The COU Chief of Staff and Acting Corporate Secretary reiterated to Colleagues that COU is continuing to advocate with the government for the full implementation of the Blue-Ribbon Panel's recommendations. Colleagues discussed the impacts of the current financial situation, as well as the impact of government decisions on institutional autonomy.

3. 318th Meeting of Council, November 20, 2024

The discussion theme: Promoting the Value of Universities to the Public. Based on various survey data regarding public perceptions of universities and colleges, Members focused on the need to develop an effective narrative that communicates to the public the value of the university to society, culture, and the economy. There was consensus on the need to communicate with the internal community (faculty, staff, students, and other members of the university community), so that everyone understands the scope of the issue, including the current public perceptions, and are working together to address it. There was also broad agreement regarding the need for each university to tell the local story by engaging local communities and partners.

4. Academic Colleagues Meeting, February 11-12, 2025

Discussion Theme: Graduate Education Landscape and Innovation

Suzanne Curtin (Vice-Provost and Dean, Faculty of Graduate Studies, Brock University; Chair of Ontario Council of Graduate Studies) and Ben Bradshaw (Assistant Vice-President, Graduate Studies, University of Guelph; Member of the Ontario Council of Graduate Studies) presented on major issues facing graduate studies in Ontario. In particular, funding and recruitment have been adversely affected by budget deficits (across the sector, with a few exceptions), which also include cuts to graduate student funding (with a couple of exceptions). The international student cap has created instability both on the "branding" side of recruitment (likely leading to fewer international students than previously thought)

and on the processing side of admissions (largely due to delays and unclear expectations related to visa timelines). The OCGS is also interested in understanding better the role of AI in the graduate student experience, from the application process to degree completion.

Updates and Reports—Highlights

Steve Orsini, the COU President, delivered an update on the provincial attestation letter (PAL) allocation process for international students, the creation of two new Working Groups with the Ontario Centre for Innovation on Life Sciences and Critical Minerals and Battery Technology, and activities underway in preparation to escalate advocacy with the government following the provincial election. During the writ period, COU is not commenting on party platforms or engaging in advocacy.

5. Academic Colleagues Meeting, April 15-16, 2025

Discussion Theme: Impacts of US Policies on Academic Activities at Ontario Universities

Dr. Sarah Laframboise, Executive Director, Evidence for Democracy, presented on emerging challenges facing Ontario academics and researchers in light of recent US policy shifts. Dr. Laframboise stated that her organization is receiving numerous cases of significant disruption, some of which can be found on the effects of American policies on Canadian research. Some recent examples include the following:

- Cuts to funding for Canadian researchers collaborating with US counterparts;
- Threats to environmental protections;
- Data censorship and loss of scientific integrity;
- Restrictions on international collaboration and talent flow; and
- Weakening of public trust in science.

Dr. Laframboise noted that other countries have been actively responding to US policy changes with an eye to recruit researchers in the US by relocating grants, fast-tracking of visas, and direct recruitment. Challenges within Canada that may limit its ability to benefit from a "brain gain" of US researchers include a declining percentage of GDP expenditure on research and development, financial constraints in Ontario universities, and international student caps.

The equity, diversity, and inclusion (EDI) landscape in Canada may also be attractive to researchers who not only work with but are also a part of under-represented groups.

The Academic Colleagues considered additional outcomes related to US policy changes:

- The possibility that international undergraduate students may choose to study in Canada rather than the US as a result of American policies. (recognizing that the international cap remains in place)
- Concerns about American promotion of a merit-based system spilling over into Canada, and the importance of collecting evidence on the positive impacts of EDI across research and teaching activities as a pre-emptive measure.
- Concern about future missed career opportunities for researchers in light of travel advisories for the US, and the measures universities may take should researchers traveling to the US find themselves in difficult situations.

Updates and Reports—Highlights

The COU Chief of Staff briefed Colleagues COU's advocacy leading up to the provincial budget, anticipated in mid-May, and recent signals about targeting funding, in the new budget, toward STEM disciplines and research.

6. 319th Meeting of Council, April 16, 2025

The Academic Colleagues brought the topic Impacts of US Policies on Academic Activities in Ontario Universities to Council for discussion. Among the issues that garnered lengthy attention were travel-related concerns, the withholding/cancellation of funds supplied by US government agencies, and privacy issues related to data collection and storage. Members engaged in an extended discussion focusing on how best to recruit scholars to Ontario universities, including using existing research excellence initiatives as a way to expedite the recruiting process.

Updates and Reports—Highlights

Steve Orsini, President of COU, briefed Members on ongoing COU advocacy efforts related to the budget, the development of a public narrative that highlights the value and role of universities, and ongoing discussions with Universities Canada in developing a national strategy related to international students.

7. Academic Colleagues Meeting, May 13-14, 2025

Discussion Theme: Research Impact in University Storytelling

Dr. Barbara Fallon, Associate Vice-President, Research, University of Toronto, presented on the importance of developing university-specific narratives that include faculty research impact. Research impact can help demonstrate a university's commitment to its mission and vision. Moreover, such stories can be tailored to communicate the value of university-based research to key stakeholders, including the general public. Dr. Fallon argued that universities would do well to support initiatives that help faculty translate their work into accessible forms of communication.

The Colleagues generally acknowledged the need for universities to include research impact in their storytelling. However, there was widespread concern that such initiatives may not yield a high return on the investment. For instance, an initiative that would have a large number of faculty researchers bringing their stories to communications staff would mean a significant need for increased staffing, which is not currently an option in many universities, especially as many universities are seeking to trim administrative staff. Additionally, there was widespread concern that the work of developing research impact stories would eventually be downloaded onto faculty, increasing the workload of faculty. Other strategies, such as renewing the commitment to effective teaching *with* faculty research, which may prepare students to tell the story of research impact as alumni, might be more effective in the current climate than increasing additional academic-communication supports. Other strategies, such as listening to what Ontarians view as valuable in university education and research, if anything, might help the sector better understand the apparent gap in the understanding of "value" between public and academics/researchers.

Updates and Reports—Highlights

Steve Orsini, President of COU, briefed Council on COU advocacy efforts with the Ontario government, especially in advance of the May budget release. The COU continues to work with Universities Canada to advocate for the development of an international student policy that differentiates university recruitment from college recruitment. One area where COU will need to play a role is re-branding Canada as a place welcoming to international students, especially in light of other countries (e.g., the UK) reducing immigration numbers as a matter of political policy. This will need to be a coordinated effort, Orsini argued, which will involve leaders in the business, tech, and manufacturing sectors advocating for increased international student flexibility and ease of process in university recruitment.

UNIVERSITY OF WATERLOO | Senate

For Approval **Open Session**

To:	Senate
From:	Senate Graduate and Research Council
Presenter(s):	Charmaine Dean Vice-President, Research & International
	Clarence Woudsma Interim Co-Associate Vice-President, Graduate Studies and Postdoctoral Affairs
Date of Meeting:	June 9, 2025
Agenda Item:	**6.1 Senate Graduate and Research Council: Graduate Certificate in Work-Integrated Learning**

Recommendation/Motion

Motion: That Senate approve the new graduate certificate in work-integrated learning, with related amendments to the graduate calendar, as described in this report and effective September 1, 2025.

Purpose/Rationale

This recommendation comes as part of the University's strategic commitment towards developing talent for a complex future and the expansion of Work-Integrated Learning (WIL) at the graduate level. A Graduate Certificate in WIL (which leverages the existing Certificate of Participation credential) offers a cost-effective, flexible and customizable pathway for faculties to differentiate their program(s) by packaging and promoting existing and developing WIL. Additional description and rationale is provided in the attachments to this report.

Jurisdictional Information

This item is being submitted to Senate in accordance with Senate Bylaw 2, section 4.03: "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

i. Senate Graduate and Research Council – May 6, 2025
ii. Senate – June 9, 2025

Documentation Provided

- Attachment 1: Graduate Certificate in Work-Integrated Learning
- Attachment 2: Graduate Work-Integrated Learning – amendments to section 10.1 and addition of section 11.5 in the Graduate Calendar

Attachment 1: Graduate Certificate in Work-Integrated Learning

Description and rationale for proposed changes:

As part of the University's strategic commitment towards developing talent for a complex future and the expansion of Work-Integrated Learning at the graduate level, Graduate Certificates in Work-Integrated Learning (WIL) are proposed as a new credential. By reducing barriers, offering customization, and enhancing the visibility of WIL through recognized credentials, Graduate Certificates in WIL advance our institutional commitment to offering "WIL for all".

A Graduate Certificate in WIL, leveraging the existing Certificate of Participation credential, offers a cost-effective and customizable pathway for faculties to differentiate their program(s) by packaging and promoting existing and developing WIL. Graduate Certificates in WIL can include course-level WIL, applied research, and other WIL experiences but cannot include Program-level WIL (i.e., internships or co-op).

The Graduate Certificate in WIL requirements include career development learning; professional skills curriculum; authentic WIL experience(s), and iterative reflection on practice to inform their career direction. These Graduate Certificates integrate student coursework and research with professional experience to demonstrate their practical skills through a recognized credential. Graduate students completing the Certificate will: integrate what they've learned into their own self-concept; connect their deep disciplinary knowledge with relevant WIL experiences; and translate and articulate that knowledge and experience to differentiate themselves to potential employers.

Graduate Certificates in WIL will adhere to requirements and standards of WIL set out in the Graduate Studies Academic Calendar and be assured through consultation with the Centre for WIL. Consultation to enable programs in building, offering, and operating Graduate Certificates in WIL will be available through Co-operative & Experiential Education and ongoing services (administration, WIL courses, experience management, etc.) can be made available for cost.

Graduate Certificates in WIL offer a flexible, customizable, and scalable approach that aligns with the University of Waterloo's strategic goals – empowering programs to shape WIL in ways that fit their unique contexts, expanding access for all students regardless of background or discipline, and reinforcing Waterloo's leadership in innovative WIL.

Note: the proposed Graduate Certificate in WIL has been reviewed and endorsed by the GradWIL Sponsors Committee and the GradWIL CoreOps group including members from Co-operative & Experiential Education, Graduate Studies and Postdoctoral Affairs, and the Graduate Student Association. Additional consultations at varying stages of the development of the Graduate Certificate in WIL have included multiple graduate student focus groups, Associate Deans (Graduate Studies), Deans, and the Associate Vice-President, Academic.

Proposed effective date: Term: Fall Year: 2025

Current Calendar copy	Proposed Calendar copy
No equivalent section	**11.5 Graduate Certificate in Work-Integrated Learning** A Graduate Certificate in Work-Integrated Learning (WIL) is a graduate certificate of

	participation that recognizes the student's completion of a minimum of 150 hours of work-integrated learning that includes career curriculum, professional skills curriculum, and reflection on practice where the majority of the time students are engaged in authentic work on problems, processes, and/or projects producing work reflecting professional practice with a host organization. Graduate Certificates in WIL must align to the requirements and standards of Graduate Work Integrated Learning. Programs offering a Graduate Certificate in WIL may include additional WIL courses or milestones outside of their degree requirements in order to meet the Graduate Certificate in WIL requirements and standards. The Graduate Certificate in WIL will formally integrate the student's academic studies with (1) paid or unpaid quality WIL experiences, (2) engaged external partnerships, and (3) program-relevant student learning outcomes related to employability, agency, knowledge and skill mobility, and life-long learning. Graduate Certificates in WIL can include course-level WIL, applied research, and other WIL experiences but cannot include program-level WIL (i.e., internships or co-op). Before a new Graduate Certificate in WIL is approved, it must undergo a quality assurance review by the Centre for Work-Integrated Learning. Existing programs that offer a Graduate Certificate in WIL, guidelines, and approval processes for each component of the Certificate are available at the Centre for Work-integrated Learning website.

Attachment 2: Graduate Work-Integrated Learning – amendments to section 10.1 and addition of section 11.5 in the Graduate Calendar

Description and rationale for proposed changes:

Adding WIL 601 Career Foundations for Work-Integrated Learning as an over-arching co-op requirement. Students in CEE-supported co-op programs will be required to complete WIL 601 in their first academic term (or prior to a work term in certain programs). WIL 601 may be recommended instead of required in some programs in the Faculty of Engineering, which will be identified within their program's degree requirements.

WIL 601 will equip students with the practical tools and strategies to engage in Graduate Work-Integrated Learning (e.g., co-operative education, internships). WIL 601 benefits both early-career and experienced professionals by packaging the tasks, strategies, and resources they will need to engage in ahead of the recruitment and job search process. The course enables students to critically reflect on career identity, values and goals, evaluate their current skillsets and competencies, practice interview skills and networking, understand workplace rights, and establish learning goals for their WIL experience. The credit/no-credit online course content was informed through collaboration with industry partners and graduate students and includes approximately 15-20 hours of content and assessment.

Additional updates to the Graduate work-integrated learning section are being made to clearly identify Applied Research WIL as one of the available models of WIL. The Graduate Certificate in WIL is also being added as another available models of WIL (more details are available in the Graduate Certificate in WIL section/proposal). Editorial updates are also being made to provide better clarity on what constitutes WIL activity.

Proposed effective date: Term: Fall Year: 2025

Current **Graduate Studies Academic Calendar (GSAC)** page:
https://uwaterloo.ca/academic-calendar/graduate-studies/catalog#/policies

Current Calendar copy	Proposed Calendar copy
10.1 Graduate work-integrated learning Work-integrated learning (WIL) opportunities are provided to students across numerous graduate programs at the University of Waterloo. Adopting the Co-operative and Work-Integrated Learning Canada (CEWIL) definition, WIL "is a form of curricular experiential education that formally integrates a student's academic studies with quality experiences within a workplace or practice setting. WIL experiences include an engaged partnership of at least: an academic institution, a host organization, and a student. WIL can occur at the course or program level and includes the development of student learning objectives and outcomes related to:	**10.1 Graduate work-integrated learning** Work-integrated learning (WIL) opportunities are provided to students across numerous graduate programs at the University of Waterloo. Adopting the Co-operative and Work-Integrated Learning Canada (CEWIL) definition, WIL "is a form of curricular experiential education that formally integrates a student's academic studies with quality experiences within a workplace or practice setting. WIL experiences include an engaged partnership of at least: an academic institution, a host organization, and a student. WIL can occur at the course or program level and includes the development of student learning objectives and outcomes related to:

employability, agency, knowledge and skill mobility and life-long learning." WIL allows for theoretical learning to be integrated with practice, promoting deeper understanding of theory through practical application. Graduate programs offering WIL opportunities should follow best-practices through the inclusion of the following key WIL components: pedagogy (curricular elements that include when the activity occurs, duration/intensity, and training); experience (ensuring meaningful activities and alignment with the WIL definition); assessment (of activities based on identified learning outcomes); and reflection (on what constitutes purposeful work for each student). Regardless of how WIL is structured, activities should align with Graduate WIL (GradWIL) learning development process. At the University of Waterloo, there are different WIL models that provide consistency in how WIL experiences are offered and recorded across academic programs. While there may be some WIL activities that do not fall within one of the models (as well as accreditation requirements for professional programs), academic units should use one of the following WIL models to facilitate standardization and institutional tracking of experiences. 1. **Course-level WIL** is delivered in the context of a course (either required or elective) and activities are typically facilitated through a course instructor. Students receive course credit for the activity, with the unit weight being determined by the intensity/duration of activities. Course-level WIL comes in the form of the following models: 1) Community and Industry Research Projects (CIR) or 2) Practicums:* 1. **Community and Industry Research Projects (CIR)**: Supporting the course objectives, CIR consist of a project or assignment within the course wherein students engage with a partner organization either individually or in teams. The course project/assignment would	employability, agency, knowledge and skill mobility and life-long learning." WIL allows for theoretical learning to be integrated with practice, promoting deeper understanding of theory through practical application. Graduate programs offering WIL opportunities should follow best-practices through the inclusion of the following key WIL components: pedagogy (curricular elements that include when the activity occurs, duration/intensity, and training); experience (ensuring meaningful activities and alignment with the WIL definition); assessment (of activities based on identified learning outcomes); and reflection (on what constitutes purposeful work for each student). Regardless of how WIL is structured, activities should align with Graduate WIL (GradWIL) learning development process. At the University of Waterloo, there are different WIL models that provide consistency in how WIL experiences are offered and recorded across academic programs. While there may be some WIL activities that do not fall within one of the models (as well as accreditation requirements for professional programs), academic units should use one of the following WIL models to facilitate standardization and institutional tracking of experiences. 1. **Course-level WIL** is delivered in the context of a course (either required or elective) and activities are typically facilitated through a course instructor. Students receive course credit for the activity, with the unit weight being determined by the intensity/duration of activities. Course-level WIL comes in the form of the following models: 1) Community and Industry Research Projects (CIR) or 2) Practicums:* 1. **Community and Industry Research Projects (CIR)**: Supporting the course objectives, CIR consist of a project or assignment within the course wherein students engage with a partner organization either individually or in teams. The course project/assignment would

occur in or with external organizations, with examples being consulting projects, design projects, program evaluations. When a course involves CIR, the activity would be identified with a secondary (or tertiary) component using the course component CIR. 2. **Practicums (PRA)**: Practicums are a work-integrated learning experience that form the basis of the course and provide students with intensive, hands-on experience in a setting relevant to their subject of study (paid or unpaid). Practicums are typically supervised within the external setting by identified person(s) who are approved by the program (based on their professional and other competencies). Practicum hour requirements are established by the program, vary across different programs and courses. Practicums are denoted as a primary component using the course component PRA. Practicums are usually graded as credit/no-credit. 2. **Program-level WIL** is delivered as a required component of the program with associated WIL activities typically facilitated through the academic unit, often in partnership with Co-operative and Experiential Education (CEE). Program-level WIL comes in the form of the following models: a) Co-operative Education or b) Internship. Program-level WIL would be identified through the program name, plan code, and corresponding milestone(s). In both models, the WIL activity provides experience in a practice/workplace setting related to the student's field of study. Typically the WIL activity would occur at a time in the student's academic program to allow for an	occur in or with external organizations, with examples being consulting projects, design projects, program evaluations. When a course involves CIR, the activity would be identified with a secondary (or tertiary) component using the course component CIR. 2. **Practicums (PRA)**: Practicums are a work-integrated learning experience that form the basis of the course and provide students with intensive, hands-on experience in a setting relevant to their subject of study (paid or unpaid). Practicums are typically supervised within the external setting by identified person(s) who are approved by the program (based on their professional and other competencies). Practicum hour requirements are established by the program, vary across different programs and courses. Practicums are denoted as a primary component using the course component PRA. Practicums are usually graded as credit/no-credit. * There are other types of experiential learning courses that take place in a setting outside the classroom [e.g., Labs (LAB), Field Studies (FLD), Studio (STU)]. The key distinction between these types of courses and those that denote WIL is that, for the former, a meaningful partnership with an external/host organization is not required. If criteria for WIL is met, courses should be identified as CIR or PRA. 2. **Program-level WIL** is delivered as a required component of the program with associated WIL activities typically facilitated through the academic unit,

integration of learning between the WIL experience and academic/research activities. As program-level WIL typically involves full-time activity, students would be required to have a change of enrolment status during their experience(s). 1. **Co-operative Education (Co-op)**: Co-op is full-time, paid work experience in a workplace setting that is related to the student's area of study and career interest. ~~Co-op programs typically include completion of a professional development course~~ prior to a work term ~~(WIL 601**), work term(s), and reflective and/or work reports as required by the graduate program.~~ In masters-level programs with co-op designations, students are required to successfully complete a minimum of one standard work-term and~~, if specified by their program, one additional work term (standard or flexible work-terms)~~. Co-op doctoral programs require a minimum of three standard work-terms and, if specified by their program, additional work terms (standard or flexible work-terms). 2. **Internships**: Internships are supervised work-integrated learning experiences that are discipline-specific and directly align with the graduate program's learning outcomes. Internships require approval by the graduate program. Internships vary in length and intensity, but are typically between 4 months to 12 months of full-time work experience (that is paid or unpaid), and supervised within the external setting by identified persons who are approved by the graduate program (based on their	often in partnership with Co-operative and Experiential Education (CEE). Program-level WIL comes in the form of the following models: a) Co-operative Education or b) Internship. Program-level WIL would be identified through the program name, plan code, and corresponding milestone(s). In both models, the WIL activity provides experience in a practice/workplace setting related to the student's field of study. Typically the WIL activity would occur at a time in the student's academic program to allow for an integration of learning between the WIL experience and academic/research activities. As program-level WIL typically involves full-time activity, students would be required to have a change of enrolment status during their experience(s). 1. **Co-operative Education (Co-op)**: Co-op is full-time, paid work experience in a workplace setting that is related to the student's area of study and career interest. In addition to program course requirements, students in CEE-supported co-op programs are required to successfully complete WIL 601 Career Foundations for Work-Integrated Learning prior to a work term (typically completed within the first academic term). In masters-level programs with co-op designations, students are required to successfully complete a minimum of one standard work-term and a work/reflective report and, if specified by their program, one additional work term (standard or flexible work-terms) and a second work/reflective report. Co-op doctoral programs require a minimum of three standard work-terms and three work/reflective reports, and if specified by their program, additional work terms

professional and other competencies). Separate from course or program-level offerings, many graduate students are involved in discipline-specific research activities that constitute WIL either as part of degree requirements (e.g., thesis or Master's Research Paper) or as additional research projects during their graduate training (i.e., during a time when they have active enrolment status). Such research would involve an industry or community partner and an identified faculty collaborator (in most cases, the research supervisor). For research activities to be considered WIL, there must be co-creation of the research objectives by the external partner and the student/faculty member, active engagement and interaction between the student and external partner, and the external partner should have a role in providing feedback to and/or assessment of the student activity. ~~* There are other types of experiential learning courses that take place in a setting outside the classroom [e.g., Labs (LAB), Field Studies (FLD), Studio (STU)]. The key distinction between these types of courses and those that denote WIL is that, for the former, a meaningful partnership with an external/host organization is not required. If criteria for WIL is met, courses should be identified as CIR or PRA.~~ ~~** WIL 601 does not count towards home program degree course requirements.~~	(standard or flexible work-terms). 2. **Internships**: Internships are supervised work-integrated learning experiences that are discipline-specific and directly align with the graduate program's learning outcomes. Internships require approval by the graduate program. Internships vary in length and intensity, but are typically between 4 months to 12 months of full-time work experience (that is paid or unpaid), and supervised within the external setting by identified persons who are approved by the graduate program (based on their professional and other competencies). 3. **<u>Applied Research WIL:</u>** Separate from course or program-level offerings, many graduate students are involved in discipline-specific research activities that constitute WIL either as part of degree requirements (e.g., thesis or Master's Research Paper) or as additional research projects during their graduate training (i.e., during a time when they have active enrolment status). Such research would involve an industry or community partner and an identified faculty collaborator (in most cases, the research supervisor). For research activities to be considered WIL, there must be co-creation of the research objectives by the external partner and the student/faculty member, active engagement and interaction between the student and external partner, and the external partner should have a role in providing feedback to and/or assessment of the student activity. 4. **<u>Graduate Certificate in Work-Integrated Learning (WIL)</u>**: <u>Graduate Certificates in WIL are developed and delivered at the program level and can include varying models of work-</u>

	integrated learning. Students receive credit in the form of a certificate for the completion of all required activities. See section 11.5 Graduate Certificate in Work-Integrated Learning for specific requirements.

UNIVERSITY OF WATERLOO | Senate

For Approval **Open Session**

To:	Senate
From:	Senate Undergraduate Council
Sponsor/Presenter:	David DeVidi Associate Vice-President, Academic
Date of Meeting:	June 9, 2025
Agenda Item:	**7.1 Senate Undergraduate Council Report: Honours Bachelor of Medical Sciences (BMSci)**

Recommendation/Motion

That Senate approve the Honours Bachelor of Medical Sciences (BMSci) program, in partnership with St. George's University (SGU) in Grenada, including new courses that will deliver SGU course content, and proposed regulation changes, effective September 1, 2026, as presented.

Summary

Following an expedited approval process, Senate Undergraduate Council conducted an e-vote which concluded on May 30th, 2025 and agreed to forward the following items to Senate for approval as part of the regular agenda.

- Creation of the Honours Bachelor of Medical Sciences (BMSci) program

The proposal and related curricular documentation can be found in the posted materials for the SUC May 26, 2025 e-vote package. (Link pending SUC package materials)

Proposal/Rationale

The Faculty of Science (Science) at the University of Waterloo (UW), in an exclusive North American partnership with St. George's University (SGU) in Grenada, West Indies, will provide students an educational pathway to medical training, and a Doctorate of Medicine (M.D.) in this innovative undergraduate degree program. This partnership agreement between SGU and UW aligns with the success of an existing partnership agreement between SGU and Northumbria University (NU) in the United Kingdom (UK). The objective of the UW agreement is to diversify medical pathways for students, generate accelerated pathways out of high school, and create a pool of skilled medical professionals to address the demands within the Canadian health care system.

BMSci is a full-cost recovery co-matriculation undergraduate program. This program provides students with two unique opportunities, an entry from high school into a 6-year path, or an entry with first year credits into a 5-year path. In the 6-year path, students complete two years of preclinical studies at UW and four years of clinical training at SGU. In the 5-year path, students who meet pre-requisite admission requirements complete only the second of the two years at UW, followed by four years of clinical training at SGU. The

courses taken during the first two years of the M.D. program at SGU will count towards degree requirements of both the BMSci and M.D. degrees.

There are currently 24 UW graduates enrolled in the M.D. program at SGU. While this is an 8-year path for these students, the proposed program would provide an accelerated pathway for students, requiring only six years to obtain an M.D. from high school. Since 2019 there have been 42 Ontario high school students who have chosen to proceed through the 6-year path at SGU.

Over the past 40 years, SGU has conferred M.D. degrees on approximately 2,400 Canadian students, where 203 chose Canadian residencies after their degree. Of these residents, 125 physicians have practiced in Ontario to date. To return to Canada to practice medicine after graduating from SGU School of Medicine, Canadian students have two main pathways, the Canadian Residency Pathway (CaRMS) and the United States (U.S.) Residency Pathway through the National Resident Matching Program (NRMP).

With the implementation of this new proposed program and agreement with SGU, it is expected that SGU enrolment of Ontario students, as well as students from elsewhere in Canada, could grow, in alignment with North American students' preference to remain closer to home for the first two years of post-secondary education. The BMSci program is also an attractive alternative for a student demographic interested in an international educational pathway to practice medicine, including an interest in accessing U.S. residencies. The proposed program, with rigorous educational requirements and a shorter duration, will support Canada's efforts to recruit qualified medical professionals.

The proposed program is administered fully on-campus (UW and SGU) with a proposed launch of Fall 2026 and a first-year intake of up to 100 students, with a projected enrolment of 25 students for each of the 6-year and 5-year tracks (a minimum student number of 10 for each track, below which the program will not be offered). The proposed program aligns the learning outcomes between UW, SGU and Northumbria University (NU). The curriculum was designed by applying longstanding analytical practices of metrics and assessments that drive the success of students and graduates in medical education.

The tuition fee for Fall 2026 is projected to be $47,904 USD for the academic year, converting to approximately $70K CAD. A portion of the gross revenue from the tuition fee is allocated to UW to account for the human resource costs of administering the proposed program. These will be additional administrative and academic supports to promote student success in the program. This will include a dedicated advisor at the UW, after hours support, an advisor at SGU and cohort building activities, access to a peer mentorship program, and interaction with SGU alumni and physicians.

Administratively, the University benefits from the success of existing collaborative practices, processes and procedures that put at the center the specific needs of this student demographic. Student success drives the collaborative model between SGU and the institutional partnerships (NU and UW). As a result of the partnership agreement between SGU and NU, UW will share/access resource intensive administrative processes such as Registration and Admission, Marketing and Recruitment, and residency placement. The services through the Office of Career Guidance at SGU begin in the second year of the M.D. program (before clinical rotations) and continue after students graduate and enter residency. As per the partnership agreement, Canadian students have access to comprehensive resources for those aiming to return to Canada for residency, including a Canadian Residency Mentor who provides coaching on navigating the recruitment process.

The postsecondary credits students earn in the proposed program could be transferred to other science-related programs because there is considerable overlap in course requirements between the BMSci and other programs at UW. Students who choose not to

continue in the proposed program, or who have failed to meet progression requirements, will have the opportunity to transfer the course credits for entry to several existing Science programs. At this time, students will be reassessed to determine whether they meet the entry requirements for their chosen program at UW.

Admission Requirements

Academic Criteria

For direct entry from high school, an Ontario Secondary School Diploma (OSSD) with an overall average of about 90 per cent with a strong science performance, are the typical requirements for entry to SGU pre-clinical programs. The students admitted into the BMSci program will have met SGU admission requirements.

Once SGU completes an assessment of the potential students' credentials and have deemed they meet the admission requirements, they are provided with a link to an Ontario Universities' Application Centre (OUAC) application specific to this program. The OUAC application fee will be waived. The OUAC application to UW will enable the standard new student processes to take place. Once the potential UW student accepts the offer from the university, they are added to the Student Information System/Student Records (Quest) and receive identical communication and services afforded any student. At this stage they are considered a standard UW student with all the rights and privileges of a first-year student which means they have access to all the resources, amenities, benefits, services on-campus, and guaranteed access to housing in residence.

Non-Academic Criteria

SGU also undertakes a holistic admission process where students are examined for personal characteristics such as motivation for medicine, empathy and compassion, communication skills, critical thinking and curiosity, resilience, and teamwork. These factors are viewed in combination to consider how an individual might contribute value not only as a medical student but also as a future physician.

New Courses

New MEDSCI courses- Open to students in the new Bachelor of Medical Sciences (BMSci) program only:

- MEDSCI 200, 202- Year two courses (2A BMSci), with SGU content, taught at UW
- MEDSCI 203, 250, 260, 270, 280, 290- Year two courses (2B BMSci), with SGU content (mirror term), running 16 weeks at UW
- MEDSCI 300, 350, Year three courses (3A, 3B BMSci)/ Year one Doctor of Medicine courses, taught at SGU (co-matriculation)
- MEDSCI 400, 420, 450- Year four courses (4A, 4B, 4C BMSci)/Year two Doctor of Medicine courses, taught at SGU (co-matriculation)

Table 1: Determination of Course Weights - MEDSCI

(based on SGU credits)

MEDSCI	SGU credits	weeks	Assigned UW unit weight
200	1	12	0.25
202	2	12	0.5
203	3	16	0.5
250	4	16	0.5
260	4	16	0.5
270	4	16	0.5
280	3	16	0.5
290	4	16	0.5
300	17	17	2.5
350	17	18	2.5
400	21	18	3.0
420	8	6	1.0
450	19	18	2.5

General Guidelines to determine unit weights*	
SGU credits	UW units
1 credit	0.25 units
2-4 credits	0.5 units
5-8 credits	1.0 unit
9-12 credits	1.5 units
13-16 credits	2.0 units
17-20 credits	2.5 units
21-24 credits	3.0 units

*Using 4 credits to 0.5 unit as a rough guide, rounding up to higher credit

Associated Regulation Changes

The proposed new Bachelor of Medical Sciences (BMSci) program will have its own unique progression information. As students in the SGU M.D. program can complete their pre-clinical courses at either SGU, Northumbria (NU) or UW, it is necessary to establish equivalencies through grade conversions.

The SGU/UW grade conversion is achieved using the grade of 70 per cent at SGU representing a passing (satisfactory) minimum and aligning this with 60 per cent grade at UW, also representing a minimum satisfactory (C category) grade. The following will be used to interconvert between SGU and UW percentages:

UW% = 1.33 * SGU% - 33.3

where UW represents the percentage grade reported by a UW course and on a UW transcript, and where SGU per cent represents the percentage grade reported by a SGU course and is recorded on a SGU transcript.

SGU will set the progression and promotion requirements for students. Students receive this information in their manuals upon acceptance to SGU.

The minimum mark that students UW/SGU M.D. pathway must obtain in every course in terms 1A-2A is 70 per cent at SGU, converting to 60 per cent at UW. The term average requirements is set as an SGU grade point of 3.2 (~83 per cent). This corresponds to 77 per cent at UW.

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

c. 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

i. Science Faculty Council: March 31, 2025

ii. Senate Undergraduate Council: April 8, 2025 (preliminary proposal review)

iii. Senate Undergraduate Council, Curriculum Subcommittee: May 26, 2025 (via e-vote)

iv. Senate Undergraduate Council: May 30, 2025 (via e-vote)

v. Senate: June 9, 2025 (prospective)

Documentation Provided

i. Faculty of Science – Program Proposal (BMSci)
ii. Faculty of Science – New Courses, Plan and Regulation Changes (BMSci)
(Link pending SUC package materials)

UNIVERSITY OF WATERLOO

NEW PROGRAM PROPOSAL

OF

BACHELOR

OF

MEDICAL SCIENCES

Submitted to the
Ontario Universities Council on Quality Assurance

VOLUME I - PROPOSED BRIEF

SEPTEMBER 2026

***NOTE:** This template must be used for submission of a new program proposal. Please consult the University of Waterloo Institutional Quality Assurance Process and the Quality Assurance Framework (QAF) for details or the Academic Quality Enhancement Office.

****Volumes I, II, III must be reviewed and approved by the Academic Quality Enhancement Office, GSPA and IAP prior to submission to your Faculty Council****

Completed by AQuE Office

Proposed Start Date:

Fall 2026

(subject to change by AQuE Office depending on meeting approval milestones)

- QC Submission by May 2025
- QC Approval by July 2025

TABLE OF CONTENTS

1. INTRODUCTION

The Bachelor of Medical Sciences (BMSci)[1] program and pathway to a Doctor of Medicine (M.D.) program, known as the 6- and 5-Year Medical Degree Track and referred to as the proposed program throughout the application, is designed to provide students with the core knowledge, skills and abilities fundamental to academic success in health and medical sciences programs, as well as other science- and medical-related programs. Students develop their knowledge and skills in communications, biology, physiology, physics, and general and organic chemistry to prepare them for the rigours of continuing studies in medicine. In addition, students gain valuable coaching and mentorship by highly skilled faculty, physicians and graduates to prepare them for potential careers in the health and medical sciences that will enable them to achieve their career objectives.

The proposed program objectives and learning outcomes capture the fundamental principles in biology, anatomy and physiology and the impact of the social determinants of health on patient outcomes. This supports the graduate's clinical reasoning when evaluating patient symptoms and assessing potential and effective treatments, and, is a curricular foundation for further exploration of the learning outcomes that support patient care for the M.D. program at St. George's University (SGU) in Grenada, West Indies.

The Faculty of Science (Science), in partnership with SGU, will provide students in the proposed program with an educational pathway to medical training, residency and employment opportunities in a shorter duration (2+4 years versus 4+4 years). The negotiation of this agreement between SGU and the University of Waterloo (UW) will align with the success of an existing agreement between SGU and Northumbria University (NU) in the United Kingdom (UK). These agreements are focused on reducing barriers for students seeking pathways to becoming physicians. Currently there are no other Ontario institutions with a similar co-matriculation agreement with an international medical school.

The pathway created from the UW-SGU agreement provides students with dreams of practicing medicine to not wait anxiously as they progress through their undergraduate studies, concerned about how each grade will affect their chances of being accepted into a Canadian medical school after their fourth year of studies. This early acceptance, directly out of high school, provides the student who meets the minimum threshold, a guaranteed path into medical school. This is currently available in Grenada as the 6-year path directly through SGU, and Ontario students, and Canadian students more widely, who have chosen to attend SGU for that early acceptance program are succeeding in metrics at every level, termly tests, licensing exams, and residency match rates (see below). The UW-SGU agreement mirrors what was created 10 years ago with Northumbria University, where students can stay in the UK for the first two years of basic sciences training, before proceeding to the medicine courses, amounting to four years, at SGU in Grenada. This model is the foundation for the UW-SGU agreement. The UW-SGU agreement allows Ontario students to finish the basic sciences at UW therefore staying closer to home for those first two years out of high school and continuing for the remaining four years at SGU in Grenada.

[1] The BMSci program is a four-year honours program and will be used to refer to the first four years of the 6-Year Track and the last three years of the four-year honours program refers to the 5-Year Track.

UW is aware of the challenges faced by international medical graduates (IMGs) with Ontario restrictions of access to residencies currently capped at 10 per cent. Even with this in place, some Canadian students are continuing to choose from the various international pathways available to them, with many interested in family medicine or psychiatry, knowing there is a strong track record of IMGs obtaining those matches. To address the continuing reports of shortages in Ontario for family physicians, the UW-SGU pathway facilitates this journey for the student interested in what an international path has to offer. By relying on SGU alumni family physicians currently practicing Ontario (see Graduate Metrics below), students choosing the UW-SGU path can have access to mentors for career guidance. While SGU acknowledges that it has tracked students matched into their residencies, including Canadian residencies, there are many Canadians who return to work as physicians in Canada after American residencies, through reciprocity agreements between Canadian provinces and American states, and as such, some of the results below (see next paragraph) may be underreporting the number of Canadian SGU grads practicing in Canada.

As the current number of medical school graduates is predicted to yield a short-fall of physicians with Ontario currently under resourced for family physicians (CBC, Number of Ontarians without family doctor reaches 2.5 million, college says, July 12, 2024; Ontario Medical Association News release, January 29, 2024), the international school pathway permits a larger number of Canadian students to obtain this expertise. SGU has already placed over 200 Canadian graduates in Canadian residences, and over 68 UW graduates have proceeded to obtain their M.D. degree from SGU's medical school (data collected between 1980 and 2024). As this pathway is already of interest to students, and with demonstrated routes to return to practice in Canada (see Appendix C), this partnership will enhance Canada's recruitment of qualified medical personnel. Between 1980 and 2024, a total 203 Canadian graduates from SGU successfully matched into Canadian residency programs. Of these: 108 graduates (53 per cent) secured positions in Family Medicine residencies.

The agreement increases the number and diversity of medical school pathways available to students at the UW and supports undergraduate enrolment growth in Science. As a full cost-recovery program[2] based on a 2+4 model, it does not affect Ministry of Colleges and Universities (MCU) corridor funding and sets a precedent for similar pathways in the future at the UW. UW acknowledges that this proposed program comes at a higher cost for students and as a result, this program is likely to be of interest to the type of student already choosing to embark on the 6-year track in Grenada. The UW-SGU agreement allows these students to live at home or closer to home for two years before proceeding to Grenada.

The proposed program is comprised of a six-year full-time, on campus and regular stream program which includes a pathway to completing the M.D. program at SGU. This is referred to as the 6-year Medical Degree Track. Potential students can also access a 5-year Medical Degree Track. This provides potential students, with the requisite requirements, to access the second year of the proposed program. For the 6-year track, students are geographically

[2] As a full cost-recovery program, Science is aware it is not eligible for Ministry of Colleges and Universities (MCU) funding, students do not contribute to corridor admission reporting, and students may be eligible for the Ontario Student Assistance Program (OSAP).

located, for the first two years, at the UW and for the subsequent four years at SGU where they will be taking medical science courses to advance their skills in medicine-specific clinical settings. Students in the 5-year track are geographically located, for the first year, at UW and for the subsequent four years at SGU where they will be taking medical science courses to advance their skills in medicine-specific clinical settings.

Students in the proposed program co-matriculate with a BMSci undergraduate degree from UW, and a Doctor of Medicine (M.D.) degree from SGU. Students in the 5-year track will be awarded the BMSci degree after three years and students in the 6-year track after four years. Students in the 5-year track are awarded an M.D. after five years and students in the 6-year track are awarded an M.D. after six years (See Appendix B for a visual representation of the BMSci (UW), Doctor of Medicine (SGU), and 5YR and 6YR tracks). Please note that students will need to be located at SGU to complete the third- and fourth-year courses of the BMSci program.

Grade Conversion

As students in the SGU M.D. program can complete their pre-clinical courses at either SGU, Northumbria (NU) or UW, it is necessary to establish equivalencies through grade conversions.

The SGU/UW grade conversion is achieved using the grade of 70 per cent at SGU representing a passing (satisfactory) minimum and aligning this with 60 per cent grade at UW, also representing a minimum satisfactory (C category) grade. The following will be used to interconvert between SGU and UW percentages:

UW% = 1.33 * SGU% - 33.3

where UW represents the percentage grade reported by a UW course and on a UW transcript, and where SGU per cent represents the percentage grade reported by a SGU course and is recorded on a SGU transcript.

SGU will set the progression and promotion requirements for students. Students receive this information in their manuals upon acceptance to SGU.

The minimum mark that students UW/SGU M.D. pathway must obtain in every course in terms 1A-2A is 70 per cent at SGU, converting to 60 per cent at UW. The term average requirements is set as an SGU grade point of 3.2 (~83 per cent). This corresponds to 77 per cent at UW.

The requirements for UW students to meet the term progressions between 1A and 2A is:

- Minimum grade of 60 per cent in every course; and
- Minimum overall term average of 77 per cent.

During the 2B term, students are only taking SGU courses. The grades for these courses, determined by SGU grading, will be converted to UW grading for the BMSci UW student transcript.

Progression Requirements

Both UW and SGU will monitor the student's progress through the proposed program and can audit the administration of the program to ensure it is running efficiently, in alignment with the program objectives (POs), program learning outcomes (PLOs) and Degree Level Expectations and according to the terms and obligations set forth in the agreement. UW is

responsible for monitoring students' progress while students are enrolled in the first two years of study and will keep SGU informed of student progress.

Progression from 1A to 2B

Courses

Students must obtain SGU 70 per cent (UW 60 per cent minimum in every course).

- If a student does not meet this minimum, they must retake that course before progression to the next term. Only the higher grade is used in average calculations when repeated.
- A student can normally repeat a failed course only once, advisors will be in contact with these students to help them succeed.

Term Average

Students must meet the term average of SGU 83 per cent (UW 77 per cent) to progress to the next term.

- Students who do not meet this average will not proceed to the following term;
- Those who do not proceed can retake one or more courses to increase the grade in those courses to impact the overall term average, as only the higher grade is used in calculations of averages.

Promotion from 2B to 3A

Students must obtain:

- SGU 70 per cent (UW 60 per cent minimum in every course);
- SGU 83 per cent (UW 77 per cent) weighted average across all 2A and 2B courses
- SGU 80 per cent (UW 73 per cent) weighted average across all 2A and 2B science (Science courses do not include the Communications and Learning Strategies courses); and
- SGU 70 per cent (UW 60 per cent) minimum grade on each component of the comprehensive exam.

SGU will determine promotion and may offer students who do not meet one or more of the above requirements an opportunity to take courses in the following term at SGU so that their grades can meet requirements.

Progression once in M.D. program

Required minimum grade in each course:

- 3A: 69.5 per cent (UW 59 per cent);
- 3B: 71.5 per cent (UW 61.5 per cent); and
- 4A, 4B and 4C: 72.5 per cent (UW 63 per cent).

All grades from 2B and higher terms will be SGU graded, converted into UW percentages (using established grade conversion formula), and the UW grades will be recorded on the UW BMSci transcript.

Pathways and Student Transferability: UW Programs

The postsecondary credits students earn in the proposed program could be transferred to other science-related programs because there is considerable overlap in course requirements between the BMSci and other programs in Science. Students who choose not to continue in the proposed program, or who have failed to meet progression requirements (see above), will have the opportunity to apply to the UW to transfer the course credits for entry to several

existing Science programs. At this time, students will be reassessed to determine whether they meet the admission requirements for entry to programs at UW. If student applicants are found not to have completed the course requirements for Science, they will be denied admission and directed and guided to other opportunities, such as an online delivery to fulfill those requirements.

If successful with their application to transfer to another Science program, the student will continue to be registered at the UW and will pay the domestic or international tuition fee associated with the program, as appropriate. The student will continue to have access to all the resources and services (for example, counselling, campus wellness, athletics, bus pass, etc.) afforded any UW student.

An existing Science program with the best alignment to the proposed program is the Honours Bachelor of Biomedical Sciences (Biomedical Sciences) program, as there are many courses that contribute toward the core requirements in both programs. This is a regular program and therefore does not require students to complete co-op requirements. In this scenario all course credits from year one and two of the proposed program could be transferable. Students will need to meet the 65 per cent average in courses in Science and 60 per cent overall average, and any additional admission requirements (if applicable), for transfer to the Biomedical Sciences program.

An alternative to the Biomedical Sciences program is the Honours Bachelor of Science program, which is a very flexible program. In this case, all courses from year one and two of the proposed program could be transferred to either core or elective requirements of the program. Students will need to meet the 60 per cent average in courses in Science and 60 per cent overall average requirements, and any additional admission requirements (if applicable). The Honours Bachelor of Science is a regular program, chosen by many students who are interested in continuing studies in Canadian Medicine, Dentistry, Pharmacy or Optometry programs.

Any student who does not meet the above average requirements could transfer to the Bachelor of General Science three-year degree program that requires a 55 per cent average in courses in Science and a 55 per cent overall average, and any additional admission requirements (if applicable). Students who do not meet these requirements would not be permitted to continue studying in the Faculty of Science and can meet with advisors about transferring out of the Faculty.

Tuition

The proposed program is administered fully on-campus with a proposed launch of Fall 2026 and a first-year intake of up to 100 students, with a projected enrolment of 25 students for each of the 6-year and 5-year tracks, with a minimum student number of 10 for each track - below which the program will not be offered[3]. The tuition fee for Fall 2026, according to the partnership agreement, is at a rate of $47,904 USD for the academic year. This converts, on

[3] According to the agreement between UW and SGU, For the inaugural class, in September 2026, the minimum starting enrolment will be 10 Students. For future cohorts, this minimum viable cohort may be revised upon the agreement of both Parties, taking into consideration both internal and external factors that may impact setting the appropriate class size (Enrolment Targets, Schedule 3 – Recruitment and Marketing).

February 3, 2026, to approximately $34,932 CAD/ for the term and $69,863 CAD for the academic year. This is remitted to SGU by the student. SGU invoices students and collects all applicable student fees. SGU is also responsible for keeping an accurate accounting of student fees and for providing that accounting to the UW for review.

This tuition fee also accounts for the human resource costs of administering the proposed program. Once the tuition fee is collected by SGU, a portion of the gross revenue is allocated to UW.

Application Process

Potential students apply to the proposed program through the application procedure at SGU. SGU's committee on admissions, the Faculty Student Selection Committee (FSSC), reviews applicants holistically, taking into account both academic performance and personal attributes. Admission to the pre-clinical track requires strong academic achievement in high school, and especially in science subjects such as Biology, Chemistry, and Math. Additional factors, such as motivation for medicine, empathy and compassion, communication skills, critical thinking and curiosity, resilience, and teamwork, are also important in the selection process. These factors are viewed in combination to consider how an individual might contribute value not only as a medical student but also as a future physician.

All students admitted into the program by SGU will have met SGU requirements. Once SGU completes an assessment of the potential students' credentials and have deemed they meet the admission requirements, they are provided with a link to an Ontario Universities' Application Centre (OUAC) application specific to this program. The OUAC application fee will be waived. The OUAC application to UW will enable the standard new student processes to take place. Once the potential UW student accepts the offer from the university, they are added to the Student Information System/Student Records (Quest) and receive identical communication and services afforded any student. At this stage they are considered a standard UW student with all the rights and privileges of a first-year student which means they have access to all the resources, amenities, benefits, services on-campus, and guaranteed access to housing in residence (only first year students are guaranteed a spot in residence).

Registration

The Office of the Registrar will 'block enroll' students into required courses in each term of the four years of the proposed program. At the end of UW year three and UW year four, transcripts from SGU will be provided to record grades. During years three and four, as students are not present on campus, they will be enrolled with no fees[4] applicable as they will not be accessing UW resources. These students will not be paying ancillary or tuition fees to UW. Students will apply for graduation from UW at the end of year four. Students are geographically located at the UW in year one and two and at SGU in year three, four, five and six (see table below for visual representation; see Appendix B for program maps for the BMSci program, and 5- and 6-year tracks).

[4] The reference to fees is to those attributed to students who are physically on-campus. This does not refer to tuition. Students in years three and four will pay tuition to SGU.

Delivered at the University of Waterloo (*content/assessments provided by SGU)				Delivered at St. George's University			
1A Term (Fall)	1B Term (Winter)	2A Term (Fall)	*2B Term (Winter) 16 weeks	3A Term (Fall) 17 weeks	3B Term (Winter) 18 weeks	4A Term (Fall)	4B Term (Winter) 18 weeks
All courses taken at UW	All courses taken at UW	All courses taken at UW	All courses taken at UW	All courses taken at SGU	All courses taken at SGU	All courses taken at SGU	All courses taken at SGU
Fees applicable (students will pay SGU and SGU will transfer to UW)				Student will be enrolled in courses at UW but no fees will apply (all courses are 'zero billing units')			

UW Student Program Incentives

Students in the proposed program, while at the UW, will be placed in sections with students in other programs. To account for the tuition fee for the students in the proposed program, additional administrative and scholarly support to best facilitate their success in the program is provided. This includes a dedicated advisor at the UW, after hours support, an advisor at SGU and a peer mentorship program.

UW will provide access to peer mentors. The advisor for BMSci students will monitor student performance through the first-year midterm check-in and will connect with students to ensure they are aware of the progression requirements and the resources to succeed. The advisor will then determine if a student needs and is interested in participating in peer mentoring. Peer mentors are students who have excelled in particular courses and volunteer their time to support students to succeed. The advisor will have access to a list of tutors should students seek more specialized and individualized support. The benefits of a strong mentorship program can enhance academic success, improve study skills, increase student engagement, promote peer collaboration, and develop communication and leadership skills.

For fourth year students in the proposed program/second year student in the M.D. program, the SGU's Office of Career Guidance and Student Development offers comprehensive resources for Canadian students aiming to return to Canada for residency, which can be divided into two groups: those seeking residency through the Canadian Resident Matching Service (CaRMS) process and those who have completed a U.S. residency (see Appendix C for a discussion about the two pathways). Their support includes an annual webinar that presents updates on the CaRMS match and recent match statistics for both Canada and the U.S., broken down by specialty, geography, and institution. They also host specific sessions for Canadian interview preparation and a post-match webinar, featuring recent graduates who share insights on Canadian interview styles and contemporary topics both provincially and nationally.

In addition, Canadian students are assigned to a Canadian Residency Mentor, Dr. Joshua Ramjist, an SGU Canadian graduate, the Associate Program Director of the Pediatric General and Thoracic Surgery Fellowship at SickKids and liaison to the General Surgery program at the University of Toronto (UoT). He offers a valuable perspective on the nuances of recruitment, including the importance of diversity, equity, and inclusion in the current medical climate. He serves as a direct point of contact for Canadian students, assisting them as they navigate the

process. The services through the Office of Career Guidance start in the second year of the M.D. program (before clinical rotations) and continue after students graduate and enter residency. As per the partnership agreement, the services offered by SGU's Office of Career Guidance and Student Development to Canadian students is access to a Canadian Residency Mentor to provide coaching on navigating the recruitment process.

Student Financial Support

As an institution of higher education with a vision of providing access to education, UW understands the students' financial obligation to complete the proposed program. In this effort to provide access to a diverse body of students, the UW is exploring support in the form of scholarships provided to UW students in the first two years of the proposed program.

Comparable Program at UW

There are no comparable programs at UW. The Honours BMSci program uniquely presents students with the opportunity to co-matriculate with an international institution, where the fundamentals of medicine are condensed into two years of preclinical work undertaken at UW. The first two years of the M.D. program will provide the connection between more specialized anatomy, physiology and biochemistry, and pathology and treating the patient, and these two years will be counted towards degree requirements for both the BMSci and M.D. programs.

The Pre-Clinical Specialization in the School of Public Health Sciences at UW offers a blend of courses in the behaviour and health sciences. This specialization provides an opportunity to study the foundational sciences, such as biology, chemistry and physics, and the areas of global health, behaviour science and policy and health promotion. The proposed program differs from the Pre-Clinical Health Sciences Specialization as it addresses learning objectives principally in the areas of anatomy, biochemistry, physiology and psychology for the prevention, treatment and palliation of disease.

Comparable Programs in Ontario

There are two programs in Ontario that have a very similar title to the proposed degree program, and similar curricular and admission requirements. The programs at Western University and Brock University do not have formalized academic pathway agreements for graduates of an undergraduate program to an M.D. program.

Trent University has a number of pathways and partnerships, namely with SGU, the University of Medicine and Health Sciences (St. Kitts), Trinity School of Medicine (St. Vincent and the Grenadines) and Massachusetts College of Pharmacy and Health Sciences (United States) (see table below for details). The SGU agreement is a 4+4 pathway where after four years of study, graduates of the Bachelor Honours B.A. or B.Sc. while completing the Medical Professional Stream earn the qualifications for entry into SGU's School of Medicine (SoM) Doctor of Medicine (M.D.) program. Applicants from Trent University are required to graduate with a cumulative average of 77 per cent, complete an undergraduate interview with graduates of SGU's SoM, and meet all the admission requirements of SGU's SoM, including a letter of recommendation from the Trent University Medical Professional Stream. These students may spend their first two years studying in Grenada or choose to complete their first year at Northumbria University in the United Kingdom as part of the SGU NU/UK program before

returning to Grenada for their second year. During the third and fourth years, students will complete clinical rotations in the United States, United Kingdom, or Canada.

Ontario Tech also has 4+4 pathway agreements with Saba University School of Medicine, Medical University of the Americas, St. Matthew's University School of Medicine and SGU's SoM. Graduates of Chemical Biology, Health Sciences, Human Health Science, Neuroscience, Biomedical Science and Public Health with a minimum cumulative GPA of 75 per cent are eligible for admission to the M.D. programs. Graduates must satisfactorily complete an undergraduate interview with the admissions team at one of the pathway universities, along with other steps in the admissions process.

University/ Program Title	Western University Bachelor of Medical Sciences Approximately 800 students are admitted to Medical Sciences 1 each year.
Overview	Molecular, cellular and systematic organization of the human body and the biological mechanisms it uses to adapt to environmental changes and disease. Subject Areas: Biochemistry, Epidemiology and Biostatistics, Interdisciplinary Medical Sciences, Medical Biophysics, Medical Cell Biology, Medical Health Informatics, Microbiology and Immunology, One Health, Pathology, Pharmacology, and Physiology.
Admission Requirements	OSSD Ontario Grade 12 courses required for admission include: Biology, Chemistry, Calculus, English and two other 4U/M courses. Recommended Physics Students are registered as Medical Sciences students in Years 1 and 2 and apply to the BMSc Program when they enter Year 3. Entry into the BMSc Program is competitive and limited but admission is assured for Medical Sciences 2 students who achieve a minimum average of 80%, with no mark less than 60%, in the Year 2 courses that are specific to the student's module of interest for Year 3 BMSc.
Educational or Career Pathways	Many graduates with BMSc degrees go on to pursue further education in graduate studies (MSc and/or PhD) or professional schools such as: Dentistry, Medicine, Veterinary Medicine, Pharmacy, Physical Therapy, and Optometry. Other career opportunities include: Law (bioethics, patent development); Business (biotechnology marketing, research and development, quality control); Industry (pharmaceuticals,

	biotechnology, biosafety regulation and enforcement); and Teaching (elementary, secondary, post-secondary).
University/ Program Title	Brock University Bachelor of Science in Medical Sciences
Overview	Medical Sciences focuses on the biophysical foundation of human health. In addition to courses in anatomy, biology, physiology and the social sciences, we offer advanced courses in clinical epidemiology, cardiology, medical microbiology and pharmacology.
Admission Requirements	OSSD English (ENG4U) Biology (SBI4U) Chemistry (SCH4U) (min. 70%) One 4U math (MDM4U preferred) Recommended Exercise Science (PSE4U) or Introductory Kinesiology (PSK4U) Data Management (MDM4U)
Educational or Career Pathways	Graduates of this program have the foundation to pursue other advanced and professional degrees in medicine, dentistry, rehabilitation or occupational therapy, among others. For instance, Physician, Dentist, Optometrist, Chiropractor, Pharmacist, and Health researcher. *Some careers may require additional education/qualifications
University/ Program Title	Trent University Medical School Pathways & Partnerships
Overview	Through these partnerships and learning experiences, students can earn a competitive edge for entry into the Schools' professional medicine programs. Students begin their journey to medical school at Trent University, where they will spend four years completing an undergraduate degree in the program of their choice while concurrently participating in unique learning opportunities to prepare for medical school through the Medical Professional Stream.
Admission Requirements	SGU Requirements • Students must graduate Trent University with a Bachelor Honours B.A. or B.Sc. while completing the Medical Professional Stream with a cumulative average of 77% • Must obtain a competitive score on the Medical College Admission Test (MCAT), within three points of the prior term average score at St. George's

	• Complete an undergraduate interview with graduates of St. George's University • Meet all the admission requirements of St. George's University School of Medicine • A letter of recommendation from the Trent University Medical Professional Stream University of Medicine and Health Sciences (St. Kitts) Pathway • Completion of 20 credits of university level courses and the required prerequisite courses • An overall Grade Point Average of 3.2 (77%) or higher • No grade lower than a "C" (65%) in any of the prerequisite courses • Minimum MCAT score of 490 for those applicants applying to the Standard Basic Science Program • Applicants that do not meet this minimum MCAT requirement or do not have an MCAT score will be reviewed for the Extended Basic Sciences Program (5 semesters) or the Accelerated Review Program • A recommendation for admission by UMHS interviewer who interviewed the applicant • A written recommendation from Trent attesting to the candidate's preparation and that they are suitable for the study and practice of medicine. Trinity School of Medicine (Saint Vincent and the Grenadines) Pathway • Students must have 90 credit hours of undergraduate coursework or equivalent to 15 credits in Trent University standards, with a concentration of courses in the sciences (biology, chemistry and biochemistry) • Students should have a 77% cumulative grade average • The MCAT is no longer required for admission. • An interview with TMSU and two letters of recommendation Massachusetts College of Pharmacy and Health Sciences Pathway • Graduate from Trent University with a Bachelor Honours B.A. or B.Sc. while completing the Medical Professional Stream (MPS) • Achieve a competitive cumulative average (minimum 77%) • Complete an undergraduate interview with MCPHS admissions representatives • Submit a letter of recommendation from the Trent University MPS program • Meet all MCPHS admission requirements • MCAT not required for admission
Educational or Career Pathways	SGU University of Medicine and Health Sciences (St. Kitts) Pathway

	Trinity School of Medicine (Saint Vincent and the Grenadines) Pathway • Doctor • Surgeon • Anesthesiologist • Policy Advisor • Medical Researcher • General Practitioner • Professor Massachusetts College of Pharmacy and Health Sciences Pathway • Pharmacist • Optometrist • Clinical Researcher • Healthcare Consultant
University/ Program Title	Ontario Tech University Medical School Pathway
Overview	Ontario Tech students who successfully graduate from the following programs with a minimum cumulative GPA of 75 per cent* will be eligible for admission** to the Doctor of Medicine (MD) program at Saba University School of Medicine, Medical University of the Americas, St. Matthew's University School of Medicine or St. George's University of Grenada School of Medicine: • Chemical Biology • Health Sciences • Human Health Science • Neuroscience • Biomedical Science • Public Health *Ontario Tech graduates with a GPA lower than 75 per cent will be considered on an individual basis and subject to seat availability. **To receive entry, Ontario Tech graduates must satisfactorily complete an undergraduate interview with the admissions team at one of the pathway universities, along with other steps in the admissions process.
Admission Requirements	The following courses are the pre-medical requirements for admission Biology: One-year General Biology or Zoology course with a laboratory requirement. Students who elect to pursue additional coursework in the Biological Sciences should consider Genetics, Embryology, Cell and Molecular Biology, or Comparative Anatomy.

	Chemistry: One year of Organic Chemistry with a laboratory component. Biochemistry can be considered as an option for one semester of Organic Chemistry. English: At least one year of post-secondary level English literature, composition or communications.
Educational or Career Pathways	• Doctor • Surgeon • Anesthesiologist • Policy Advisor • Medical Researcher • General Practitioner • Professor

Comparable Program in Canada

The only Canadian 2+4 program combining an undergraduate Bachelor of Medical Science with a professional degree in the medical field is the University of Alberta pathway for Doctor of Dental Surgery (DDS) students. Students can enter with two years of post-secondary education in the social sciences, general or physical science or engineering, and obtain a Bachelor of Medical Science degree after two years in the DDS program. The proposed UW BMSci program presents a route through an international institution, and as such is not constrained by availability in a Canadian medical school.

Rationale for Proposed Program

The impetus for proposing this new program stems from the need in Ontario and Canada for physicians and a potential solution to the current limitations for training physicians in medical schools. Currently 2.5 million people in Ontario are without a family physician and that number is expected to double in two years (CBC, Number of Ontarians without family doctor reaches 2.5 million, college says, July 12, 2024; Ontario Medical Association News release, January 29, 2024). This amounts to approximately 2.8 physicians per 1000 people (Ontario Medical Association Fact Sheet: Ontario's Doctor Shortage). Despite forecasts that the shortage will worsen, enrolment at the 17 medical schools in Canada have not been permitted to increase at a rate that closes the gap, unlike our United States counterpart "which is nearing a targeted increase of 30 per cent set by the Association of American Medical Colleges in 2006 to address a projected physician shortage" (Owens, B., October 22, 2018, If Canada needs more doctors, why hasn't medical school enrolment increased? Canadian Medical Association Journal).

This agreement between the UW and SGU is timely. Since SGU has the capacity to accept a higher number of incoming medical students, the proposed program provides students access to medical training that has the potential to close the skills gap. Benefiting from the success of an existing 2+4 agreement with Northumbria University (NU) in the United Kingdom (UK), the

UW will be the institution in the North American space to provide access to the preclinical courses and medical training[5] at SGU.

Based on the data from SGU, there are a number of Canadian students entering SGU directly to do their two preparatory years followed by the M.D. program and currently paying the tuition fee and travelling internationally to obtain this medical training. SGU has reported that over the past 40 years approximately 2,400 Canadian students have graduated with an M.D. degree, 203 have secured Canadian Residencies and 125 are practicing in Ontario. There have been 68 graduates with a UW undergraduate degree who have proceeded to enrol in the SGU M.D. program between 1989 and 2020, with 24 UW graduates currently enrolled.

Canadian and American students achieved a 96 per cent first time pass rate on the United States Medical Licensing Examination (USMLE) Step 1. This is not surprising considering students in the proposed program have access to medical professionals, including SGU's Medical School instructors and advisors, and courses developed and delivered by SGU (2B term), referred to as the 'mirror' term. The content of the mirror term parallels the agreement between SGU and NU and is designed to provide students at NU and the UW an equivalent educational experience and comparable entry requirement for the clinical courses in the M.D. program. With past UW graduates succeeding in these exams, it is predicted that this proposed program will also generate successful graduates of the M.D. program.

With the implementation of this new proposed program and agreement with SGU, it is expected that SGU enrolment of Ontario students could grow to align with North American students' preference to remain closer to home for the first two years of post-secondary education. The UW/SGU partnership is well placed to provide students with an alternate avenue to pursue their MD and clear pathways to return to Canada as a practicing physician.

2. EVALUATION CRITERIA

2.1 Objectives of the program (QAF 2.1.2.1)

Program Objectives (POs)

- To provide a multidisciplinary program with theoretical and applied courses in the health sciences, liberal/communication arts and science.
- To teach students the significance of approaching clinical reasoning with a sensitivity and responsiveness to a diverse patient population.
- To provide students with opportunities to engage in an intellectual curiosity for new knowledge, guidelines, standards, technologies, products, services and resources that improve outcomes for patients and provide optimal healthcare.
- To provide a program where students develop the self-evaluation skills and passion for life-long learning that improves patient care and maintains a healthy professional identity.

[5] The agreement to support this proposed program is two-way between SGU and the UW. It is consistent with the successful program at NU to ensure students are equally prepared. NU is an external consultant to provide guidance and direction on how to structure the agreement.

- To provide students with experiential learning opportunities to gain the communication, professional and ethical skills to support collaborative and trusting relationships with patients, families, and all members of the health care team to advance patient care.

Nomenclature

The proposed title for the four-year degree is Honours Bachelor of Medical Sciences (BMSci). It meets degree level standards in credential, subject matter and outcomes. The courses at the UW have had curricular and instructional support by Educational Developers in the Centre for Teaching Excellence (CTE), who are familiar with degree level study. The title of the proposed program reflects the level of postsecondary education achieved and is consistent with the nomenclature of similar degrees in the sector, facilitating public understanding of the credential. By way of example, Western University, Bachelor of Medical Sciences, and Brock University, Bachelor of Science in Medical Sciences, have similar and most notably recognizable program titles.

Program Learning Outcomes (PLOs)

By the time of graduation, all students will be able to:

1. Apply communication tools and techniques to engage in a professional and respectful manner with various audiences and mediums.
2. Describe the etiology, pathogenesis, structural and molecular alterations as they relate to the signs, symptoms, laboratory results, imaging investigations and causes of common and important diseases.
3. Incorporate biological factors, such as aging, genetic and epigenetic, nutritional, molecular reactivity, and their effects on human health.
4. Incorporate the psycho-socio-cultural factors, such as behavior, psychological, cultural, environmental, economic, geographical, religious, and their effects on human health.
5. Apply scientific health information in clinical reasoning.
6. Evaluate scientific studies and evidence-based therapeutic strategies to determine the best options for the prevention, treatment and palliation of disease.
7. Adhere to ethical behaviour that respects diversity and patient autonomy, and act in accordance with ethical codes of conduct, following patient privacy and informed consent procedures.
8. Commit to self-evaluation and life-long learning by investigating and evaluating professional practices, engaging in professional development and seeking professional networking and mentorship opportunities to improve patient care and maintain a healthy professional identity.
9. Assess healthcare systems, resources, services and patient care.

Alignment with Strategic Plans

The partnership with SGU is in the spirit of the UW's historical foundation of "[c]onnecting with our community and being engaged nationally and globally". It champions the UW's and Science's commitment to interdisciplinary and international educational opportunities that empower students to forge connections and engagement with communities more broadly. Science is committed to "[d]eveloping programs to support employees and students [that] create a strong, supportive community where people have the tools they need to succeed".

The students of the proposed program engage with a community of peers, colleagues and healthcare professionals to forge, as graduates, social connections on a global scale.

This partnership recognizes the strength of the UW's intellectual and research talent, strength of the academic programs, and the rich student experience evident in programs at the university. The proposed program removes systemic barriers to achieving personal, academic and professional goals and contributes strong future talent to address the urgent need for physicians globally. The launch of the proposed program in Fall 2026 increases the number and diversity of medical school pathways at the UW and increases the undergraduate enrolment in Science. Students accessing this diverse learning experience and educational pathway will be strong future-ready talent and global citizens addressing a rapidly changing and complex future.

Equity

Addressing equity, diversity and inclusion (EDI) in Science responds to one of the three main pillars in the UW's Strategic plan: "strengthening sustainable and diverse communities". For instance, the Department of Biology's and Physics' commitment to EDI is directly in line with a commitment to a strong, diverse, and productive community. Empirical studies have repeatedly demonstrated that highly diverse environments improve team productivity and decision making. Ensuring department members feel safe and empowered within their place of work will help members maximize their potential and strengthen research and teaching outcomes.

There have been many developments and initiatives aimed at addressing equity. For instance, the Department of Physics has been addressing the underrepresentation of women since 2016. Below is a list of initiatives:

- The Department invited a Site Visit from the American Physical Society's Committee on the Status of Women in Physics, March 20-23, 2016. The committee found that "the Department has a collegial environment for faculty" and that the visit itself is a "clear indication that the Department is willing to work towards making an equally welcome environment for all members of the community". They provided a written report with recommendations and action items to the Chair which was made available to faculty and staff. Many of the recommendations and action items have been addressed.
- Departmental support for FemPhys, a community of undergraduate and graduate students in physics and related fields. They hold regular events and discussions around a variety of social and academic topics, often related to equity. Physics provides the club with newly renovated space, a faculty liaison, and some financial support.
- Departmental funding (about $3000/year) to partially subsidize students who wish to attend the Women in Physics Canada (WIPC) and the Canadian Conference for Undergraduate Women in Physics (CCUWiP) conferences, in addition to the annual meeting of the Canadian Association of Physicists (CAP). Approximately ten students per year are supported through these funds.
- Departmental seminars and colloquia about equity (1-2 per year).
- Physics participated in an intervention led by the College Transition Collaborative (CTC) and provided partial financial support.
- Hiring procedures have been overhauled. Equity training for hiring committees, conducted through the Office of Equity, Diversity, Inclusion and Anti-Racism, is now

mandatory for all members. In addition, we have changed our procedures to adopt best practices, including asking standardized questions of all candidates during interviews.
- Online content (e.g., course outlines) have been updated to conform to Accessibility requirements.

Another example is the formation of the Department of Biology Equity, Diversity, and Inclusion (EDI) committee initiated in January 2021. An internal survey of staff, lecturers, and faculty identified areas for improvement and was the impetus for formation of this committee. There was considerable enthusiasm within the department for the committee.

Activities to date: The EDI committee built a website which is hosted within the Department of Biology website, including a resource page with compiled resources from reputable sources addressing diverse topics within the EDI space. The website also has an anonymous comment form, to encourage confidential feedback. A fact sheet on Microaggressions was developed and circulated to the department, addressing an identified issue within the Department. The fact sheets focus on definitions of a given issue of interest and suggest ways to address the issue from the perspective of perpetrators, observers, and the impacted individuals. The number of fact sheets is impressive and the development of more is underway.

The EDI committee partnered with Science Outreach and the Earth Sciences Museum to host an exhibit featuring Dr. Anne Dagg's writings on women in science with a display of artifacts from her career as an internationally recognized giraffologist. The exhibit ran from August to November 2022 in the STC main lobby. The EDI committee hosted Dr. Dagg and her daughter Mary for a Q&A and meet and greet at the close of the exhibit.

In the Winter 2023, the EDI committee ran a 12-Week EDI Challenge for the Department of Biology graduate students, postdoctoral fellows, staff, instructors, and faculty members. The challenge consisted of a weekly email on a topic (e.g., racism, LGBTQ2SIA+ identities, Indigenous rights) which provided 1-3 quick challenges to connect with the topic (including highlighting UW-specific resources, organizations, and clubs) and a series of reflective questions. Each week also included opportunities for a deeper examination of the topic through books, podcasts, workshops, and options to expand the participants' networks.

The 12-Week EDI challenge highlighted workshops and courses available at the UW or freely available elsewhere on topics including Indigenous Rights and sexism. The EDI Challenge also shared resources and quick actions members of the Department could take to improve equity or inclusion in their teaching and research activities, including suggestions to list pronouns, improve diversity of highlighted scientists within lectures, and a science-themed safe space poster.

In teaching and learning activities (e.g., courses, workshops, seminars, etc.), the Biology Department EDI committee has liaised with the Seminar committee to improve diversity within the speaker series and include speakers with research examining EDI considerations. Highlights of this collaboration include Dr. Juliet Daniels from McMaster University, who researches cancer in underrepresented populations, Dr. Lauren Esposito from CalAcademy, who is the co-founder for the network of 500 Queer Scientists, and Mr. Myeengun Henry, the UW Health Sciences Indigenous Knowledge Holder.

The Department of Biology has been steadily improving the diversity within their faculty demographics. A mentorship program has been developed, which helps to ensure members of underrepresented groups do not feel isolated and have equal knowledge of and access to resources on campus.

Resources

University of Waterloo. Faculty of Science (n.d.) Future of Science, Strategic Plan 2024-2029.
University of Waterloo. (n.d.) Connecting Imagination with Impact, Strategic Plan 2020-2025.

2.2 Program Requirements (QAF 2.1.2.2)

Subject Areas and Scaffolding

The program's structure and curricular requirements meet the program objectives and program-level learning outcomes through a scaffolded curricular approach that includes increasing complexity of subject matter and assessment of student proficiency. During the first year of study, the students are introduced to the foundational subject areas in science, chemistry, biology and physics. This is expanded during the second year, to capture the more complex examples in anatomy, organic chemistry, biochemistry, physiology and psychopathology. As the students progress through year three, they are challenged to apply the fundamental knowledge of natural science to better understand human systems, for example, musculoskeletal, cardiovascular, pulmonary and renal systems. During the fourth and final year of the program, students work to develop evidence-based therapeutic strategies to determine the best options for the prevention, treatment and palliation of disease.

In-person Delivery

The proposed program is composed of courses that will rely on in-person delivery. The in-person delivery, in addition to the structure, curricular requirements and the teaching and assessment practices, facilitates the students' successful achievement of the POs and PLOs. Courses may choose to engage students online as well. In-person delivery is significant for the students' ability to engage in active learning and experiential learning opportunities to support them to solve clinical problems and apply communication skills to engage in an ethical and professional manner. Students will have access to laboratories for hands-on skills and application of knowledge, tools and methodologies to support clinical reasoning.

The curriculum for the BMSci program aligns with the preparatory two years delivered by NU. These students have demonstrated strong success in U.S. licensing examinations (USMLEs), success matching residencies, and have obtained work as physicians in many different countries. With this success, we are confident that the foundations of this proposed program are well aimed to develop the skills needed for students' success.

Program Currency: SGU[6]

[6] See 2.7 Quality and other indicators below for a discussion about Faculty Currency at UW and SGU.

The curriculum for the 6- and 5-Year tracks (see Appendix B) falls under the Joint Curriculum Committee of the Pre-Clinical Sciences Program (JCC-PCSP) which is a sub-committee of the Basic Sciences Curriculum Committee for the 4-year M.D. program and the Curriculum Committee of the School of Arts and Sciences (SAS). The JCC-PCSP is formed with School of Medicine (SOM) faculty, SAS Faculty, and student representatives from the student government.

The M.D. program has a four-year cycle of curriculum review that includes all faculty from the M.D. program including clinical faculty who are residency directors from affiliated hospital sites that are also affiliated SGU faculty and in some cases also serve as faculty for other medical schools. These are industry specialists and affiliated faculty of SGU in the clinical setting; they work across the healthcare sector in the UK and USA and are often responsible for postgraduate medical training and residency administration outside of their SGU-SOM role. The pre-medical program follows an adjusted program review based on the cadence of the M.D. review process, where every four years there is a whole curriculum review. This is scheduled for Spring 2025 and is the first cycle of a new review pattern as adopted by the curriculum committee.

Additionally, the SOM board is designated as a set of academic and industry representatives that act as the governance committee for the SOM M.D. program, but may also advise on pre-med and feeder programs for the SOM. The Admissions Policy Board of the School of Medicine (APBSOM) establishes policies and regulations for admissions requirements, including the feeder programs.

2.3 Assessment of teaching and learning (QAF 2.1.2.4)

The grading and assessment of student succession throughout the proposed program aligns with the practices currently used in existing programs in Science. Students will learn through lectures, laboratory classes, and small group work. They will submit written assignments, engage with case analyses, participate in group and individual assignments, deliver presentations, complete examinations (mid-term tests and final examinations) and participate in simulation or performance-based assessments. See Appendix A for a curriculum map of the courses and assessments to the PLOs and Undergraduate Degree Level Expectations (UDLEs).

Written assignments are effective in assessing students' ability to express understanding, analysis, and interpretation of a topic, issue, question, or prompt provided by an instructor. Written assignments can take various forms, such as essays - argumentative, expository, analytical, and reflective – research projects, online discussion posts, presentations and reports. These types of assessments meet the POs and PLOs that address the application of communication strategies (PO#1, PLO#1), the description of science-related technical content as it relates to other forms of information (PLO#2), the evaluation of scientific content (PO#3, PLO#6) and the commitment to self-reflective practice for the health care professional and engaging in networking opportunities (PO#4, PLO#8).

Case analysis prepares students to engage in an analysis and/or evaluation of a specific case study, in which key issues/problems are identified and practical solutions or recommendations are proposed. This supports students to meet the expectation to

incorporate psycho-social, institutional (PLO#9) and scientific information to assess the impact on human health (PO#1, PLO#3, PLO#4). Case study analysis provides students the opportunity to demonstrate critical thinking and critical reasoning skills (PO#2, PLO#5) in the application of specific knowledge and skills in activities that simulate real-life situations. It also facilitates opportunities to practice and receive feedback from colleagues and instructors to build respectful professional relationships (PLO#7, PLO#8, PLO#9). Students' participation in collaborative tasks and/or projects involving small groups assess their collective and individual learning outcomes, skills, and abilities. Group work focuses on evaluating students' capacity to work effectively as part of a team, solve problems collaboratively, communicate ideas, and achieve shared goals. This supports PLOs that address adherence to ethical and respectful behaviour (PO#5, PLO#7) and building a strong professional identity (PO#4, PLO#8).

Tests and examinations are used in the proposed program to prepare students to demonstrate their knowledge, understanding, and skills without access to any external resources or materials, perform specific skills, tasks, procedures, or demonstrations within a controlled setting. These types of assessments focus on assessing scientific knowledge (PLO#6), demonstrating technical proficiency (PLO#2), and applying theoretical concepts (PO#3, PLO#5).

Students also engage in simulation or performance-based assessments. These are structured educational experiences to engage in hands-on learning and practical training within a professional setting relevant to the discipline studied. Students demonstrate critical thinking (PO#2, PLO#5), the application of specific knowledge and skills in activities that simulate real-life situations (PO#5, PLO#6) and professionalism (PO#4, PLO#7).

Students develop theoretical knowledge across eight terms through a program curriculum scaffolded with increasing complexity and detailed knowledge expectations (Depth and Breadth & Diversity). The use of a variety of assessment practices supports learners in applying concepts (Application of Knowledge), theory and methods (Knowledge of Methodologies), procedural skills (Experiential Learning & Autonomy and Professional Capacity), communication strategies (Communication Skills) and clinical reasoning (Application of Knowledge & Awareness of Limits of Knowledge) to inform medical care. The assessments will be diversified and challenge students to apply the knowledge and skills to demonstrate proficiency in meeting the POs and PLOs.

Overall course grades will be based on the student's performance on these various assessments and serve to evaluate the achievement of the Degree Level Expectations, POs and PLOs. Each will be measured by several assessments embedded in the courses throughout the curriculum. Student performance on these and the final assessments will be measured against pre-established performance benchmarks and conveyed using rubrics, where appropriate. See a curriculum map of the PLOs aligned to the UDLEs, courses and assessments in Appendix A.

Quality Assurance: Academic Curriculum Alignment

The UW and SGU share the responsibility for curricular quality control of the proposed program (see Program Currency above for discussion about industry engagement and academic quality measures). Quality of provision is the responsibility of all managerial,

academic, administrative and technical staff associated with the proposed program. The proposed program shall be subject to UW's Institutional Quality Assurance Processes (alignment with POs, PLOs and Degree Level Expectations) and SGU's reasonable academic standards, according to the agreement.

As is the case for both UW and SGU instructor expectations, instructors are responsible to deliver and assess the subject, maintain appropriate records and have academic oversight, this includes responsibility for all Quality Assurance procedures, such as the co-ordination, organisation and development of the content and the delivery of the course(s) and co-ordination and organisation of assessment of the course(s).

A joint academic management structure will be defined by both institutions to support curriculum co-ordination, ensure academic quality, establish joint systems and arbitrate any concerns or problems. This structure centers on the appointment of representatives or appointed designates (known as Partnership Managers) at both institutions. Partnership Managers will be responsible for implementing the structure and for revising as needed for the continued administration of the proposed program. The UW Partnership Managers will be responsible for the proposed program and ultimately, the relevant academic outcomes. A Joint Steering Committee will meet quarterly to discuss issues arising from the operation of the proposed program, including recruitment, financial performance, fees and other related matters.

Graduate Metrics

The Advancement Office in Science (University of Waterloo Faculty of Science) collects data at various points in time. The first is at convocation where the graduate scans a QR code and provides information about their next steps. At year one and five, incentivized surveys are distributed. The objective of these surveys is to update contact information and employment. The office is also responsible for participating in the cyclical review and collects data relevant to the Department's needs.

SGU maintains records of all graduates from the M.D. program, including student residency specialty and location. From these records, UW will be able to connect with Canadian physicians and gradates of UW's BMSci program. To date, SGU is aware of four UW graduates who continued and obtained an SGU M.D. degree and who obtained an Ontario residency (Emergency Medicine, Internal Medicine and two in Family Medicine).

2.4 Admission Requirements (QAF 2.1.2.5)

This proposed program is a full-time and a fully on-campus delivery (see 2.2 Program Requirements above for a description of the significance of an in-person delivery). Courses retain the freedom to require students to engage with online material, including online assessments, at the discretion of the instructor.

For direct entry from high school, an Ontario Secondary School Diploma (OSSD) with an overall average of at least 90 per cent with a strong science performance, are the typical requirements for entry to SGU pre-clinical programs. The students admitted into the BMSci program will have met SGU admission requirements. SGU also undertakes a holistic admission process where students are examined for personal characteristics such as

motivation for medicine, empathy and compassion, communication skills, critical thinking and curiosity, resilience, and teamwork, are also important in the selection process. These factors are viewed in combination to consider how an individual might contribute value not only as a medical student but also as a future physician.

2.5 Resources (QAF 2.1.2.6)

Given the program's planned / anticipated class sizes and cohorts as well as its program-level learning outcomes:

a) Provide evidence of participation of a sufficient number and quality of core faculty who are competent to teach and/or supervise in and achieve the goals of the program and foster the appropriate academic environment;

NOTE: It may be helpful to create a table or map detailing faculty teaching assignments.

Year/ Term	Course Title	Units	Professor/ Faculty	Highest Qualification Earned and Discipline of Study	Appointment (Regular/ Adjunct/PT/ Limited Term)	Expertise[7] (qualifications, funding, honours, awards, research, innovation and scholarly record, etc.)
1/A	CHEM 120: General Chemistry 1 Equivalent: CHEM 122 (SGU)	0.5	Laura Ingram Associate Professor, Teaching Stream Department of Chemistry	Ph.D. Organic Chemistry	Regular	2022 University of Waterloo WUSA Excellence in Undergraduate Teaching Award 2009 Author of three published journal articles (2006, 2009, 2011), one of which was a "Featured Article" in the Journal of Organic Chemistry 2007-2010 NSERC Council of Canada Postgraduate Scholarship (Doctoral) 2007 Dean of Science Award for Outstanding Research in a Chemistry M.Sc. Program 2007-2010 University of Waterloo President's Graduate Scholarship 2007 University of Waterloo Provost Doctoral Entrance Award 2008 & 2005 Poster Awards for Biological and Medicinal Chemistry – CSC Conference 2006 Oral Presentation Award for Organic Chemistry – CSC Conference
	CHEM 120L: General Chemistry Laboratory 1	0.25	Sue Stathopulos Laboratory Instructor	BSc – Honours Science	Staff	Workshops UW First Year Science student workshop: 2022-2024 Marketing your science skills

[7] Only select information, to streamline the table, is included on this table. CVs, which have more detail about community engagement, graduate student advising, and publications, for instance are available for review in Volume 3.

Year/ Term	Course Title	Units	Professor/ Faculty	Highest Qualification Earned and Discipline of Study	Appointment (Regular/ Adjunct/PT/ Limited Term)	Expertise[7] (qualifications, funding, honours, awards, research, innovation and scholarly record, etc.)
			Department of Chemistry			SHAD Canada 3-day chemistry workshop: 2024 topic – green chemistry SHAD Canada 3-day chemistry workshop: 2023 topic – technology in the laboratory STAO 2016: Workshop presentation: Taking the fear out of the first-year chemistry lab Gairdner Lecture workshop: Topic- Reaction Kinetics and Rate Laws TD Discovery Days workshops: Topic – Vitamin C analysis Chem Ed Conference: Workshop presentation: First-year Chemistry Success UW Living Learning Community workshop: Topic – Writing Laboratory Reports BCCE 1998: Chemicals and Equipment Chair Chem Ed 2013: Logistics Chair
	PSYCH 101: Introductory Psychology Equivalent: PHYC 201 (SGU)	0.5	Paul Wehr Associate Professor, Teaching Stream Department of Psychology	Ph.D. Psychology	Regular	**Awards** 2019 University of Waterloo Online Course Design Award for PSYCH101. 2018 – 2020 Arts First Teaching Fellow with grant (CDN 2,000), University of Waterloo. 2016 – 2017 Learning Innovation and Technology Enhancement Full Grant (CDN 30,000), University of Waterloo. 2011 Recipient of the Knox Master Teaching Award for best sessional instructor in the psychology department at UBC, as voted by the student body.

Year/ Term	Course Title	Units	Professor/ Faculty	Highest Qualification Earned and Discipline of Study	Appointment (Regular/ Adjunct/PT/ Limited Term)	Expertise[7] (qualifications, funding, honours, awards, research, innovation and scholarly record, etc.)
						2007 Recipient of an Award for Teaching Excellence, Kwantlen Polytechnic University. Student nominated award. 2011, 2012 Notice of Special Recognition, Capilano University. Submitted by graduating students to thank a faculty or staff member who made an impact on their life, or who helped them to achieve their educational goals. 2004 – 2006Centre of Excellence Research Grant (CDN 10,000), Hokkaido University. 2000 – 2003University Graduate Fellowship (CDN 40,000), University of British Columbia. 1998 Best Thesis in Psychology, Nomination, CSULB
	PHYS 105: Introduction to Physics for the Health Care Professions (new) Equivalent: PHYS 200 (SGU)	0.5	Stefan Idziak Associate Dean of Science for Experiential Education and Computing Department of Physics and Astronomy	Ph.D., Physics	Regular	**Awards** 2022 Excellence in Science Teaching Award 2018 Youth Science Canada Distinguished Service Award 2000 Premier's Research Excellence Award 1987 Dean's Fellow, University of Pennsylvania 1986 Robert E. Bell Prize University Scholar, McGill University; E. R. Crawford Scholarship, McGill University
	HLTH 101: Introduction to Health 1 Equivalent: PUBH 302 (SGU)	0.5	Diane E. (Ronan) Williams Associate Director Undergrad	Ph.D. Speech and Hearing Bioscience and Technology	Regular	**Academic Awards and Distinctions** April 2003-2004 Vollum Institute Training Grant, Oregon Health and Sciences University. June 24-July 1, 2001 NSF Fellowship to attend the 4th international IEEE EMBS (Engineering in Medicine and Biology Society) Summer School on

Year/ Term	Course Title	Units	Professor/ Faculty	Highest Qualification Earned and Discipline of Study	Appointment (Regular/ Adjunct/PT/ Limited Term)	Expertise[7] (qualifications, funding, honours, awards, research, innovation and scholarly record, etc.)
			Faculty of Health, School of Public Health Sciences			Biocomplexity, Bioscaling, and Biosignal Interpretation at Dartmouth College in New Hampshire.
	BIOL 130: Introductory Cell Biology	0.5	Vivian Dayeh Associate Professor, Teaching Stream Department of Biology	Ph.D., Biology	Regular	**Research Grants** 2024–2025 Indigenous Learning Circles in Stem Education, University of Waterloo LITE Seed Grant, $7,500, (Principal Investigator, with collaborators B. Lee and S. Sloat) 2023–2024 Building an Accurate and Learner-Centered Library of Scientific Artwork in the Area of Human Physiology, Staebler Insurance OER Fellows Grant; $5,000 (Principal Investigator) **Scholarships/Awards** 2024 Society for In Vitro Biology (SIVB) Service Award 2023 Society for In Vitro Biology (SIVB) President's Award 2023 Society for In Vitro Biology (SIVB) Service Award 2021 Society for In Vitro Biology (SIVB) Fellow Award (2021). Awarded to those who have made a significant contribution to the field of in vitro biology and service to the society. 2021 Society for In Vitro Biology (SIVB) Service Award

Year/ Term	Course Title	Units	Professor/ Faculty	Highest Qualification Earned and Discipline of Study	Appointment (Regular/ Adjunct/PT/ Limited Term)	Expertise[7] (qualifications, funding, honours, awards, research, innovation and scholarly record, etc.)
						2020 University of Waterloo Outstanding Performance Award 2018 Professor Jack Carlson Teaching Excellence Award. Department of Biology, University of Waterloo
	BIOL 130L: Cell Biology Laboratory	0.25	Jola Gurska	Ph.D. Biology	Staff	**Awards, Scholarships and Grants** 2021-2022 University of Waterloo, CTE LITE SEED Grant, $6800 2020-2021 University of Waterloo, CTE LITE SEED Grant, $4000
1/B	CHEM 123: General Chemistry 2 Equivalent: CHEM 124 (SGU)	0.5	Laura Ingram Associate Professor, Teaching Stream Department of Chemistry	Ph.D. in Organic Chemistry	Regular	See General Chemistry 1 above
	CHEM 123L: General Chemistry Laboratory 2 Equivalent: CHEM 125 (SGU)	0.25	Sue Stathopulos		Staff	See General Chemistry Laboratory 1
	KIN 146: Introduction to Human Nutrition Equivalent: NUTR 201 (SGU)	0.5	Ken D. Stark Professor Department of Kinesiology and Health Sciences	Ph.D. Human Biology and Nutritional Science	Regular	**Academic Awards and Distinctions** 2017-2022 Tier 2 CIHR Canada Research Chair Renewal 2012-2017 Tier 2 CIHR Canada Research Chair 2009 Early Researcher Award – Ontario Ministry of Research and Innovation 2009 Young Scientist Award - American Oil Chemists' Society

Year/ Term	Course Title	Units	Professor/ Faculty	Highest Qualification Earned and Discipline of Study	Appointment (Regular/ Adjunct/PT/ Limited Term)	Expertise[7] (qualifications, funding, honours, awards, research, innovation and scholarly record, etc.)
						2006 Young Investigator Grant - International Society for the Study of Fatty Acids and Lipids 2005 – 2007 New Investigator Scholarship - GENESIS ICE Team (Canadian Institutes of Health Research/Heart and Stroke Foundation of Canada Interdisciplinary Capacity Enhancement Team. Gender and Sex Determinants of Cardiovascular Disease: From Bench to Beyond) **Scholarly and Professional Activities** **Grant Review Activity** 2024 NSERC Discovery Grant External Reviewer (X1) 2022 NSERC Discovery Grant External Reviewer (X2) 2021 NSERC Discovery Grant External Reviewer (X2) 2018 CFI Leaders Fund External Reviewer 2018-2019 CIHR College of Reviewers 2018 NSERC Discovery Grant External Reviewer 2017 UW Network for Aging Research Catalyst Grant 2017 NSERC Discovery Grant External Reviewer (X3) 2015-2018 CIHR Vanier Canada Graduate Scholarships selection committee
	BIOL 201: Human Anatomy Equivalent: BIOL 101 (SGU)	0.5)	Michael Bording-Jorgensen Assistant Professor, Teaching Stream	PhD in Physiology	Regular	**Funding** 2023 Farncombe Family Digestive Health Research Institute Postdoctoral Fellowship Project: Therapeutic effects of new-generation anti-proteolytic probiotics in colitis

Year/ Term	Course Title	Units	Professor/ Faculty	Highest Qualification Earned and Discipline of Study	Appointment (Regular/ Adjunct/PT/ Limited Term)	Expertise[7] (qualifications, funding, honours, awards, research, innovation and scholarly record, etc.)
			Department of Biology & Vivian Dayeh (see details above)			2021 Weston Family Foundation Proof-of-Principle LOI Project Title: Dietary fibers: feeding the microbiome, or fueling inflammation in diseases of dysbiosis Principle Applicant: Dr. Heather Armstrong Role: Co-Applicant 2020-2022 Postdoctoral Fellowship November Funding Agency: Mitacs Elevate and W. Garfield Weston Foundation Project Title: Fibre in Children with Inflammatory Bowel Diseases: Feeding Our Microbes vs. Fuelling Inflammation **Professional Awards** 2024 Canadian Digestive Disease Week Poster of Distinction – Canadian Association of Gastroenterology 2023 Farncombe Family Digestive Health Research Institute Research Day Poster Award 2023 Canadian Digestive Disease Week Poster of Distinction – Canadian Association of Gastroenterology 2022 Canadian Digestive Disease Week Poster of Distinction – Canadian Association of Gastroenterology 2021 Division of Gastroenterology Top Poster Award 2020-2022 Mitacs Elevate Post-Doctoral Fellowship

Year/ Term	Course Title	Units	Professor/ Faculty	Highest Qualification Earned and Discipline of Study	Appointment (Regular/ Adjunct/PT/ Limited Term)	Expertise[7] (qualifications, funding, honours, awards, research, innovation and scholarly record, etc.)
	BIOL 239: Genetics Equivalent: BIOL 320 (SGU)	0.5	Jacqueline MacDonald Assistant Professor Department of Biology	Ph.D. Chemical Engineering and Applied Chemistry	Regular	**Scholarships and Awards** 2012-2015 NSERC Visiting Fellowship, $150,000 2011-2012 Biozone Graduate Scholarship, $3,000 2011-2012 McAllister Graduate Fellowship, $2,500 2010-2011 Doctoral Completion Award, $3,560 2008-2009 Ontario Graduate Scholarship in Science and Technology, $15,000 2007-2008 University of Toronto Open Fellowship, $19,000 2000-2004 Dean's Honor List (all 4 years) 2000-2001 Western Scholar Award, $750
	HLTH 204: Quantitative Approaches to Health Science Equivalent: MATH 220 (SGU)	0.5	Ashok Chaurasia Associate Professor School of Public Health Sciences	Ph.D. Statistics	Regular	**Academic Awards and Distinctions** 2023 Nominated for the 2023 Faculty of Health Mid-Career Graduate Mentorship Award. 2022 Applied Health Sciences Teaching Award Co-recipient, University of Waterloo. 2017-2018 Nominated for Applied Health Sciences Teaching Award, University of Waterloo. 2014 Young Researcher Travel Award for Ordered Data Analysis, Models, and Health Research Models: An International Conference. **Research Grants and Contracts** 2022-2023 Project Grant, Government of Alberta, Can traumatic events across the lifespan affect cardiovascular and metabolic health in first responders? $56,898.01 (CAD) 2021-2022 Operating Grant: Emerging COVID-19 Research Gaps & Priorities - Indigenous Health

Year/ Term	Course Title	Units	Professor/ Faculty	Highest Qualification Earned and Discipline of Study	Appointment (Regular/ Adjunct/PT/ Limited Term)	Expertise[7] (qualifications, funding, honours, awards, research, innovation and scholarly record, etc.)
						Research, CIHR, What impacts COVID-19 vaccine uptake in Métis Citizens in Ontario? A population-based data linkage study., $181,960 (CAD) 2018-2024 NSERC Discovery Grant, NSERC, Power calculators for studies with designed missingness., PI, $92, 000 (CAD) 2018-2022 Project Grant, Occupational Health and Safety, An exploration of the occupational and psychosocial variables moderating the biological embedding of stress within firefighters., $43,439.16 (CAD) 2018-2022 Project Grant, CIHR, Beyond diarrhea, to disability and death: uncovering the hidden health consequences of foodborne infections. $585,224 (CAD) 2016-2021 Project Grant, CIHR, Extension of the COMPASS Study: building on our current success shaping the direction of youth health. $1,578,695 (CAD)
	HLTH 107: Sociology of Activity, Health, and Well-Being UCR equivalency	0.5	Michelle Ogrodnik Assistant Professor, Teaching Stream Department of Kinesiology and Health Sciences, Faculty of Health	Ph.D.	Regular	**Teaching Focused Research Grants** Fall 2024 Learning Innovation and Teaching Enhancement (LITE) Seed Grant. Comparison of Generative Artificial Intelligence in Health-Related Workforce and in Faculty of Health Classrooms at the University of Waterloo, $7500 (CAD). Collaborator: Dr. Laura Williams, University of Waterloo, Centre for Teaching Excellence. Summer 2023 Student Partner Project Funding – Exploring the impact of a Senior Laboratory. Thesis on Undergraduate Student Professional

Year/ Term	Course Title	Units	Professor/ Faculty	Highest Qualification Earned and Discipline of Study	Appointment (Regular/ Adjunct/PT/ Limited Term)	Expertise[7] (qualifications, funding, honours, awards, research, innovation and scholarly record, etc.)
						Development as Researchers, $2000 (CAD). Collaborators: Dr. Celeste Suart, Hailey Zubyk, Cailtlin Mullarkey, and Felicia Vulcu - McMaster University, MacPherson Institute. Summer 2021 Student Partner Project Funding – Department of Kinesiology. Strategizing for Curriculum Review, $1932 (CAD). Collaborators: Dr. Steven Bray & Krista Madsen - McMaster University, MacPherson Institute. 2021-2022 Student Partner Project Funding – Department of Kinesiology. Data Collection for Curriculum Review, $1932 (CAD). Collaborators: Dr. Steven Bray & Krista Madsen - McMaster University, MacPherson Institute. **Bursaries & Scholarships** 2020-2023 Joseph-Armand Bombardier Canada Graduate Scholarship (CGS-D), $105 000 (CAD) 2020-2021 Wilson Leadership Scholar Award, $25 000 (CAD) 2019-2020 Ontario Graduate Scholarship (central competition), $15 000 (CAD) 2019 Educational Developer Grants for Exchanges (EDGEs), $2000 (CAD) 2019 Student Travel Award, Society for Teaching and Learning in Higher Education, $475 (CAD) 2018-2019 Ontario Graduate Scholarship (central competition), $15 000 (CAD) 2017-2018 Canada Graduate Scholarship Master's SSHRC, $17 500 (CAD)

Year/ Term	Course Title	Units	Professor/ Faculty	Highest Qualification Earned and Discipline of Study	Appointment (Regular/ Adjunct/PT/ Limited Term)	Expertise[7] (qualifications, funding, honours, awards, research, innovation and scholarly record, etc.)
						Publications (sample) Karsan, S., Kuhn, T., Ogrodnik, M., Middleton, L. E., & Heisz, J. J. (2024). Exploring the interactive effect of dysfunctional sleep beliefs and mental health on sleep in university students. Frontiers in Sleep, 3, 1340729. Suart, C., Ogrodnik, M., & Suttie, M. (2024). Learning the landscape: Using journal clubs to introduce graduate students and early-career researchers to SoTL. In Miller-Young, J., & Chick, N. L. (Eds.), Becoming a SoTL scholar. Elon University. Coletta, G., Tuckey, C., McQuarrie, A., Ogrodnik, M., Nicholson, E., Phillips, S. M., & Cupido, C. (2023). A Virtual Versus In-Person Comparison of the Senior Fitness Test: A Randomized Crossover Trial. Physiotherapy Canada, e20230026. Ogrodnik, M., Karsan, S., Malamis, B., Kwan, M., Fenesi, B., & Heisz, J. (2023). Exploring barriers and facilitators to physical activity in adults with ADHD: A qualitative investigation. Journal of Developmental and Physical Disabilities. 1–21. Ogrodnik, M., Karsan, S., & Heisz, J. (2023) Mental health in adults with ADHD: Examining the relationship with cardiorespiratory fitness. Journal of Attention Disorders, 27(7), 698–708. Ogrodnik, M., Karsan, S., Cirone, V., & Heisz, J. (2023). Exploring the relationship between cardiorespiratory fitness and executive

Year/ Term	Course Title	Units	Professor/ Faculty	Highest Qualification Earned and Discipline of Study	Appointment (Regular/ Adjunct/PT/ Limited Term)	Expertise[7] (qualifications, funding, honours, awards, research, innovation and scholarly record, etc.)
						functioning in adults with ADHD. Brain Sciences, 13(4), 673. Halladay, J., Ogrodnik, M., Alla, J. F., Sunderland, M., Gardner, L. A., & Georgiades, K. (2023). Playing for more than winning: Exploring sports participation, physical activity, and belongingness and their relationship with patterns of adolescent substance use and mental health. Drug and Alcohol Dependence, 111039.
2/A	CHEM 237: Introductory Biochemistry	0.5	Thorsten Dieckmann Associate Professor Department of Chemistry	Dr. rer. nat.	Regular	**Research Funding** 2022-2027 NSERC Discovery Grant, Structure and Function of Aptamer based Biosensor Building Blocks (PI), $120, 000 2019-2020 Canada Foundation for Innovation, John R. Evans Leaders Fund "High Resolution NMR Facility for Structure Elucidation" (T. Dieckmann, G. Murphy, and S. Taylor Investigators), $352,810 2019-2020 Ontario Research Foundation, "Comprehensive update of the Chemistry NMR Facility" (T. Dieckmann, G. Murphy, and S. Taylor Investigators), $352,810 2017-2018 OCE-VIP "DNA detection scheme for paper-based allergy tests" (PI), $25,000
	CHEM 266: Basic Organic Chemistry 1 Equivalent: CHEM 222 (SGU)	0.5	Julie Goll	M.Sc. in Organic Chemistry	Staff	**Awards and Scholarships** 2023 Excellence in Science Teaching Award (University of Waterloo) 2007-2008 Ontario Graduate Scholarship (Chemistry)

Year/ Term	Course Title	Units	Professor/ Faculty	Highest Qualification Earned and Discipline of Study	Appointment (Regular/ Adjunct/PT/ Limited Term)	Expertise[7] (qualifications, funding, honours, awards, research, innovation and scholarly record, etc.)
						2006 Women in Chemistry Scholarship University of Waterloo) 2005-2007 Ontario Graduate Scholarship (Chemistry)
	CHEM 266L: Organic Chemistry Laboratory Equivalent: CHEM 223 (SGU)	0.25	Leanne Racicot Chemistry Instructor Department of Chemistry	Ph.D. Chemistry	Staff	**Awards and Grants** 2023 Gold level Green Lab certification, Undergraduate Organic Chemistry Teaching Lab 2023 Staff Enhancement Experience (SEE) Canada Grant (University of Waterloo) 2021 eCampus Ontario Virtual Learning Strategy (VLS) Grant (Organic Chemistry Virtual Labs, Principal Investigator, $70,252) Download link: https://bit.ly/3W0Lg5p **Publications** Racicot, L.; Valliant, J.F., Murphy, G. K. "Synthesis and Evaluation of Fluorous-Tagged and Polystyrene-Supported Precursors for Fluoro-benziodoxole" Synthesis, 2023; 55, 2730. Cuzzucoli, F.; Racicot, L.; Valliant, J.F., Murphy, G. K. "Transition metal-free fluorocyclization of unsaturated N-methoxyamides gives cyclic N-methoxyimidates" Tetrahedron, 2022, 123, 132982. Murphy, G. K.; Racicot, L.; Carle, M. S. "The Chemistry Between Hypervalent Iodine(III) Reagents and Organophosphorus Compounds" Asian J. Org. Chem., 2018, 7, 837. Zhao, Z.; Racicot, L.; Murphy, G. K. "Fluorinative Rearrangements of Substituted Phenylallenes Mediated by (Difluoroiodo)toluene: Synthesis of

Year/ Term	Course Title	Units	Professor/ Faculty	Highest Qualification Earned and Discipline of Study	Appointment (Regular/ Adjunct/PT/ Limited Term)	Expertise[7] (qualifications, funding, honours, awards, research, innovation and scholarly record, etc.)
						a-(Difluoromethyl)styrenes" Angew. Chem., Int. Ed., 2017, 56, 11620. Racicot, L.; Ciufolini, M. A. "Iodonium Metathesis Reactions of Unreactive Aryl Iodides" Tetrahedron, 2017, 73, 7067.
	BIOL 240: Fundamentals of Microbiology Equivalent: BIOL 401 (SGU)	0.5	Josh Neufeld Professor Department of Biology	Ph.D. Environmental Microbiology	Regular	**Research Funding** 2025-2030 NSERC Discovery (Nitrification and beyond: ecology and activity of nitrifiers in engineered aquatic environments) (PI), $80,000 2023-2025 AMTD Global Talent Postdoctoral Fellowship (Aerobic methane oxidation in anoxic waters of boreal shield lakes: mechanisms, models, and microorganisms) (PI), $80,000 2022-2025 NSERC Alliance (Validation of ammoniaoxidizing archaea and comammox Nitrospira for commercial application) (PI), $30,000 2022-2027 NSERC Alliance (Integrated molecular profiling to explore the microbiology of deep geological repository components for storage of used nuclear fuel) (PI), $560,000 2022-2027 Climate Action and Awareness Fund (CAAF) (Mitigation of methane emission hot-spots from municipal landfills), $25,000 2019-2025 NSERC Discovery (Exploring nitrification within engineered aquatic environments) (PI), $50,000
	BIOL 240L: Fundamental Microbiology Lab	0.25	Cheryl Duxbury	Ph.D. in Biology	Staff	**Qualifications**

Year/ Term	Course Title	Units	Professor/ Faculty	Highest Qualification Earned and Discipline of Study	Appointment (Regular/ Adjunct/PT/ Limited Term)	Expertise[7] (qualifications, funding, honours, awards, research, innovation and scholarly record, etc.)
						Research and education (B.Sc., M.Sc., Ph.D. and B.Ed.) encompass a diverse and extensive background of academic and applied biological sciences. Proven commitment to teaching exemplified by the attainment of a B.Ed. and an Ontario Teachers Certificate (Dean's Honour Role). Course work, laboratory teaching assistantships and research include animal, plant and microbial systems at the biochemical, cytological, physiological and toxicological levels. Familiar with the internal administration, curriculum and staff through a 35-year association with the Department of Biology at the University of Waterloo. Experienced educator, spanning introductory to advanced level courses in Biology Committed to continuous professional development by attending workshops on teaching pedagogy and supporting diverse learners in equitable environments Teaching of core courses in the Department of Biology with consistently high-performance evaluations. Have completed approximately 16 teaching assistantships for various laboratory courses ranging from introductory to senior levels in the Department of Biology.

Year/ Term	Course Title	Units	Professor/ Faculty	Highest Qualification Earned and Discipline of Study	Appointment (Regular/ Adjunct/PT/ Limited Term)	Expertise[7] (qualifications, funding, honours, awards, research, innovation and scholarly record, etc.)
						Conduct surveys for feedback on assessments, lecture pace and style and level of difficulty.
	BIOL 273: Principles of Human Physiology Equivalent: BIOL 202 (SGU)	0.5	TBD		Regular	
	MEDSCI 202: Communication for Health Professions I Equivalent: PCLN 302 (SGU)	0.5	TBD		Regular	
	MEDSCI 200: Learning Strategies for Preprofessional Programs Equivalent: PCLN 301 (SGU)	0.25	TBD		Contract, PT	
2/B	MEDSCI 270: Biochemistry Equivalent: CHEM 450 (SGU)	0.5	TBD		Regular	
	MEDSCI 280: Introduction to Psychopathology Equivalent: PSYC 411 (SGU)	0.5	Pamela Seeds Associate Professor, Teaching Stream Department of Psychology	Ph.D. Clinical Psychology	Regular	**Honours** 2017 Outstanding Performance Award, University of Waterloo 2016 Dr. Ruth Berman Award for an Early Career Psychologist, Ontario Psychological Association (OPA)
	MEDSCI 290: Molecular Biology	0.5	TBD		Regular	

Year/ Term	Course Title	Units	Professor/ Faculty	Highest Qualification Earned and Discipline of Study	Appointment (Regular/ Adjunct/PT/ Limited Term)	Expertise[7] (qualifications, funding, honours, awards, research, innovation and scholarly record, etc.)
	Equivalent: BIOL 321 (SGU)					
	MEDSCI 260: Human Anatomy Equivalent: BIOL 460 (SGU)	0.5	TBD		Regular	
	MEDSCI 250: Physiology Equivalent: BIOL 441 (SGU)	0.5	TBD		Regular	
	MEDSCI 203: Communication for Health Professions II Equivalent: PCLN 303 (SGU)	0.5	TBD		Regular	
3/A[8,9] SGU	MEDSCI 300: Basic Principles of Medicine I	2.5	Kevlian Andrew, MD, MBA Assistant Professor, Anatomical Sciences	M.D.	Regular	**Andrew** **Administrative Appointments** 2020-2021 Associate Course Director, Anatomy & Physiology 1 (BIOL 101) 11/20 – Present Assistant Year 1 Clinical Tutor Coordinator, St. George's University 2021-Present Course Director, Anatomy & Physiology 1 (BIOL 101) **University Service**

[8] Please note, SGU faculty teaching courses in 3A-4B are numerous due to the collaborative and co-teaching model. Please see (Basic Medical Sciences Faculty - St. George's University) to access the SoM faculty at SGU.

[9] General Academic Requirements at SGU

Rank Minimum Requirements at time of appointment or application for promotion:

Year/ Term	Course Title	Units	Professor/ Faculty	Highest Qualification Earned and Discipline of Study	Appointment (Regular/ Adjunct/PT/ Limited Term)	Expertise[7] (qualifications, funding, honours, awards, research, innovation and scholarly record, etc.)
			Subramanya Upadhya, MBBS Professor of Physiology, Neuroscience and Behavioral Sciences	DNB Varies		11/20 – Present Member, Clinical Tutor Coordinator Committee 4/21 – Present Member, Faculty Development Committee 4/21 – Present Chair, Year 1 Clinical Tutor Hiring Committee 8/21 – Present Member, Supplemental Academic Support Committee **Professional Organizations** 2020 – Present Member, American Association of Clinical Anatomists (AACA) **Research Experience** 7/20 – Present MSRI Faculty Advisor **Publications** Andrew K, Iwanaga J, Loukas M, et al. Does the Venus de Milo have a Spinal Deformity?. Cureus. 2018; 10(8): e3219. doi:10.7759/cureus.3219 Andrew K, Iwanaga J, Loukas M, et al. A Variant Origin of the Carotid Sinus Nerve. Cureus. 2018; 10(6): e2883. doi:10.7759/cureus.2883

Basic Sciences
Demonstrator - Bachelor's degree or equivalent; Instructor - Master's degree in an appropriate discipline; and Assistant, Associate and Full Professor - Terminal/professional degree: MD, MBBS, PhD or equivalent.
Clinical Faculty
Clinical teaching fellow MD or MMBS (without residency) without a postgraduate degree or internship; Clinical instructor MD or MBBS (without residency) without postgraduate degree, but with a completed internship; Lecturer - MD or MBBS (without residency) without postgraduate degree (e.g., MSc, MPH, MBA or other appropriate degree) in an appropriate field of study; and Assistant, Associate and Full Professor - MD or MBBS plus a postgraduate degree in their field, or board certification (SGU SOM Faculty Handbook).

Year/ Term	Course Title	Units	Professor/ Faculty	Highest Qualification Earned and Discipline of Study	Appointment (Regular/ Adjunct/PT/ Limited Term)	Expertise[7] (qualifications, funding, honours, awards, research, innovation and scholarly record, etc.)
						Upadhya **Fellowship** Awarded with Research Scientist fellowship and worked at National Guard Hospital, Riyadh, Saudi Arabia in year 2000. **Administrative Experience** Deputy Controller of Examinations at Manipal Academy of Higher Education (MAHE) (January 1996 to August 2006) **Publications** (select) Beneficial Effects of ragi (Finger Millet) on Hematological Parameters, Body Mass Index, and Scholastic Performance among Anemic Adolescent High-School Girls (AHSG). Suja Karkada, Sharmila Upadhya, Subramanya Upadhya & Gopalakrishna Bhat. Comprehensive Child and Adolescent Nursing, March 2018, DOI: 10.1080/24694193.2018.1440031. Link to this article: https://doi.org/10.1080/24694193.2018.1440031 Psychomotor functions at various weeks of chronic renal failure in rats. Merin Iype, Subramanya Upadhya, Sharmila Upadhya, Gopalakrishna Bhat. Cogn Neurodyn. April 2015, Volume 9, Issue 2, pp 201-211; DOI 10.1007/s11571-014-9315-z. Enhanced dendritic arborization of hippocampal CA3 neurons by Bacopa monniera extract treatment in adult rats. Vollala VR, Subramanya

Year/ Term	Course Title	Units	Professor/ Faculty	Highest Qualification Earned and Discipline of Study	Appointment (Regular/ Adjunct/PT/ Limited Term)	Expertise[7] (qualifications, funding, honours, awards, research, innovation and scholarly record, etc.)
						Upadhya, Nayak S. Rom J Morphol Embryol. 2011;52(3):879-86. PMID: 21892534. Enhancement of basolateral amygdaloid neuronal dendritic arborization following Bacopa monniera extract treatment in adult rats. Vollala VR, Subramanya Upadhya, Nayak S. Clinics (Sao Paulo). 2011;66(4):663-71. PMID: 21655763. Enhanced dendritic arborization of amygdala neurons during growth spurt periods in rats orally intubated with Bacopa monniera extract. Vollala VR, Subramanya Upadhya, Nayak S. Anat Sci Int. 2011 Dec;86(4):179-88. Epub 2011 Mar 17. PMID: 21409525.
3/B SGU	MEDSCI 350: Basic Principles of Medicine II	2.5	Janine Paul, MBBS Lecturer of Physiology, Neuroscience and Behavioral Sciences Mary C. Maj, PHD, MSc Professor of Biochemistry	Post Graduate Certificate in Medicine Ph.D. Biochemistry	Regular	**Paul** **Work Experience** • General Hospital Saint George's Grenada. January 2012 to December 2012 - Medical Internship-clinical rotations • Saint George's University. 2013 to 2016 - Clinical tutor in the Neuroscience, Physiology and Behavioral Sciences. Department responsible for all subjects taught in terms 1and 2 in the School of Medicine. • Saint George's University. 2018 to present - Clinical tutor in the Neuroscience, Physiology and Behavioral Sciences. Department responsible for all subjects in terms 1 and 3 in the School of Medicine.

Year/ Term	Course Title	Units	Professor/ Faculty	Highest Qualification Earned and Discipline of Study	Appointment (Regular/ Adjunct/PT/ Limited Term)	Expertise[7] (qualifications, funding, honours, awards, research, innovation and scholarly record, etc.)
						Maj **St. George's University Service** January 2020 to Present SOM Subcommittee for Promotions Chair January 2016-to Present SOM Judiciary Committee Chair **Publications** 1. In Preparation: M.Maj, K. Landau, D. Li, E. Bhoh, H. Toriello, B. Nelson, H. Hakonarson, S. Gluschitz, R. Walker, A. Sobering (2021) A novel homozygouse truncating variant in SYNJ1 in causing early infantile epileptic encephalopathy 53 in and Afro-Caribbean individual 2. In Preparation: E. Salter, K. Balhotra, I. Holman, H.S. La, J. Lendore, K. Yearwood, A. Holbein, A. Reese, A. Brooks, T. John-Ballantyne, A. Bahador-Yetman, G. Lambert, P.J. Fields, M.C. Maj, F. McGill,(2017) Self Pap as a Method of Cervical Screening Modification and HPV Testing in Grenada 3. A. Wardeh, T. Jackson, B. Nelson, C. Ernst, J.F. Théroux, W. Al-Hertani, A. K. Sobering1, and M. C. Maj, (2018) Identification of a de novo case of COL5A1-related Ehlers-Danlos syndrome in an infant in the West Indies leading to improved targeted clinical care. Clinical Case Report 4. M.D. Thompson, T. Sakurai, I. Rainero, M.C. Maj and J.P. Kukkonen. (2017) Orexin Receptor Multimerization versus Functional Interactions:

Year/ Term	Course Title	Units	Professor/ Faculty	Highest Qualification Earned and Discipline of Study	Appointment (Regular/ Adjunct/PT/ Limited Term)	Expertise[7] (qualifications, funding, honours, awards, research, innovation and scholarly record, etc.)
						Neuropharmacological Implications for Opioid and Cannabinoid Signalling and Pharmacogenetics. Pharmaceuticals (Basel). 2017 Oct 8;10(4). pii: E79. **Editor** Webmed Central: Open Access Biomedical Publisher using Post Publication Peer Review **Professional Societies** Canadian Society of Biological, Molecular and Cellular Biology United Mitochondrial Disease Foundation Society for the Study of Inborn Errors of Metabolism
4A SGU	MEDSCI 400: Principles of Clinical Medicine 1	2.5	Ewarld Marshall, MD, MSc, MSMEd Associate Professor, Pathology Theofanis Kollias, M.D. Assistant Professor Microbiology, Pharmacology and Immunology Alvin Billey, M.D.	MSMEd M.D. M.D.	Regular	**Marshall** **Visiting Professor** Post Graduate Anatomy and Histology. 2018-present. Department of Cell Biology, Harvard Medical School. Medical Education Feb -May 2020. Lake Erie College of Osteopathic Medicine. **Publications** Klaassen, Z., Marshall, E., Tubbs, R. S., Louis Jr, R. G., Wartmann, C. T., & Loukas, M. (2011). Anatomy of the ilioinguinal and iliohypogastric nerves with observations of their spinal nerve contributions. Clinical Anatomy, 24(4), 454-461. Pontell, M. E., Scali, F., Marshall, E., & Enix, D. (2013). The obliquus capitis inferior myodural bridge. Clinical anatomy, 26(4), 450-454. Scali, F., Pontell, M. E., Enix, D. E., & Marshall, E. (2013). Histological analysis of the rectus capitis

Year/ Term	Course Title	Units	Professor/ Faculty	Highest Qualification Earned and Discipline of Study	Appointment (Regular/ Adjunct/PT/ Limited Term)	Expertise[7] (qualifications, funding, honours, awards, research, innovation and scholarly record, etc.)
			Lecturer, Pathology			posterior major's myodural bridge. The Spine Journal, 13(5), 558-563. Scali, F., Pontell, M. E., Welk, A. B., Malmstrom, T. K., Marshall, E., & Kettner, N. W. (2013). Magnetic resonance imaging investigation of the atlanto-axial interspace. Clinical anatomy, 26(4), 444-449. Pontell, M. E., Scali, F., Enix, D. E., Battaglia, P. J., & Marshall, E. (2013). Histological examination of the human obliquus capitis inferior myodural bridge. Annals of Anatomy-Anatomischer Anzeiger, 195(6), 522-526. Pontell, M., Scali, F., & Marshall, E. (2011). A unique variation in the course of the musculocutaneous nerve. Clinical Anatomy, 24(8), 968-970. **Kollias** **Professional Experience** • 06/2021-present: Deputy Chair for the department of Pharmacology. St. George's University • 0/6/21-present: Faculty advisor for BIZMED St. George's University School of Medicine • 01/2021-present: Content manager for the department of Pharmacology. St. George's University • 08/2018-present: Instructor for the department of Pharmacology. St. George's University

Year/ Term	Course Title	Units	Professor/ Faculty	Highest Qualification Earned and Discipline of Study	Appointment (Regular/ Adjunct/PT/ Limited Term)	Expertise[7] (qualifications, funding, honours, awards, research, innovation and scholarly record, etc.)
						• 08/2018-present: Hippocrates College Director. St. George's University **Publication** Richard Isaiah Tubbs, James C. Barton III , Caroline C. Watson , Theofanis Kollias , Robert J. Ward , Marios Loukas , Nicholas M. Barbaro , Aaron A. Cohen-Gadol. A novel method for sciatic nerve decompression: Cadaveric feasibility study with potential application to patients with piriformis syndrome. Translational Research in Anatomy 1 (2015) 40e43 **Billey** **Awards** Best Researcher Award for Research on "Knowledge Attitudes and Practices of Stroke among patients attending GPHC Medical Clinic" **Publications** Aishwarya Singh, Rohit Mishra, Alvin Billey Cardiac Lesions in Sudden Death: Insights from autopsy and histopathological analysis. Int J Acad Med Pharm 47009/jamp.2023.5.5.308.
	MEDSCI 420: Basic Principles of Medicine III	1.0	Kerry Mitchell, Ph.D. Associate Professor, Public Health & Preventive	Ph.D. Biological Sciences Ph.D. Public Health	Regular	**Mitchell** **Administrative** • Dean of Students, Assistant Dean 2021 – present • SOM Honors Selective I & II, Co-Director 2021 – present • SGU Iota Epsilon Alpha (IEA), Faculty Advisor 2021 - present • St. George's University Institutional Review

Year/ Term	Course Title	Units	Professor/ Faculty	Highest Qualification Earned and Discipline of Study	Appointment (Regular/ Adjunct/PT/ Limited Term)	Expertise[7] (qualifications, funding, honours, awards, research, innovation and scholarly record, etc.)
			Lauren Orlando, Ph.D., MSc Assistant Professor, Epidemiology			• Board, Vice Chair 2020 - present • St. George's University Institutional Review Board, Secretary 2019 – 2020 • St. George's University Institutional Review • Board, non-executive member 2018 – 2019 • Department of Public Health and Preventive • Medicine Admissions and Graduate Committee, member 2018 – present • Department of Public Health and Preventive Medicine Research and Scholarly Activity Committee, member 2018 – present **Professional** Review Editor 2021 – present • Editorial Board of Soil Pollution and Remediation, Frontiers in Soils Science, Lausanne Switzerland; ISSN:2673-8619 (Online) Ad-Hoc Journal Reviewer 2017 – present • Environmental Science and Pollution Research, Springer Berlin Heidelberg; ISSN: 0944-1344 (Print), 1614-7499 (Online) • Bragantia Revista de Ciências Agronômicas, Instituto Agronômico de Campinas; ISSN: 0006-8705 (Print) / 1678-4499 (Online) Consultant 2020 – present • The Grenada National Ecosystem Assessment; Caribbean Natural Resources Institute Thesis Advisor 2014 – present **Publications** • Mitchell, K., Moreno-Jimenez, E., Jones, R., Zheng, L., Trakal, L., Hough, R., & Beesley, L. (2020). Mobility of arsenic, chromium and copper

Year/ Term	Course Title	Units	Professor/ Faculty	Highest Qualification Earned and Discipline of Study	Appointment (Regular/ Adjunct/PT/ Limited Term)	Expertise[7] (qualifications, funding, honours, awards, research, innovation and scholarly record, etc.)
						arising from soil application of stabilised aggregates made from contaminated wood ash. Journal of Hazardous Materials, 393(122479), 1–10. https://doi.org/10.1016/j.jhazmat.2020.122479 • Mitchell, K., Mendoza-González, C. V., Ramos-Gómez, M. S., Yamamoto-Flores, L., Guerrero-Barrera, A. L., Macias-Medrano, R., & Avelar-González, F. J. (2020). The effect of low-temperature biochar and its non-pyrolyzed composted biosolids source on the geochemical fractionation of Pb and Cd in calcareous river sediments. Environmental Earth Sciences, 79(7), 1–8. https://doi.org/10.1007/s12665-020-08908-5 • Ray, E., & Mitchell, K. (2019). Environmental Atrazine Exposure and Endocrine Health: Implications for Rural Communities in Midwestern United States. Public Health - Topics, Themes and Trends, 11(4), 37–53; corresponding author • Flores de la Torre, J. A., Mitchell, K., Ramos Gómez, M. S., Guerrero Barrera, A. L., Yamamoto Flores, L., & Avelar González, F. J. (2018). Effect of plant growth on Pb and Zn geoaccumulation in 300-year-old mine tailings of Zacatecas, México. Environmental Earth Sciences, 77(10), 0. https://doi.org/10.1007/s12665-018-7563-7 • Mitchell, K., Trakal, L., Sillerova, H., Avelar-González, F. J., Guerrero-Barrera, A. L., Hough, R., & Beesley, L. (2018). Mobility of As, Cr and Cu in a contaminated grassland soil in response to diverse organic amendments; a sequential column

Year/ Term	Course Title	Units	Professor/ Faculty	Highest Qualification Earned and Discipline of Study	Appointment (Regular/ Adjunct/PT/ Limited Term)	Expertise[7] (qualifications, funding, honours, awards, research, innovation and scholarly record, etc.)
						leaching experiment. Applied Geochemistry, 88, 95–102. https://doi.org/10.1016/j.apgeochem.2017.05.020 • Trakal, L., Raya-Moreno, I., Mitchell, K., & Beesley, L. (2017). Stabilization of metal(loid)s in two contaminated agricultural soils: Comparing biochar to its non-pyrolysed source material. Chemosphere, 181, 150–159. https://doi.org/10.1016/j.chemosphere.2017.04.064 **Presentations** • Bogollagama, M., Khan, T., Forde, M., Compton, S., Mendes, J., Edwards, O., & Mitchell, K. corresponding author (2021). Nutrient concentrations in surface and subterranean water sources in the Southern Region of Grenada. Caribbean Science Symposium on Water Magazine, 21–22. • Dirienzo, N., Mitchell, K., Forde, M., Rainham, D., & Villeneuve, P. J. (2021). Temporal trends in ambient fine particulate matter air pollution, and the impacts of COVID-19 on this pollution in Grenada, West Indies. 4th Life Sciences Day - Carleton University, Ottawa. • Khan, T., & Mitchell, K. corresponding author (2021). Evaluation of the Association between Maternal Exposure to Indoor Air Pollutants and Low Birth Weight. 65th Annual Health Research Conference, Virtual.

Year/ Term	Course Title	Units	Professor/ Faculty	Highest Qualification Earned and Discipline of Study	Appointment (Regular/ Adjunct/PT/ Limited Term)	Expertise[7] (qualifications, funding, honours, awards, research, innovation and scholarly record, etc.)
						• Mitchell, K. (2021a). Air Pollution - A Public Health Emergency? Seminario de Investigación MCBQ- Universidad Autónoma de San Luis Potosi, San Luis Potosi, Mexico - Virtual. • Mitchell, K. (2021b). Efectos del Cambio Climático en la Salud Comunitaria. Webinar de Organizacion Dominicana de Estudiantes de Medicina (ODEM) & One Health Lessons, Virtual. • Mitchell, K., Avelar-González, F. J., Guerrero-Barrera, A. L., Ramos-Gómez, M. S., & Yamamoto-Flores, L. (2021). Evaluating the potential mobility of Cd in contaminated calcareous sediments amended with biosolids and biochar. SETAC Europe 31st Annual Meeting - 2021 - Global Challenges. An Emergency for Environmental Sciences - Abstract Book, 202. • Mitchell, K., Edwards, O., Forde, M., Punch, B., Khan, T., & Bogollagama, S. (2021). Priority setting for occupational carcinogen exposure among doctors. 65th Annual Health Research Conference. • Mitchell, K., Forde, M., Smith, M., Villenueve, P., & Dirienzo, N. (2020, November). Preliminary monitoring of ambient particulate matter mass concentrations in Grenada. Virtual Public Health Conference - Relevance, Creativity & Innovation, Grenada; Virtual. • Flores de la Torre, J. A., Mitchell, K., Ramos-Gomez, M. S., Yamamoto-Flores, L., Peña-Cabriales, J. J., Guerrero-Barrera, A. L., & Avelar-González, F. J. (2017). Effect of Cortaderia Selloana and Sporobolus airoide on the geoaccumulation

Year/ Term	Course Title	Units	Professor/ Faculty	Highest Qualification Earned and Discipline of Study	Appointment (Regular/ Adjunct/PT/ Limited Term)	Expertise[7] (qualifications, funding, honours, awards, research, innovation and scholarly record, etc.)
						index of Pb. 14th International Phytotechnologies Conference, Montreal. • Mark-George, I., Sealy, H., Mc Lawrence, J., Mitchell, K., & Enoe, J. (2017, October). The public health impacts of the influx of Sargassum seaweed on the residents of Soubise, Grenada in 2015. Phi Zeta Research Emphasis and Research Day, St. George's University. • Mitchell, K., Avelar-González, F., Guerrero-Barrera, A., Ramos-Gómez, M., & Yamamoto-Flores, L. (2017, October). Fractionation of Pb in contaminated calcareous sediments amended with biosolids and biochar. Phi Zeta Research Emphasis and Research Day, St. George's University, St. George's University. **Orlando** **Presentations** • RISE for Equity: Reflect, Inspire, Strengthen & Empower 2024, Mayo Clinic, Washington D.C. (August 2024) • European Public Health Conference, Dublin, Ireland (November 2023) • Caribbean Public Health Agency (CARPHA) Annual Health Research Conference, Nassau, Bahamas (April 2023) • Consortium of Universities for Global Health Conference, Washington, D.C. (April 2023) • St. George's University 20th Research Day, True Blue, Grenada (March 2023)

Year/ Term	Course Title	Units	Professor/ Faculty	Highest Qualification Earned and Discipline of Study	Appointment (Regular/ Adjunct/PT/ Limited Term)	Expertise[7] (qualifications, funding, honours, awards, research, innovation and scholarly record, etc.)
						• CRCP2020+ Caribbean Regional Conference of Psychology, St. Croix (November 2021) • ISANA 30th International Education Association Conference, Melbourne, Australia (December 2019) • Council for Education in the Commonwealth (CEC) Annual Conference, True Blue, Grenada (May 2019) •ISANA 29th International Education Association Conference, Sydney, Australia (December 2018) **Publications** • Prince, M. A., Orlando, L., Prince, E., & Fasanmi, A. (2023, December). 1397. What were the Birth Outcomes of Infants Born to Zika Positive Mothers in Developing Countries? Open Forum Infectious Diseases, 10(2). https://doi.org/10.1093/ofid/ofad500.1234 • Landon, B., Thomas, E.D., Orlando, L., Evans, R. L., Murray, T., Mohammed, L., Noel, J., Isaac, R. & Waechter, R. (2023). Spare the rod, spoil the child: The process of shifting • intergenerational beliefs and behaviors around corporal punishment. Frontiers in Public Health, 11. https://doi.org/10.3389/fpubh.2023.1127687 • Chitterman, A., Palanichami, D.K., La, A., Adedara, V., Orlando, L., Keku, E.O., & Fasanmi, A. (2023). Evaluation of the effectiveness of ivermectin in chemoprophylaxis and treatment of COVID-19 patients: A narrative review. International Public Health Journal, 15(1), 57-67.

Year/ Term	Course Title	Units	Professor/ Faculty	Highest Qualification Earned and Discipline of Study	Appointment (Regular/ Adjunct/PT/ Limited Term)	Expertise[7] (qualifications, funding, honours, awards, research, innovation and scholarly record, etc.)
						• Palmer, K., Adedara, V., Ogunmoyin, T., Kuteyi, A., Palanichami, D.K., La, A., Orlando, L., Fasanmi, A., & Keku, E. O. (2023). Elective surgical procedures in the COVID-19 era. International Public Health Journal, 15(1), 91-99. • Eagel, B.A., La, A., Palanichami, D.K., St Cyr, G., Orlando, L., Fasanmi, A., & Keku, E.O. (2023). Dengue vaccine development and safety: What went wrong? International Public Health Journal, 15(1), 101-115. • Waechter, R., Evans, R., Fernandes, M., Bailey, B., Holmes, S., Murray, T., Isaac, R., Punch, B., Cudjoe, N., Orlando, L., & Landon, B. (2022, May). A community-based responsive caregiving program improves neurodevelopment in two-year old children in a middle-income country, Grenada, West Indies. Psychosocial Intervention, 31(2), 97-107. https://doi.org/10.5093/pi2022a6 • Orlando, L., & Frame, T. (2021). Assessment of implementation of the Spotlight Initiative to end gender-based violence in six Caribbean countries during the COVID-19 pandemic. Caribbean Journal of Psychology, 13(2), 161-191.
4/B SGU	MEDSCI 450: Principles of Clinical Medicine 2	2.5	Anna Cyrus-Murden, M.D., MPH Assistant Professor, Clinical Skills	M.D., MPH	Regular	**Cyrus-Murden** **Administrative** • 2017 – Pres Deputy Chair of Clinical Skills, St. George's University • 2018 – Pres Director of Simulation Center, St. George's University **Departmental Service** • Pathology Review Committee

Year/ Term	Course Title	Units	Professor/ Faculty	Highest Qualification Earned and Discipline of Study	Appointment (Regular/ Adjunct/PT/ Limited Term)	Expertise[7] (qualifications, funding, honours, awards, research, innovation and scholarly record, etc.)
			Assistant Dean of Simulation Morona Sukhoo-Pertab, MBBS Lecturer, Clinical Skills Assistant Dean, Clinical Studies	MBBS		• BPM 1 review Committee • Clinical Skills Faculty Search Committee • Clinical Skills Curriculum Sub-Committee University **University Service** • Focus Group on Simulation Activities (Chair) • Focus Group on Curriculum Management, Design, Review/Content Monitoring, Evaluation and Comparability • Focus group on Physical Examination and OSCE • Focus Group on Curriculum Reform • Focus Group on 'Flipped Classroom' • SGU Senate – Clinical Division • SGU Curriculum Committee • SGU Judicial Advisor • Committee for Technology based Teaching and Learning • Joint Curriculum Coordinating Committee • Candidates Selection Committee Workshops • USMLE Subcommittee **Professional Memberships** • Member, Society for Simulation in Healthcare • Member, Directors of Clinical Skills • Member, American Association of Clinical Anatomists **Presentations** Local/Regional • Feb 2020 Featured Speaker - Grenada General Hospital Internship Program Interns' Graduation, Grenada • Feb 2020 "Clinical Skills in Grenada", Clinical

Year/ Term	Course Title	Units	Professor/ Faculty	Highest Qualification Earned and Discipline of Study	Appointment (Regular/ Adjunct/PT/ Limited Term)	Expertise[7] (qualifications, funding, honours, awards, research, innovation and scholarly record, etc.)
						Meetings, St. George's University, Grenada • Sept 2019 "Technologies in the Healthcare Industry", Rotaract Career Day Speech, Grenada • Feb 2019 Featured Speaker - Grenada General Hospital Internship Program Interns' Graduation, Grenada International • Oct 2020 "Online Clinical Evaluation Exercise (OCEX)", Clinical Meetings, St. George's University, Grenada (Online) **Sukhoo-Pertab** **Licenses and Certifications** • 2022 Strategic Leadership in Healthcare, Doane University, MicoMasters Program • 2021 Health Informatics and Technology in Decision Making, Doane University, MicoMasters Program • 2021 Healthcare Organization and Delivery Modes, Doane University, MicoMasters Program • 2021 Basic Biomedical Research Certification, Collaborative Institutional Training Initiative (CITI) • 2020 Defeating Malaria from the Genes to the Globe, Harvard University, Online Learning Initiative **Services and Memberships** • 2021 BPM3 Course Evaluator, St. George's University

Year/ Term	Course Title	Units	Professor/ Faculty	Highest Qualification Earned and Discipline of Study	Appointment (Regular/ Adjunct/PT/ Limited Term)	Expertise[7] (qualifications, funding, honours, awards, research, innovation and scholarly record, etc.)
						• 2020 CAAM Accreditation Working Group on Educational Database, St. George's University • 2019 – Present Basic Sciences Curriculum Subcommittee, St. George's University • 2019 – Present Committee for Academic Performance and Professional (CAPPS) Pre-Clinical Sciences • 2016 – 2019 Pediatric Club, St. George's University Role: Volunteer medical doctor at various centers/schools to screen and examine patients. Assisted pre-clinical medical students in history taking and physical examination skills • 2016 – 2019 Academic Advisor, St. George's University Role: Provide counselling and guidance on academic status, academic outcomes and alternative options for post-exam medical students in Term 4 identified by the APRC • 2014 – present Sparkle Grenada Children's Foundation Inc Non-governmental organization. Secretary and Project Leader "Back to School"

b) As applicable, discuss and/or explain the role and approximate percentage of adjunct/part-time faculty/limited term appointments used in the delivery of the program, including plans to ensure the sustainability of the program and the quality of the student experience;

The majority of the proposed program, 75 per cent as demonstrated in the table above, will be delivered by full-time regular faculty members (of varying ranks). Full-time staff, principally as laboratory instructors, make up the remaining 25 per cent. The percentage of part-time faculty/limited term appointments used in the delivery of the program is negligible but may occur due to unexpected absences.

c) Describe the provision of supervision of experiential learning opportunities, if applicable;

This is a regular program therefore students will require no supervision for any work-integrated learning opportunities (i.e., field placement or co-op). Students will participate in several experiential learning opportunities (EL) at UW throughout the proposed program and will be supervised by the faculty member and/or lab technicians, as applicable.

While at SGU, students will have opportunities to observe and practice communication skills in actual healthcare settings during visits to local hospitals and community health centers. Additionally, student-led organizations provide platforms for demonstration and supervised hands-on practice on various basic medical procedures. Students also engage in research-oriented coursework, including group presentations, article reviews, and critiques. These activities help develop foundational research skills and critical analytical abilities, preparing students for more advanced research opportunities in the medical program.

d) Describe the administrative unit's planned use of existing human, physical and financial resources, including implications for other existing programs or support units at the university;

Resources: HR, Faculty

The delivery of the first two years of the proposed program requires access to four courses and faculty members from the Faculty of Health (Health), one from the Faculty of Arts (Arts), and the remainder (19) from Science. The courses in the 2B term mirror those taught at SGU and NU to ensure students who progress have achieved the same course learning outcomes (CLOs). These courses, developed by SGU, will draw on the expertise of the Faculty areas at the UW to deliver content and assess student achievement. Any needs that arise for an additional instructor to deliver the proposed program will be supported by Science.

Resources: HR, Administrative

Students in the proposed program require an advisor who will liaise with the SGU program administrators. The advisor will act as a liaison between the two institutions to support the students' progression throughout the program (see 2.5(f) for additional information about administrative resourcing).

Resources: Facilities/Space

The proposed program, in alignment with the partnership agreement, requires dedicated and private office space for any BMSci program staff for daily use. Science will also use existing laboratory and classroom space for delivery of the curriculum. Science does not require any additional space, equipment or upgrades to the existing space to support these requirements.

e) Provide evidence that there are adequate resources to sustain the quality of scholarship and research activities produced by students, including library support (a report from the Library should be prepared and included), information technology support, laboratory access and space; and

Library

Liaison librarians are specialists in their discipline and able to provide insight into research strategies, literature reviews and related areas. The Library provides a high level of instructional, research, and collections support to both the undergraduate and graduate programs in Science. Librarians also have expertise in scholarly communication (including copyright, licensing and open access) and research data management. Further involvement of the Library in this area helps to improve student research skills and support achievement of degree level expectations.

Liaison Librarians are available to answer reference questions from faculty members and students via telephone or email to support research and scholarly activities. Additionally, faculty and students can schedule one-on-one consultations with Liaison Librarians to discuss research strategies and techniques for graduate theses, coursework, and article publications. Students are encouraged to make use of the teaching, learning, research support services, and expertise the Library offers.

In accordance with the UW's Indigenization efforts, the Library is promoting and collecting research and resources that celebrate and explore Indigenous ways of knowing and doing. For instance, the biology librarian is a member of the Library's Indigenous research committee, which has authored an Indigenous research guide that will be reviewed annually. They also maintain an Indigenous science and ways of knowing section in the biology research guide. The Liaison Librarian for Physics, Astronomy and related disciplines provide course-based instruction through classroom sessions to incorporate a more systematic, program wide approach to increase skills related to information research, evaluation, and use throughout the Physics and Astronomy curricula.

The Library purchases and subscribes to a number of resources relevant to the science disciplines. Ongoing Library subscriptions include Oxford Handbooks and Reference, Springer, and Taylor & Francis ebook collections; the BioOne, CAB Direct, OVID Medline and Embase, Reaxys, SciFinder-n, and Web of Science databases; the ASM Protocols, Colloquium Life Sciences, Jove (Basic and Advanced Biology, and Chemistry collections), and Springer Nature Experiments digital libraries; and Scopus, SPIE Digital Library, IEEE, and MathSciNet. Access is also provided to journals from publishers such as the American Chemical Society (ACS), Canadian Science Publishing (CSP), Elsevier, the National Research Council of Canada (NRC), Nature, the Society for Freshwater Science Wiley, the American Physical Society, the Institute of Physics, and the American Institute of Physics.

OMNI, the library catalogue shared by Ontario universities, allows users to discover and request materials from 16 universities directly through the catalogue. In addition to the local collection, the UW Library partners with other Ontario and Canadian universities to further expand access to physics and astronomy collections. Such collaborations include the libraries of the University of Guelph (UG) and Wilfrid Laurier University (WLU), the 10 other Ontario institutions that

make up the OCUL consortium Collaborative Futures initiative and the Canadian Research Knowledge Network (CRKN).

Laboratory Facilities

There are no specific lab equipment needs to meet the PLOs for the proposed program. The existing facilities are sufficient to meet the PLOs for the proposed program. The teaching labs managed by the four Science departments have undergone a significant reorganization and improvement with the opening of the Science Teaching Complex (STC), which provided its first scheduled lectures and labs in the Winter 2016 term. Students have access to updated facilities and lockers for use during labs.

The STC is a 20,000 square metre (215,000 sq. ft.) building and includes a range of facilities:

- Below grade: five 150-seat classrooms;
- Main level: study and seating area for (50); 450-seat classroom; student society and club space; a small food outlet;
- Level two: Science Undergraduate Office; study and seating area for (25); upper entrance to 450-seat classroom;
- Level three: five undergraduate teaching labs and related support facilities;
- Level four: five undergraduate teaching labs and related support facilities; and
- Level five: one undergraduate teaching lab and support facility.

Biology lectures are held in many locations across campus including the STC, Biology 1, Biology 2, and Math, Arts, and Engineering buildings. The core Biology laboratory spaces are six labs in the STC, five in Biology 2, and three in Biology 1. All lab spaces have a capacity of 32 to 34 students with the exception of one smaller lab in Biology 1 with a capacity of 24 students. Various labs are equipped to run courses in microbiology (including Biohazard level 2 spaces in Biology 1 and the STC), physiology, cell and molecular biology, zoology, plant sciences, and to provide support for ecology and field courses. The Biology Research laboratories are located in the Biology 1, Biology 2 and part of the Earth Sciences and Chemistry buildings, plus one laboratory in the Quantum-Nano Centre. Teaching laboratories are in Biology 1 and 2, and the new STC.

Computer Facilities

Science provides computer support through the Science Computing Help Desk, which is staffed daily from 9 am to 4 pm. The university site licenses many software packages (e.g., Office 365, Adobe Acrobat) and makes some available free or at substantial discounts to students and faculty members. There are three computing labs, each outfitted with audio-visual podiums, projectors, and chalk/dry-erase boards.

Computing Lab	Facilities
C2-160	• 35 workstations

Computing Lab	Facilities
	• Not typically booked for courses • available for open use during normal business hours when not booked for courses
PHY-342	• 20 workstations • Not typically booked for courses • available 24/7 when not booked for courses

f) If necessary, provide evidence of additional institutional resource commitments to support the program in step with its ongoing implementation.

Currently the proposed program is undergoing a financial viability analysis in consultation with IAP.

What is evident by the partnership agreement is that the proposed program will be administered jointly by the UW and SGU. Faculty expertise and courses are required from Science, Health, and Arts to support the delivery of the proposed program. Science is the UW's administrative lead in the partnership agreement with SGU and will provide the administrative support for the proposed program. At this time there are no plans for any other institution to be involved in offering the proposed program. In fact, according to the non-compete clause in the agreement, SGU shall not directly or indirectly establish a Doctor of Medicine (M.D.) track involving an Early Assurance program to SGU's M.D. degree program with any university in Ontario, other than with the UW.

The UW and SGU will share the responsibility for planning, management, and administrative aspects of the proposed program. As indicated above, this structure centers on the appointment of representatives or appointed designates (known as Partnership Managers) at both institutions. Partnership Managers will be responsible for implementing the structure and for revising as needed for the continued administration of the proposed program. This will be assumed under the responsibilities of the Associate Dean initially and re-evaluated regularly.

A "Joint Steering Committee" will meet quarterly to discuss issues arising from the operation of the proposed program, including recruitment, financial performance, fees and other related matters. SGU and the UW will define the attendees and terms of reference within three months of the date of the agreement. Each institution is entitled to replace any of its representatives on the Joint Steering Committee from time to time.

Where the formation of a separate section is required to account for the students in the BMSci program, the sessional instructor fee will be paid by Science to cover that additional section(s). In addition, UW faculty members will support the build of a new course (PHYS105: Introduction to Physics for Health Care Professions) and the update to existing courses, if applicable (see Appendix B – Program Map for a visual representation of the courses and associated Faculty/Departments).

2.6 Resources for graduate programs only (QAF 2.1.2.7)

Not applicable for this application.

2.7 Quality and other indicators (QAF 2.1.2.8)

As is evidenced in the table above (2.5 Resources), faculty members in Science, Health and Arts are committed to the intellectual quality of the student experience. Faculty members' qualifications, funding, honours, awards, research, innovation and scholarly record demonstrate the strength of the collective faculty expertise and commitment to remaining current and innovative.

As per Policy 76 – Faculty Appointments and the definitions of the appointment categories (tenured or permanent, probationary, definite-term) and appointment intensities (full-time, part-time, fractional load) at the UW, and the rigors of the tenure and teaching stream expectations, the tenure, permanence and promotion procedures, and professional conduct expectations specified in Policy 77 -- Tenure and Promotion of Faculty Members, the collective faculty members are a strong community of scholars supporting the university's commitment to developing intellectual resources and traditions for the modern university. In alignment with Policy 77, "faculty members [are] effective and committed teachers and scholars, constantly striving to expand and communicate their knowledge, ideas and understanding for the benefit of society" (Introduction).

At SGU in the SOM, for each rank, the faculty member is expected to display an appropriate level and combination of evidence as relevant to the rank applied. The weighting of activities varies depending on the primary area of focus. The more senior the rank, the higher the expectation in terms of evidence that will be required to be provided for promotion to that rank.

It is not expected that a faculty member will demonstrate achievement of all the specified examples/standards, but that their achievement will be at a level/standard commensurate with the rank of their appointment/promotion and activities. For example, a faculty member in the Educator track with a primary focus on teaching who has a substantial service contribution as an Assistant Dean or a Chair of a Department, would reasonably be expected to have less evidence of contribution to the scholarship component.

For all tracks, the requirements are:

- Primary focus area as per the stipulations of the track (Education, Research, etc.).
- Distinction in primary focus area.
- Secondary contributions to academic and clinical mission of SGU.

The diversity of SGU faculty in terms of their backgrounds and educational training means there is a natural level of variation in levels of qualifications and experience. Generally, faculty in the Teaching tracks will have different expectations and associated standards with respect to their teaching and pedagogical contributions, compared to

faculty in the Investigator track. For all tracks, there is a secondary expectation of contributions to other fields, including scholarly activity, administration and service to the university community, as appropriate to the faculty members' seniority and teaching responsibilities as defined in their letter of appointment, and as defined by the associated promotions criteria for their track.

This secondary expectation includes contribution to the administrative and committee services that support the educational mission of the SOM and SGU. All scholarly activities of the applicant must carry an SGU affiliation to be counted towards fulfilling the specified promotion requirements.

In the School of Arts and Sciences, SGU strives to maintain the highest standards of teaching, research, and service; therefore, it is essential that the faculty be composed of individuals with high personal and professional qualifications. Effective teaching is the most prized quality in members of the faculty. The primary criteria for judging the fitness of a faculty member for rank or promotion are academic degree, length and effectiveness of teaching, and knowledge and understanding of important problems in the field. In addition, professional activities, research, and participation in university life are considered. The faculty members at SGU are encouraged to engage in scholarly and creative work.

In general, a terminal degree appropriate to the candidate's field of expertise will be required. In some cases, after taking into account the specific nature of the faculty member's academic discipline, equivalent outstanding achievement may be substituted. The specific Educational Standards for each academic rank are as follows:

- Demonstrator: An earned Bachelor's Degree with special administrative responsibilities.
- Instructor: An earned Master's Degree, or equivalent in appropriate field of study.
- Assistant Professor: An earned doctorate, or equivalent in appropriate field of study, or all degree requirements completed and the degree pending.
- Associate Professor: An earned doctorate or equivalent in appropriate field of study.
- Full Professor: An earned doctorate or equivalent in appropriate field of study.

Appendix A – Summary of PLOs and UDLEs Mapped to Courses and Assessment Methods

							UDLEs	Communication Skills Autonomy & Professional Capacity	Depth & Breadth Knowledge of Methodologies Communication Skills Experiential Learning	Application of Knowledge Awareness of Limits of Knowledge	Application of Knowledge Awareness of Limits of Knowledge	Knowledge of Methodologies Application of Knowledge	Knowledge of Methodologies Application of Knowledge Experiential Learning	Autonomy & Professional Capacity Diversity	Communication Skills Autonomy & Professional Capacity	Depth & Breadth Awareness of Limits of Knowledge Diversity
Year/ Term		Program Objective						PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9
		To provide a multidisciplinary program with theoretical and applied courses in the health sciences, liberal/communication arts and science.	To teach students the significance of approaching clinical reasoning with a sensitivity and responsiveness to a diverse patient population.	To provide students with opportunities to engage in an intellectual curiosity for new knowledge, guidelines, standards, technologies, products, services and resources that improve outcomes for	To provide a program where students develop the self-evaluation skills and passion for life-long	To provide students with experiential learning opportunities to gain the communication, professional and ethical skills to support collaborative and trusting relationships with		Apply communication tools and techniques to engage in a professional and respectful manner with various audiences and mediums.	Describe the etiology, pathogenesis, structural and molecular alterations as they relate to the signs, symptoms, laboratory results, imaging investigations and causes of common and important diseases.	Incorporate biological factors, such as aging, genetic and epigenetic, nutritional, molecular reactivity, and their effects on human health.	Incorporate the psycho-socio-cultural factors, such as behavior, psychological, cultural, environmental, economic, geographical, religious, and their effects on human health.	Apply scientific health information in clinical reasoning.	Evaluate scientific studies and evidence-based therapeutic strategies to determine the best options for the prevention, treatment and palliation of disease.	Adhere to ethical behaviour that respects diversity and patient autonomy, and act in accordance with ethical codes of conduct, following patient privacy and informed consent procedures.	Commit to self-evaluation and life-long learning by investigating and evaluating professional practices, engaging in professional development and seeking professional networking and mentorship opportunities to improve patient care and maintain a healthy professional identity.	Assess healthcare systems, resources, services and patient care.
1/A Courses	CHEM120: General Chemistry 1	X Q/T, EXM		X ONLN, A						X Q/T, EXM						
	CHEM120L: General Chemistry Laboratory 1	X A, EXM				X RPT, A, LB				X RPT, EXM						
	PSYCH101: Introductory Psychology	X EXM	X A, RSCH		X A, RSCH			X EXM			X EXM	X EXM				X A, RSCH
	PHYS105: Introduction to Physics for Health Care Professions (new)	X Q/T, EXM		X Q/T, EXM					X Q/T, EXM			X Q/T, EXM				
	HLTH101: Introduction to Health 1		X A, PRES, EXM	X A&P, A, EXM		X A, PRES					X A, PRES, EXM	X A&P, A, PRES, EXM			X A&P, A, PRES	X A, PRES, EXM
	BIOL130: Introductory Cell Biology	X ONLN		X A						X Q/T, EXM						
	BIOL130L: Cell Biology Laboratory	X Q/T				X RPT, A				X LB						
1/B Courses	CHEM123: General Chemistry 2	X Q/T, EXM		X A&P, ONLN					X A&P, Q/T, EXM	X ONLN, Q/T, EXM						
	CHEM123L: General Chemistry Laboratory 2	X A, RPT				X LB, RPT, EXM			X A, LB, RPT, EXM	X A, LB, RPT, EXM						
	KIN146: Introduction to Human Nutrition	X Q/T, A	X A							X Q/T, A		X A				
	HLTH 204: Quantitative Approaches to Health Science	X EXM		X LB, A		X LB						X EXM	X LB, A			

							UDLEs								
							Communication Skills Autonomy & Professional Capacity	Depth & Breadth Knowledge of Methodologies Communication Skills Experiential Learning	Application of Knowledge Awareness of Limits of Knowledge	Application of Knowledge Awareness of Limits of Knowledge	Knowledge of Methodologies Application of Knowledge	Knowledge of Methodologies Application of Knowledge Experiential Learning	Autonomy & Professional Capacity Diversity	Communication Skills Autonomy & Professional Capacity	Depth & Breadth Awareness of Limits of Knowledge Diversity
Year/ Term		Program Objective					PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9
		To provide a multidisciplinary program with theoretical and applied courses in the health sciences, liberal/communication arts and science.	To teach students the significance of approaching clinical reasoning with a sensitivity and responsiveness to a diverse patient population.	To provide students with opportunities to engage in an intellectual curiosity for new knowledge, guidelines, standards, technologies, products, services and resources that improve outcomes for	To provide a program where students develop the self-evaluation skills and passion for life-long	To provide students with experiential learning opportunities to gain the communication, professional and ethical skills to support collaborative and trusting relationships with	Apply communication tools and techniques to engage in a professional and respectful manner with various audiences and mediums.	Describe the etiology, pathogenesis, structural and molecular alterations as they relate to the signs, symptoms, laboratory results, imaging investigations and causes of common and important diseases.	Incorporate biological factors, such as aging, genetic and epigenetic, nutritional, molecular reactivity, and their effects on human health.	Incorporate the psycho-socio-cultural factors, such as behavior, psychological, cultural, environmental, economic, geographical, religious, and their effects on human health.	Apply scientific health information in clinical reasoning.	Evaluate scientific studies and evidence-based therapeutic strategies to determine the best options for the prevention, treatment and palliation of disease.	Adhere to ethical behaviour that respects diversity and patient autonomy, and act in accordance with ethical codes of conduct, following patient privacy and informed consent procedures.	Commit to self-evaluation and life-long learning by investigating and evaluating professional practices, engaging in professional development and seeking professional networking and mentorship opportunities to improve patient care and maintain a healthy professional identity.	Assess healthcare systems, resources, services and patient care.
	HLTH107: Sociology of Activity, Health, and Well-Being	X Q/T, A&P			X A&P, A		X A&P, A			X A&P, A		X A, Q/T			X A&P, A
	BIOL201: Human Anatomy	X Q/T, A, EXM		X A&P, A					X A&P, Q/T, A		X EXM				
	BIOL239: Genetics	X Q/T, A, EXM		X A&P, A					X A&P, Q/T, A		X EXM				
2/A Courses	CHEM237: Introductory Biochemistry	X Q/T, EXM		X Q/T, EXM				X Q/T, EXM			X EXM				
	CHEM266: Basic Organic Chemistry 1	X A, Q/T, EXM		X A					X A, Q/T, EXM		X A, EXM				
	CHEM266L: Organic Chemistry Laboratory	X Q/T, EXM				X LB, A, RPT			X Q/T, EXM		X LB, A, RPT				
	Communication for Health Professions I		X A&P, Q/T, A		X A&P, A	X A&P, A	X A&P, A				X Q/T, A	X A		X A&P	
	BIOL240: Fundamentals of Microbiology	X Q/T, EXM		X Q/T, EXM				X Q/T, EXM			X EXM				
	BIOL 240L: Fundamental Microbiology Lab	X Q/T, LB				X A&P, RPT, LB, A		X RPT, LB, A			X Q/T, LB				
	BIOL 273: Principles of Human Physiology	X A, Q/T, EXM		X A, EXM					X A, Q/T, EXM				X A, Q/T, EXM		
	Learning Strategies for Preprofessional Programs			X A, A&P	X A, A&P	X A, A&P	X A, A&P							X A, A&P	X A, A&P
	MEDSCI270: Biochemistry	X Q/T, A		X A				X Q/T, A	X Q/T, A						

							UDLEs	Communication Skills Autonomy & Professional Capacity	Depth & Breadth Knowledge of Methodologies Communication Skills Experiential Learning	Application of Knowledge Awareness of Limits of Knowledge	Application of Knowledge Awareness of Limits of Knowledge	Knowledge of Methodologies Application of Knowledge	Knowledge of Methodologies Application of Knowledge Experiential Learning	Autonomy & Professional Capacity Diversity	Communication Skills Autonomy & Professional Capacity	Depth & Breadth Awareness of Limits of Knowledge Diversity
Year/ Term		Program Objective						PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9
		To provide a multidisciplinary program with theoretical and applied courses in the health sciences, liberal/communication arts and science.	To teach students the significance of approaching clinical reasoning with a sensitivity and responsiveness to a diverse patient population.	To provide students with opportunities to engage in an intellectual curiosity for new knowledge, guidelines, standards, technologies, products, services and resources that improve outcomes for	To provide a program where students develop the self-evaluation skills and passion for life-long	To provide students with experiential learning opportunities to gain the communication, professional and ethical skills to support collaborative and trusting relationships with		Apply communication tools and techniques to engage in a professional and respectful manner with various audiences and mediums.	Describe the etiology, pathogenesis, structural and molecular alterations as they relate to the signs, symptoms, laboratory results, imaging investigations and causes of common and important diseases.	Incorporate biological factors, such as aging, genetic and epigenetic, nutritional, molecular reactivity, and their effects on human health.	Incorporate the psycho-socio-cultural factors, such as behavior, psychological, cultural, environmental, economic, geographical, religious, and their effects on human health.	Apply scientific health information in clinical reasoning.	Evaluate scientific studies and evidence-based therapeutic strategies to determine the best options for the prevention, treatment and palliation of disease.	Adhere to ethical behaviour that respects diversity and patient autonomy, and act in accordance with ethical codes of conduct, following patient privacy and informed consent procedures.	Commit to self-evaluation and life-long learning by investigating and evaluating professional practices, engaging in professional development and seeking professional networking and mentorship opportunities to improve patient care and maintain a healthy professional identity.	Assess healthcare systems, resources, services and patient care.
2/B Courses	MEDSCI280: Introduction to Psychopathology	X Q/T, EXM	X EXM							X EXM	X Q/T, EXM		X EXM			X EXM
	MEDSCI203: Communication for Health Professions II		X A&P, A		X A&P, A			X A&P, A				X A&P, A			X A&P, A	
	MEDSCI260: Human Anatomy	X A&P, Q/T, EXM		X EXM						X Q/T, EXM				X A&P		X Q/T, EXM
	MEDSCI250: Physiology	X A&P, Q/T, A, EXM		X A&P, A						X Q/T, A, EXM				X A&P		X Q/T, A, EXM
	MEDSCI290: Molecular Biology	X Q/T, EXM		X EXM					X EXM	X EXM						
3/A Courses at SGU	MEDSCI300: Basic Principles of Medicine I	X LB, Q/T, EXM		X LB, EXM					X LB	X Q/T, EXM			X EXM			X LB, Q/T, EXM
3/B Courses at SGU	MEDSCI350: Basic Principles of Medicine II	X A&P, LB, Q/T, EXM		X LB, Q/T, EXM		X A&P, LB			X LB, EXM	X LB, EXM			X Q/T, EXM			X A&P, LB, Q/T, EXM
4A Courses at SGU	MEDSCI400: Principles of Clinical Medicine 1		X A&P, LB, A	X A&P, LB, A, EXM	X A&P, LB, A	X A&P, LB, A							X EXM	X A&P, LB, A	X A&P, LB	X A&P, LB, A, EXM
	MEDSCI420: Basic Principles of Medicine III	X Q/T, EXM		X EXM		X Q/T, EXM				X Q/T, EXM			X Q/T, EXM	X Q/T, EXM		

		UDLEs	Communication Skills Autonomy & Professional Capacity	Depth & Breadth Knowledge of Methodologies Communication Skills Experiential Learning	Application of Knowledge Awareness of Limits of Knowledge	Application of Knowledge Awareness of Limits of Knowledge	Knowledge of Methodologies Application of Knowledge	Knowledge of Methodologies Application of Knowledge Experiential Learning	Autonomy & Professional Capacity Diversity	Communication Skills Autonomy & Professional Capacity	Depth & Breadth Awareness of Limits of Knowledge Diversity
Year/ Term		Program Objective	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9
		To provide a multidisciplinary program with theoretical and applied courses in the health sciences, liberal/communication arts and science. To teach students the significance of approaching clinical reasoning with a sensitivity and responsiveness to a diverse patient population. To provide students with opportunities to engage in an intellectual curiosity for new knowledge, guidelines, standards, technologies, products, services and resources that improve outcomes for To provide a program where students develop the self-evaluation skills and passion for life-long To provide students with experiential learning opportunities to gain the communication, professional and ethical skills to support collaborative and trusting relationships with	Apply communication tools and techniques to engage in a professional and respectful manner with various audiences and mediums.	Describe the etiology, pathogenesis, structural and molecular alterations as they relate to the signs, symptoms, laboratory results, imaging investigations and causes of common and important diseases.	Incorporate biological factors, such as aging, genetic and epigenetic, nutritional, molecular reactivity, and their effects on human health.	Incorporate the psycho-socio-cultural factors, such as behavior, psychological, cultural, environmental, economic, geographical, religious, and their effects on human health.	Apply scientific health information in clinical reasoning.	Evaluate scientific studies and evidence-based therapeutic strategies to determine the best options for the prevention, treatment and palliation of disease.	Adhere to ethical behaviour that respects diversity and patient autonomy, and act in accordance with ethical codes of conduct, following patient privacy and informed consent procedures.	Commit to self-evaluation and life-long learning by investigating and evaluating professional practices, engaging in professional development and seeking professional networking and mentorship opportunities to improve patient care and maintain a healthy professional identity.	Assess healthcare systems, resources, services and patient care.
4/B Courses at SGU	MEDSCI450: Principles of Clinical Medicine 2		X A&P, LB, F, PRES	X A&P, LB, F, A, PRES, EXM	X A&P, LB, F	X A&P, LB, F		X F, A, PRES, EXM		X F, A, PRES, EXM	X F, A, PRES, EXM

Assessment Methods:
Assignments/ arguments/policy briefs (A)
Exams (EXM)
Field (F)
Online Engagement (ONLN)
Presentations (PRES)
Quizzes/Tests (Q/T)
Research/data interpretation/synthesis/visualization (RSCH)
Technical reports/plans (RPT)

Appendix B – Program Maps

6YR Track									
	5YR Track								
				Doctor of Medicine (SGU)					
Bachelor or Medical Sciences (UW)									
Delivered at the University of Waterloo (*content/assessments provided by SGU)				Delivered at St. George's University					
1A Term (Fall) Standard UW Term	1B Term (Winter) Standard UW Term	2A Term (Fall) Standard UW Term	*2B Term (Winter) 16 weeks	3A Term (Fall) 17 weeks	3B Term (Winter) 18 weeks	4A Term (Fall) 24 weeks	4B Term (Winter) 18 weeks	YR 3 42 weeks Core Rotations	YR 4 38 weeks Sub-Internships and Electives
CHEM 120: General Chemistry 1 Equivalent: CHEM 122 (SGU)	CHEM 123: General Chemistry 2 Equivalent: CHEM 124 (SGU)	CHEM 237: Introductory Biochemistry	MEDSCI 270: Biochemistry Equivalent: CHEM 450 (SGU)	MEDSCI 300: Basic Principles of Medicine I 17 credits Foundation to Medicine (6 weeks) Musculoskeletal System (4 weeks) Cardiovascular, Pulmonary and Renal Systems (7 weeks)	MEDSCI 350: Basic Principles of Medicine II 17 credits Endocrinology and Reproduction (3 weeks) Digestion and Metabolism (5 weeks) Nervous System and Behavioral Sciences (10 weeks)	MEDSCI 420: Basic Principles of Medicine III 8 credits over 6 weeks	MEDSCI 450: Principles of Clinical Medicine 2 19 credits	Internal Medicine 12 weeks	Family Medicine 4-6 weeks
CHEM 120L: General Chemistry Laboratory 1 Equivalent: CHEM 123 (SGU)	CHEM 123L: General Chemistry Laboratory 2 Equivalent: CHEM 125 (SGU)	CHEM 266: Basic Organic Chemistry 1 Equivalent: CHEM 222 (SGU)	MEDSCI 280: Introduction to Psychopathology Equivalent: PSYC 411 (SGU)			MEDSCI 400: Principles of Clinical Medicine 1 21 credits over 18 weeks		Surgery 12 weeks	Subinternship (Psychiatry, OB/GYN, Internal Medicine, Pediatrics, or Surgery)
PSYCH 101: Introductory Psychology Equivalent: PHYC 201 (SGU)	KIN 146: Introduction to Human Nutrition Equivalent: NUTR 201 (SGU)	CHEM 266L: Organic Chemistry Laboratory Equivalent: CHEM 223 (SGU)	MEDSCI 203: Communication for Health Professions II Equivalent: PCLN 303 (SGU)					Pediatrics 6 weeks	Medicine Elective 4 weeks
PHYS 105: Introduction to Physics for the Health Care Professions (new) Equivalent: PHYS 200 (SGU)	HLTH 204: Quantitative Approaches to Health Science Equivalent: MATH 220 (SGU)	MEDSCI 202: Communication for Health Professions I Equivalent: PCLN 302 (SGU)	MEDSCI 260: Human Anatomy Equivalent: BIOL 460 (SGU)					Obstetrics/Gynecology 6 weeks	Additional Electives 24-26 weeks
HLTH 101: Introduction to Health 1 Equivalent: PUBH 302 (SGU)	HLTH 107: Sociology of Activity, Health, and Well-Being Equivalent: URC	BIOL 240: Fundamentals of Microbiology Equivalent: BIOL 401 (SGU)	MEDSCI 250: Physiology Equivalent: BIOL 441 (SGU)					Psychiatry 6 weeks	
BIOL 130: Introductory Cell Biology	BIOL 201: Human Anatomy Equivalent: BIOL 101 (SGU)	BIOL 240L: Fundamental Microbiology Lab	MEDSCI 290: Molecular Biology Equivalent: BIOL 321 (SGU)						
BIOL 130L: Cell Biology Laboratory	BIOL 239: Genetics Equivalent: BIOL 320 (SGU)	BIOL 273: Principles of Human Physiology Equivalent: BIOL 202 (SGU)							
		MEDSCI 200: Learning Strategies for Preprofessional Programs (11 wks) Equivalencies: PCLN 301 (SGU)							

Chemistry	Physics	Psychology	Health Sciences	Biology	Student Success Office	Medicine (SGU)

6YR Track

6YR Track									
				Doctor of Medicine (SGU)					
Bachelor or Medical Sciences (UW)									
Delivered at the University of Waterloo (*content/assessments provided by SGU)				Delivered at St. George's University					
1A Term (Fall) Standard UW Term	1B Term (Winter) Standard UW Term	2A Term (Fall) Standard UW Term	*2B Term (Winter) 16 weeks	3A Term (Fall) 17 weeks	3B Term (Winter) 18 weeks	4A Term (Fall) 24 weeks	4B Term (Winter) 18 weeks	YR 3 42 weeks Core Rotations	YR 4 38 weeks Sub-Internships and Electives
CHEM 120: General Chemistry 1 Equivalent: CHEM 122 (SGU)	CHEM 123: General Chemistry 2 Equivalent: CHEM 124 (SGU)	CHEM 237: Introductory Biochemistry	MEDSCI 270: Biochemistry Equivalent: CHEM 450 (SGU)	MEDSCI 300: Basic Principles of Medicine I 17 credits Foundation to Medicine (6 weeks) Musculoskeletal System (4 weeks) Cardiovascular, Pulmonary and Renal Systems (7 weeks)	MEDSCI 350: Basic Principles of Medicine II 17 credits Endocrinology and Reproduction (3 weeks) Digestion and Metabolism (5 weeks) Nervous System and Behavioral Sciences (10 weeks)	MEDSCI 420: Basic Principles of Medicine III 8 credits over 6 weeks	MEDSCI 450: Principles of Clinical Medicine 2 19 credits	Internal Medicine 12 weeks	Family Medicine 4-6 weeks
CHEM 120L: General Chemistry Laboratory 1 Equivalent: CHEM 123 (SGU)	CHEM 123L: General Chemistry Laboratory 2 Equivalent: CHEM 125 (SGU)	CHEM 266: Basic Organic Chemistry 1 Equivalent: CHEM 222 (SGU)	MEDSCI 280: Introduction to Psychopathology Equivalent: PSYC 411 (SGU)			MEDSCI 400: Principles of Clinical Medicine 1 21 credits over 18 weeks		Surgery 12 weeks	Subinternship (Psychiatry, OB/GYN, Internal Medicine, Pediatrics, or Surgery)
PSYCH 101: Introductory Psychology Equivalent: PHYC 201 (SGU)	KIN 146: Introduction to Human Nutrition Equivalent: NUTR 201 (SGU)	CHEM 266L: Organic Chemistry Laboratory Equivalent: CHEM 223 (SGU)	MEDSCI 203: Communication for Health Professions II Equivalent: PCLN 303 (SGU)					Pediatrics 6 weeks	Medicine Elective 4 weeks
PHYS 105: Introduction to Physics for the Health Care Professions (new) Equivalent: PHYS 200 (SGU)	HLTH 204: Quantitative Approaches to Health Science Equivalent: MATH 220 (SGU)	MEDSCI 202: Communication for Health Professions I Equivalent: PCLN 302 (SGU)	MEDSCI 260: Human Anatomy Equivalent: BIOL 460 (SGU)					Obstetrics/Gynecology 6 weeks	Additional Electives 24-26 weeks
HLTH 101: Introduction to Health 1 Equivalent: PUBH 302 (SGU)	HLTH 107: Sociology of Activity, Health, and Well-Being	BIOL 240: Fundamentals of Microbiology Equivalent: BIOL 401 (SGU)	MEDSCI 250: Physiology Equivalent: BIOL 441 (SGU)					Psychiatry 6 weeks	
BIOL 130: Introductory Cell Biology	BIOL 201: Human Anatomy Equivalent: BIOL 101 (SGU)	BIOL 240L: Fundamental Microbiology Lab	MEDSCI 290: Molecular Biology Equivalent: BIOL 321 (SGU)						
BIOL 130L: Cell Biology Laboratory	BIOL 239: Genetics Equivalent: BIOL 320 (SGU)	BIOL 273: Principles of Human Physiology Equivalent: BIOL 202 (SGU)							
		MEDSCI 200: Learning Strategies for Preprofessional Programs (11 wks) Equivalencies: PCLN 301 (SGU)							
Bachelor or Medical Sciences (UW)				**Shared Curriculum between two credentials**				**Doctor of Medicine (SGU)**	

5YR Track

<table>
<tr><td colspan="8">5YR Track</td></tr>
<tr><td colspan="2"></td><td colspan="6">Doctor of Medicine (SGU)</td></tr>
<tr><td colspan="4">Bachelor or Medical Sciences (UW)</td><td colspan="4"></td></tr>
<tr><td colspan="2">Delivered at the University of Waterloo
(*content/assessments provided by SGU)</td><td colspan="6">Delivered at St. George’s University</td></tr>
<tr><td>2A Term (Fall)
Standard UW Term</td><td>*2B Term (Winter)
16 weeks</td><td>3A Term (Fall)
17 weeks</td><td>3B Term
(Winter)
18 weeks</td><td>4A Term
(Fall)
24 weeks</td><td>4B Term
(Winter)
18 weeks</td><td>YR 3
42 weeks
Core Rotations</td><td>YR 4
38 weeks
Sub-Internships and Electives</td></tr>
<tr><td>CHEM 237: Introductory Biochemistry</td><td>MEDSCI 270: Biochemistry
Equivalent: CHEM 450 (SGU)</td><td rowspan="9">MEDSCI 300: Basic Principles of Medicine I
17 credits

Foundation to Medicine (6 weeks)
Musculoskeletal System (4 weeks)
Cardiovascular, Pulmonary and Renal Systems (7 weeks)</td><td rowspan="9">MEDSCI 350: Basic Principles of Medicine II
17 credits

Endocrinology and Reproduction (3 weeks)
Digestion and Metabolism (5 weeks)
Nervous System and Behavioral Sciences (10 weeks)</td><td>MEDSCI 420: Basic Principles of Medicine III
8 credits over 6 weeks</td><td rowspan="9">MEDSCI 450: Principles of Clinical Medicine 2
19 credits</td><td>Internal Medicine
12 weeks</td><td>Family Medicine
4-6 weeks</td></tr>
<tr><td>CHEM 266: Basic Organic Chemistry 1
Equivalent: CHEM 222 (SGU)</td><td>MEDSCI 280: Introduction to Psychopathology
Equivalent: PSYC 411 (SGU)</td><td rowspan="8">MEDSCI 400: Principles of Clinical Medicine 1
21 credits over 18 weeks</td><td>Surgery
12 weeks</td><td>Subinternship (Psychiatry, OB/GYN, Internal Medicine, Pediatrics, or Surgery)</td></tr>
<tr><td>CHEM 266L: Organic Chemistry Laboratory
Equivalent: CHEM 223 (SGU)</td><td>MEDSCI 203: Communication for Health Professions II
Equivalent: PCLN 303 (SGU)</td><td>Pediatrics
6 weeks</td><td>Medicine Elective
4 weeks</td></tr>
<tr><td>MEDSCI 202: Communication for Health Professions I
Equivalent: PCLN 302 (SGU)</td><td>MEDSCI 260: Human Anatomy
Equivalent: BIOL 460 (SGU)</td><td>Obstetrics/Gynecology
6 weeks</td><td>Additional Electives
24-26 weeks</td></tr>
<tr><td>BIOL 240: Fundamentals of Microbiology
Equivalent: BIOL 401 (SGU)</td><td>MEDSCI 250: Physiology
Equivalent: BIOL 441 (SGU)</td><td>Psychiatry
6 weeks</td><td rowspan="3"></td></tr>
<tr><td>BIOL 240L: Fundamental Microbiology Lab</td><td>MEDSCI 290: Molecular Biology
Equivalent: BIOL 321 (SGU)</td><td rowspan="3"></td></tr>
<tr><td>BIOL 273: Principles of Human Physiology
Equivalent: BIOL 202 (SGU)</td><td rowspan="2"></td></tr>
<tr><td>MEDSCI200: Learning Strategies for Preprofessional Programs (11 wks)
Equivalencies: PCLN 301 (SGU)</td></tr>
<tr><td colspan="2">Bachelor or Medical Sciences (UW)</td><td colspan="4">Shared Curriculum between two credentials</td><td colspan="2">Doctor of Medicine (SGU)</td></tr>
</table>

Appendix C – Residency and Practicing Pathways for Canadians

To return to Canada to practice medicine after graduating from SGU School of Medicine (SoM), Canadian students have two main pathways, the Canadian Residency Pathway (CaRMS) and the United States (U.S.) Residency Pathway through the National Resident Matching Program (NRMP).

CaRMS

Canadians and Canadian permanent residents (PRs) can apply to the Canadian Residency Matching Service (CaRMS) after graduating from SGU and participate in the Canadian Match process. There are a few key points to consider:

- The CaRMS timeline overlaps with the U.S. National Residency Match Program (NRMP), and the number of spots available for International Medical Graduates (IMGs) in Canada is limited[10].
- If a student matches to a residency position in Canada, they are automatically withdrawn from the U.S. match.

To be eligible to apply for Canadian residency programs, Canadian citizens and PRs must

- Complete the licensing exams
  - Medical Council of Canada Qualifying Exam Part 1 (MCCQE1), and
  - National Assessment Collaboration Objective Structured Clinical Examination (NAC OSCE).
- Apply for Canadian Residency through
  - CaRMS, decisions are based on exam results and application materials.

Pathway to Canada

Canadian residency typically takes three to five years, depending on the specialty. After completing residency, graduates can apply for licensing through the medical regulatory authority (MRA) for the province they want to practice. For instance, graduates apply to the College of Physicians and Surgeons of Ontario (CPSO) to practice in Ontario.

U.S. Residency Pathway - NRMP

For SGU graduates following the U.S. pathway through the NRMP, the steps to return to Canada and practice medicine are as follows:

- Complete U.S. Licensing Exams,
  - USMLE Step 1 (during medical school), and
  - USMLE Step 2 CK (during medical school).

[10] This means that while students can apply to both the Canadian and U.S. matches, most SGU Canadian students end up matching in the U.S. due to more opportunities available. In recent years, the CaRMS match took place after the NRMP, meaning Canadian students who matched in U.S. residencies were automatically withdrawn from the CaRMS process. However, CaRMS has now moved back to being a week before the NRMP, which allows Canadian students to apply to both programs. If they match in Canada, they are automatically withdrawn from the U.S. match. That said, the majority of SGU Canadian graduates successfully match in U.S. residencies. Over the past five years, 94 per cent of Canadian graduates from SGU have secured U.S. residency positions (Average of 2020, 2021, 2022, 2023, and 2024 residency placement rates. Residency placement rate is defined as the total number of Canadian students/graduates who obtained a U.S. residency divided by the total number of Canadian students/graduates who applied to a U.S. residency program in a given year as of October 2024).

    - The Occupational English Test (OET) (as part of the application process).
- Apply for U.S. Residency
    - Through the National Residency Matching Program (NRMP) based on their exam results and application materials.

Residency in the U.S. typically takes three to five years, depending on the specialty. During this time graduates must complete USMLE Step 3 to proceed with their residency. For those who match in the U.S. and complete residency training there, Canadian graduates can pursue licensing in Canada through the reciprocity of training agreement between the U.S. and Canada.

After completing U.S. residency, graduates have three pathways to practice medicine in Canada.

- Sit the Royal College exams if they wish to further specialize.
- Match directly into a subspecialty for the Postgraduate Year Four (PGY4) entry residency training programs, if applicable.
- Apply for certification through the College of Family Physicians of Canada.

If a graduate is board-certified in the U.S. after completing their residency, they can apply for independent licensure in Canada. There are streamlined pathways for U.S. trained (board certified) physicians.

- Verify credentials through Physiciansapply.ca (Medical Council of Canada).
- Apply for licensure through the provincial College of Physicians and Surgeons (e.g., College of Physicians and Surgeons of Ontario).

If a graduate is not board-certified in the U.S. after completing their residency, they will be required to

- Verify credentials through Physicinsapply.ca (Medical Council of Canada).
- Pass the Medical Council of Canada Qualifying Exams Part 1 and 2.
- Pass the National Assessment Collaboration Objective Structured Clinical Examination (NAC OSCE).
- Apply for licensure through the MRA for the province they want to practice.

Unmatched

For those who remain unmatched in either the CaRMS or NRMP processes, SGU has several support systems in place. The Office of Career Guidance (OCG) provides immediate outreach to any student who remains unmatched, offering guidance and support to explore other options. The Supplemental Offer and Acceptance Program (SOAP) provides a uniform process for programs to offer unfilled positions to eligible unmatched or partially matched applicants (during Match week). This offers additional opportunities for residency placement.

Graduates can leverage the SGU network for potential opportunities outside of the formal match programs. For those who do not match in the current year, SGU encourage students to build their residency resumes through clinical research placements within our extensive clinical network. Additionally, SGU offers tuition-free programs such as the Master of Public Health (MPH) and Master of Science (MSc) which can enhance their candidacy for future

residency matches. Students who are unmatched in the first year may have another opportunity to enter the match in subsequent years, both in Canada and the U.S..

UNIVERSITY OF WATERLOO | Senate

For Recommendation **Open Session**

To:	Senate
From:	Senate Executive Committee
Presenter:	Vivek Goel President and Vice-Chancellor
Agenda Item:	**8.2 Amendments to Senate Bylaw 2**

Recommendation/Motion

That Senate give second and final reading to the amendments to Senate Bylaw 2 as presented in this report and effective September 1, 2025.

Background

This report and recommendation executes the necessary bylaws amendments required for amendment to Senate Bylaw 2, on the prospective approval of the new bodies as noted in the recommendation.

To foster greater flexibility for Senate, it is proposed that the terms of reference for the three new bodies be approved outside of Senate Bylaw 2. The establishment of those new bodies would necessitate the dissolution of the three progenitor committees/councils as established within Senate Bylaw 2. The prospective bylaw amendments are included with this report.

Jurisdictional Information

Section 22 of the *University of Waterloo Act, 1972* empowers Senate:

> …
>
> *(o)* to enact by-laws and regulations for the conduct of its affairs.

Senate Bylaw 1, section 14 enunciates Senate's approved procedures for the passage of new bylaws or amendments to an existing bylaw:

> 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.

Governance Path

i. Senate Executive Committee – April 21, 2025

ii. Senate

a. May 5, 2025 – approval of new committee, and first reading of bylaw amendments to dissolve progenitor committee

b. June 9, 2025 – prospective second reading of bylaw amendments

Documentation Provided

i. Attachment - Proposed Amendments to Senate Bylaw 2

Attachment – Proposed Amendments to Senate Bylaw 2

(underline = new text; strikethrough = deleted text)

***

Senate Bylaw 2

A bylaw to establish Committees and Councils of Senate of the University of Waterloo.

BE IT ENACTED as a bylaw of Senate of the University of Waterloo, as follows:

1. Executive Committee

1.01 There shall be a standing committee of Senate called the Executive Committee.

1.02 **Executive Committee Membership**

The membership of this committee shall consist of the following:

a. *Ex Officio*

i. The president of the university, who shall chair this committee.

ii. The vice-president, academic & provost.

iii. The associate vice-president, graduate studies and postdoctoral affairs.

iv. The president of the Faculty Association of the University of Waterloo.

b. Elected

i. One faculty member of Senate from each faculty of the university.

ii. Three members from the student members of Senate, at least one of whom shall be an undergraduate student and at least one of whom shall be a graduate student.

iii. One member of Senate from among the community-at-large members of the Board of Governors.

iv. One faculty member of Senate from the affiliated and federated institutions of Waterloo.

v. One member from among the alumni members of Senate.

1.03 The term of office of members elected pursuant to paragraph 1.02.b shall be one year. Each member is eligible for re-election.

1.04 **Powers and duties of Executive Committee**

The Executive Committee shall have the following powers and duties:

a. To request special meetings of Senate, in accordance with Senate Bylaw 1.

b. On those occasions when the agenda does not, in the estimation of the Executive Committee, warrant a meeting of Senate, to cancel any such meeting of Senate, and to exercise the powers of Senate, within the limits of *The University of Waterloo Act, 1972*, on all matters considered by the Executive Committee in its discretion to be of sufficient urgency that they must be decided prior to the next regular meeting of Senate, provided that the Executive Committee shall have no power under any circumstances to repeal, amend or modify Senate bylaws, or to exercise Senate's responsibilities under Policies 45, 48, 50 and 68. All such actions are to be reported to Senate.

c. To prepare the agenda for all regular and special meetings of Senate.

d. To receive and review reports from the deans of the university prior to their submission to Senate at each regular meeting.

e. To present to Senate, normally at the last regular meeting in the year, a list of nominations for the committees and councils of Senate.

f. To make recommendations to Senate as may be necessary from time to time regarding the establishment of ad hoc committees of Senate, such recommendations to include the terms of reference of any such committee and a list of nominations for the membership thereof.

g. To receive and review the reports and recommendations of all committees and councils, prior to their presentation to Senate and to make at its discretion recommendations to Senate thereon.

h. To act on behalf of Senate on such matters as Senate may from time to time designate.

i. To report to Senate, as expeditiously as possible, with respect to the conduct of such matters as shall be delegated by Senate to the committee from time to time.

1.05 **Meetings of the Executive Committee**

The committee shall normally hold regular meetings during each year equal to the

number of regular meetings of Senate, each such meeting to be held approximately two weeks prior to the date of each general meeting of Senate. Special meetings of the committee shall be called by the chair of the committee.

2. Finance Committee

2.01 There shall be a standing committee of Senate called the Finance Committee.

2.02 **Finance Committee Membership**

The membership of this committee shall consist of the following:

a. Ex Officio

i. The president of the university, who shall chair this committee.

ii. The vice-president, academic & provost.

iii. The vice-president, administration & finance.

iv. The vice-president, research and international.

v. The associate vice-president, graduate studies and postdoctoral affairs.

vi. The deputy provost, integrated planning and budgeting.

vii. The dean of each faculty.

b. Elected

i. One member from the community-at-large members of the Board of Governors.

ii. One elected faculty member of Senate from each faculty and one faculty member of Senate from the affiliated and federated institutions of Waterloo.

iii. Three members from the elected student members of Senate, at least one of whom shall be an undergraduate student and at least one of whom shall be a graduate student.

iv. One member from among the alumni members of Senate.

2.03 The term of office of members elected pursuant to paragraph 2.02.b shall be one year. Each member is eligible for re-election.

2.04 **Powers and Duties of Finance Committee**

The Finance Committee shall have the following powers and duties:

a. To consider, study, and review all matters pertaining to the financial operations of the university and to make recommendations to Senate thereon.

b. To consider, study, and review the general policies governing the internal allocation of the university's financial resources and to make recommendations to Senate thereon.

c. To receive each year from the vice-president, academic & provost, for consideration, study, and review, on behalf of Senate, a detailed operating budget for the university and to make recommendations to Senate thereon.

3. Long Range Planning Committee

3.01 There shall be a standing committee of Senate called the Long Range Planning Committee.

3.02 **Long Range Planning Committee Membership**

The membership of this committee shall consist of the following:

a. Ex Officio

i. The president of the university.

ii. The vice-president, academic & provost, who shall chair this committee.

iii. The vice-president, administration & finance.

iv. The vice-president, research and international.

v. The associate vice-president, graduate studies and postdoctoral affairs.

vi. The deputy provost, integrated planning and budgeting.

vii. The dean of each faculty.

b. Elected

i. One elected faculty member of Senate from each faculty and one faculty member of Senate from the affiliated and federated institutions of Waterloo.

ii. One member from the Board of Directors of the Faculty Association of the University of Waterloo.

iii. Three members of Senate from the elected student members, at least one of whom shall be an undergraduate student and at least one of whom shall be a graduate student.

iv. One member of Senate from the community-at-large members of the Board of Governors.

v. One member from among the alumni members of Senate.

3.03 The term of office of members elected pursuant to paragraph 3.02.b shall be one year. Each member is eligible for re-election.

3.04 **Powers and duties of Long Range Planning Committee**

The Long Range Planning Committee shall have the following powers and duties:

a. To make recommendations to Senate in all matters pertaining to the co-ordination of the planning of the academic, physical, and operational development of the university and the achievement of a planned rate and scope of such development.

b. To receive from the president, for consideration, study and review, on behalf of Senate, plans for the development of the university and to make recommendations to Senate thereon.

c. To undertake such studies as Senate may designate from time to time.

d. To report to Senate, as expeditiously as possible, with respect to the conduct of such matters as shall be delegated by Senate to the committee from time to time.

4. Graduate & Research Council

4.01 There shall be a council of the university, appointed by and responsible to Senate, called the Graduate & Research Council.

4.02 **Graduate & Research Council Membership**

The membership of this council shall consist of the following:

a. Ex Officio

i. The president of the university.

ii. The vice-president, academic & provost.

iii. The vice-president, research and international, who shall co-chair this council.

iv. The associate vice-president, graduate studies and postdoctoral affairs, who shall co-chair this council.

v. An assistant vice-president, graduate studies and postdoctoral affairs appointed on the recommedation of the associate vice-president, graduate studies and postdoctoral affairs

vi. The associate vice-president, interdisciplinary research.

vii. The associate vice-president, research oversight and analysis

viii. The associate dean for graduate studies from each Faculty

ix. The associate dean for research from each Faculty

x. The director of research ethics

xi. The director, research partnerships

xii. The director, graduate academic services

xiii. The university librarian or designate

xiv. The president of the Graduate Student Association

b. Elected / Appointed

i. One faculty member from the affiliated and federated institutions of Waterloo, who shall serve for a term of two years

ii. One graduate student from each faculty, each of whom shall serve for a term of two years.

4.03 **Powers and Duties of the Graduate & Research Council**

The Graduate & Research Council shall consider all questions relating to the academic quality of graduate studies and research activity within the university and, without intending to restrict the generality of the foregoing, the Graduate & Research Council shall,

a. Make recommendations to Senate with respect to the governance, direction and management of, or any changes in rules, regulations or policies for graduate studies and research in the university.

b. Advise the vice-president, academic & provost on all matters relating to graduate studies and research.

c. Receive, consider, study and review briefs on any aspect of graduate studies and research from members of the university.

~~d. Make recommendations to Senate with respect to any financial matter pertaining to graduate studies and research.~~

~~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.~~

~~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.~~

~~g. Consider, study and review all proposals for new centres and institutes, and the closure of centres and institutes, and make recommendations to Senate thereon.~~

~~h. On behalf of Senate, consider and approve renewals for centres and institutes, and report such renewals to Senate for information. 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.~~

~~5.~~ 2. Undergraduate Council

~~5~~2.01 There shall be a council of the university, appointed by and responsible to Senate, called the Undergraduate Council.

~~5~~2.02 **Undergraduate Council Membership**

The membership of this council shall consist of the following:

a. Ex Officio

i. The president of the university.

ii. The vice-president, academic & provost.

iii. The associate vice-president, academic, who shall co-chair this council.

iv. The dean of the federated university.

v. The associate dean for undergraduate studies for each faculty.

vi. The registrar of the university.

vii. The university librarian, or delegate.

viii. The vice-president (education) or equivalent from the Undergraduate Student Association of each faculty of the university.

b. Elected / Appointed

i. One member of the faculty from each faculty of the university which offers undergraduate programs, each of whom shall serve for a term of two years.

ii. One member of faculty from the federated university, who shall serve for a term of two years.

iii. One member of faculty from the affiliated university colleges, who shall serve for a term of two years.

iv. A director appointed from Co-operative Education & Career Action.

v. An executive member appointed from the Federation of Students.

5<u>2</u>.03 **Powers and Duties of the Undergraduate Council**

The Undergraduate Council shall consider all questions relating to the academic quality of undergraduate studies within the university and, without intending to restrict the generality of the foregoing, the Undergraduate Council shall,

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

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.

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.

d. Advise the vice-president, academic & provost on all matters relating to undergraduate studies.

e. Consider, study and review briefs on any aspect of undergraduate studies from members of the university.

Amended/consolidated from Bylaws 2, 3, 4, 8 and 9 in two readings, September and October 2014.
Amended by Senate in two readings, November 2017 and January 2018.
Amended by Senate in two readings, May 2019 and June 2019.
Amended by Senate in two readings, January 2025 and March 2025.
Amended by Senate in two readings, *[date]* and *[date]*.

UNIVERSITY OF WATERLOO | Senate

For Approval **Open Session**

To:	Senate
From:	Mathematics Faculty Council
Presenter(s):	Mark Giesbrecht Dean, Faculty of Mathematics
Date of Meeting:	June 9, 2025
Agenda Item:	**9.1 Amendments to the Faculty of Mathematics Constitution**

Recommendation/Motion
That Senate approve the amended Constitution for the Faculty of Mathematics at the University of Waterloo, as described in this report.

Proposal/Rationale
The proposed amendments aim to bring the Faculty's constitution in line with the current structure and operations of the Faculty, and in compliance with recent policy changes at the University level.

Amendments to the constitution are detailed in the attachment to this report, and a summary of the proposed changes are as follows:

- Amendments arising from the recent revisions to Policy 76 and Policy 77, and the introductions of new ranks within the professoriate.
- Amendments to align with the organizational structure of the Faculty (Math/Business is no longer a unit, the Centre for Education in Mathematics and Computing (CEMC) and Mathematics Undergraduate Group (MUG) are now treated as units, the Mathematics Graduate Student Association now exists).
- Amendments to reflect current practices or pragmatic approaches.
- The term length for Chair of Faculty Council is now defined as two years.
- The process to elect a Chair of Faculty Council is modified to include an option "None of the Above", which if the option prevails in the election the full election process under section V.i will be restarted from the beginning. This provision aims to mitigate situations where the elected Chair does not sufficiently earn the confidence of Faculty Council.
- The Dean Nominating Committee membership is amended to provide seven (7) faculty members whenever allowed by Senate, to ensure that every faculty member is represented.
- Adjustment of Faculty Council quorum from 25 to 35, to reflect the growth of the Faculty in the time since that quorum figure was approved. Setting a formulaic quorum was considered but not adopted.
- Editorial edits to improve flow along with updates of titles and units.

The consultation process also yielded additional constitutional changes of potential interest to the Faculty, however it was determined that those additional changes would themselves require extensive consultation and were not pursued as part of the suite of changes for submission to Senate in this report.

Jurisdictional Information

Per Senate Bylaw 1, Article 15.01, where a Faculty has adopted a formal constitution, that constitution and any amendments thereto are inoperative and ineffective until approved by Senate.

Governance Path

i. March 2024 - Faculty of Mathematics Administrative Committee established a subcommittee on constitution reform
ii. May 2024 - Faculty Council received notice as part of agenda of regular meeting
iii. October 2024 and February 2025 - Preliminary reports to Mathematics Faculty Council
iv. May 2024 to March 2025 - Consultation
    a. chairs of the various Faculty of Mathematics committees
    b. Faculty Equity Officer
    c. Secretary of the University
    d. Dean Advisory Council
    e. Faculty of Mathematics Administrative Committee
v. March 21, 2025 - Draft revisions circulated to Mathematics Faculty Council
vi. April 22, 2025 – Recommendation of proposed amendments by Mathematics Faculty Council, with 57 members in attendance and 52 voting in favour
vii. Proposed amendments approved by electronic vote of Mathematics Faculty Council held 5 May 2025 to 27 May 2025. 310 ballots circulated, Y ballots returned. Z voted in favour (P%, exceeds necessary threshold) - to be confirmed following e-vote
viii. Consideration of proposed amendments for approval by Senate (9 June 2025, anticipated).

Documentation Provided

- **Attachment**: Draft revisions to the "Constitution of The Faculty of Mathematics at The University of Waterloo"

Proposed amendments to the Constitution of the Faculty of Mathematics
(strikethrough = deleted text; underline = new text)

CONSTITUTION OF THE FACULTY OF MATHEMATICS AT THE UNIVERSITY OF WATERLOO

The Faculty of Mathematics at the University of Waterloo (the "University") is constituted to
(i) conduct research that has worldwide impact and recognition;
(ii) provide teaching and learning opportunities of unmatched breadth and depth;
(iii) produce graduates who are in worldwide demand; and
(iv) undertake educational outreach and community engagement that increases mathematical and computing literacy nationally and globally.

I
FACULTY AND FACULTY COUNCIL

I.1 There shall be a unit of the University called the Faculty of Mathematics (the "Faculty").

I.2 The plenary organ of the Faculty shall be the Faculty of Mathematics Faculty Council ("Faculty Council").

I.2.i Faculty Council shall consist of the following, all as voting members:
The President of the University
The Vice-President, Academic & Provost
The Dean of the Faculty
~~All Associate Deans of the Faculty~~
~~All Professors, Associate Professors, Assistant Professors and Lecturers holding a regular faculty appointment in the Faculty~~
All regular faculty members, as defined by Policy 76, holding appointments in the Faculty of Mathematics
The Associate Vice-President, Academic (or delegate)
The Associate ~~Provost~~ Vice-President, Graduate Studies and Postdoctoral Affairs (or delegate)
The University Registrar (or delegate)
The University Librarian (or delegate)
The Faculty Relations Manager (Mathematics) in ~~the Department of Co-operative Education and Career Action~~ Co-operative and Experiential Education (CEE)
The Director of the Student Success Office (or delegate)
One full-time graduate student in the Faculty, pursuant to paragraph V.2.i
Two full-time undergraduate students in the Faculty, pursuant to paragraph V.2.ii
One full-time post-doctoral fellow in the Faculty, pursuant to paragraph V.2.iii
One representative from each of
1. the Faculty of ~~Applied~~ Health ~~Sciences~~;
2. the Faculty of Arts;
3. the Faculty of Engineering;
4. the Faculty of Environment;
5. the Faculty of Science

pursuant to paragraph V.2.iv.

I.2.ii The Chair of Faculty Council may invite representatives of other units and sub-units of the University to attend and participate in meetings of Faculty Council on such terms as Faculty Council may determine.

I.3 Except as may otherwise be determined by the Administrative Committee of Faculty Council, meetings of Faculty Council shall be open to all members of the University community. The Administrative Committee of Faculty Council may, on 48 hours' notice, close a meeting to any or all categories of spectators. Student members of Faculty Council shall not participate in meetings or parts of meetings in which individual student cases are discussed.

I.4 The Year of Faculty Council runs from September 1st to August 31st. Faculty Council shall meet at least four times annually, as specified in the Bylaws. Additional meetings may be held either at the call of the Administrative Committee established pursuant to Clause III.1 below, or within 15 working days of receipt by either the Chair or the Secretary of Faculty Council of the written request of 15% of the membership of Faculty Council.

I.5 A quorum at all meetings of Faculty Council shall consist of ~~25~~ 35 members of Faculty Council.

I.6 Meetings of Faculty Council shall be conducted in accordance with Robert's Rules of Order and Procedure (to the extent that those Rules are not inconsistent with this Constitution) and such bylaws as may be adopted by Faculty Council. Except as otherwise provided for in this Constitution, notices of meetings with agenda and all relevant documentation shall be made available to members of Faculty Council at least 5 working days in advance of its meetings.

I.7 All Faculty Council Records will be maintained in accordance with University Policy 12 – Records Management which guides the creation, storage, use, and disposition of University Records. Except where prohibited by University Policy or government privacy legislation, all Faculty Council Records will be made available to the Faculty electronically.

I.8 Faculty Council shall have the following powers and duties:
a) Subject to the approval of the Senate of the University (the "Senate"), to determine the course of study in the Faculty and the conditions of admission into, and continuation within, these courses of study;
b) Subject to confirmation by Senate, to appoint the examiners for, and conduct the examinations of, the courses in the Faculty and determine the results of such e~~xaminations~~;
c) On the Recommendation of the Undergraduate Standings and Promotions Petitions Committee established pursuant to Clause III.3 below and the Graduate Studies Committee established pursuant to Clause III.4 below, to recommend to Senate candidates for the conferring of degrees, diplomas, awards and other honours;
d) To appoint such standing and ad hoc committees of Faculty Council as it shall determine, and to delegate to such committees the powers and responsibilities that Faculty Council itself possesses pursuant to Clause IV below; and
e) To consider and report to Senate upon such matters affecting the Faculty as Faculty Council may deem appropriate.

~~f)~~ I.9 Except in cases of extreme emergency, no motion of major policy significance may be debated or voted upon in any meeting unless prior notice of that motion is included in the agenda of that meeting. In cases of dispute, the Chair's ruling on whether or not a motion shall be admitted shall be final. Normally, reference to committees, questions of procedure, tabling and requests for information are among the matters not requiring notice of motion.

II
OFFICERS
II.1 The Dean
II.1.1 The senior executive officer of the Faculty shall have the title "Dean of Mathematics" (the "Dean").

II.1.ii The Dean is an officer of the University and is appointed in accordance with University Policy 45, "The Dean of a Faculty," as it may be amended from time to time, or any document in substitution therefor.

II.1.iii In reporting to the Vice-President, Academic & Provost, the Dean leads the Faculty with respect to curriculum development, teaching, learning, research, and fostering its best interests. The Dean represents the Faculty and acts on its behalf in any administrative and ceremonial matters pertaining to the Faculty as a whole. The Dean manages the Faculty, including matters relating to resourcing, resource allocation and Faculty development with advice from the Faculty Council and other relevant committees and performs such other duties or functions as required for the academic program of the Faculty.

II.2 The Chair of Faculty Council
II.2.i Pursuant to the provisions of Clause V.1 below, Faculty Council shall elect one of its faculty members as chair to serve for a term of two years.

II.2.ii The duties of the chair shall consist of:
a) Calling and chairing meetings of Faculty Council in accordance with I.5 above;
b) Calling and chairing meetings of the Administrative Committee established pursuant to Clause III.1 below;
c) Serving as electoral officer of the Administrative Committee established pursuant to Clause III.1 below; and
d) Such other duties as may be assigned to the chair by this Constitution or through bylaws or resolutions of Faculty Council.

II.3 The Secretary of Faculty Council
II.3.i The Secretary of Faculty Council shall be appointed by the Dean.
II.3.ii The duties of the secretary shall consist of:
a) Giving notice of and recording the proceedings of Faculty Council meetings and keeping the attendance roll;
b) Giving notice of and recording proceedings of meetings of the Administrative Committee established pursuant to Clause III.1 below; and
c) Such other duties as may be assigned to the secretary by the Chair, this Constitution or through bylaws or resolutions of Faculty Council.

III
STANDING COMMITTEES
~~The tenure of standing committees of the Faculty is from September 1st to August 31st.~~

- Administrative Committee
- Undergraduate Affairs Committee
- Standings and ~~Promotions~~ Petitions Committee
- Graduate Studies Committee
- Faculty Tenure, Permanence and Promotion Committee
- Honorary Degrees Committee
- Computing Advisory Committee
- Faculty Committee on Student Appeals

III.1 Administrative Committee (the "AC")
III.1.i The AC shall:
a) Plan the forthcoming business of Faculty Council and arrange the agenda of its meetings;
b) Receive reports from standing and ad hoc committees of Faculty Council;
c) Assign matters to appropriate committees and Faculty Council and manage matters that do not otherwise fall within the mandates of committees of Faculty Council;
d) Serve as a nominating committee for Faculty representatives to other bodies in the University, and for any other committees to which the Faculty may from time to time send representatives, including appointing members to such bodies or committees as required to fill vacancies which may occur between elections;
e) Monitor all motions submitted to Faculty Council via the Agenda in order to ensure that such motions are accompanied by adequate statements outlining the reasons for the motion, and its expected consequences.

III.1.ii The AC shall consist of the following, all as voting members:
Ex Officio
a) The Chair of Faculty Council, who shall be Chair;
b) The Secretary of Faculty Council;
c) The Dean of the Faculty;
d) The Associate Dean, Undergraduate Studies;
e) The Associate Dean, Graduate Studies.
Elected/Appointed
a) One member of Faculty Council from each of 1. Applied Mathematics 2. Combinatorics and Optimization 3. Centre for Education in Mathematics and Computing (CEMC) 4. Computer Science 5. Mathematics Undergraduate Group (MUG) 6. ~~4.~~ Pure Mathematics ~~5.~~ 7. Statistics and Actuarial Science chosen by a procedure approved by the relevant unit;
b) One undergraduate student representative, chosen by the undergraduate students in the Faculty through a procedure approved by ~~the Dean~~ the Mathematics Society (MathSoc);
c) One graduate student representative, chosen by the graduate students in the Faculty through a procedure approved by the ~~Dean~~ Math Graduate Student Association (MGSA).

III.1.iii Meetings of the AC shall be closed to everyone other than members of the AC and those invited to attend at the request of the AC.

III.2 Undergraduate Affairs Committee (the "UAC")

III.2.i The UAC shall:

a) Provide general academic oversight on proposals concerning curricula, courses, academic policies, academic standards, continuation conditions, and general undergraduate affairs, and make recommendations on those matters to Faculty Council;

b) Define and oversee the functioning of the core curriculum in the Faculty, and make recommendations in that respect to Faculty Council;

c) Establish and oversee policies relating to admission of undergraduates to the Faculty, including policies governing advanced standing; Oversee and coordinate the preparation of calendar and other informational material relating to undergraduate programs and plans in the Faculty;

d) Receive and consider proposals from the Undergraduate Standings and Promotions Committee; and

e) Consult representatives of groups that do not have permanent representation on the UAC whenever those groups may be affected by proposals to be considered by the UAC, and, in the discretion of the UAC, invite representatives of such groups to attend UAC meetings at which such proposals are to be discussed.

III.2.ii The UAC shall consist of the following as members, all of whom shall be voting members of the UAC unless otherwise noted:

Ex Officio

a) The Dean;

b) The Associate Dean, Undergraduate Studies, who shall be Chair;

c) The Associate Dean, Co-operative Studies;

d) The Associate Dean, Undergraduate Admissions and Outreach;

e) ~~d)~~ The Faculty of Mathematics representative on Senate Undergraduate Council;

f) ~~e)~~ The Mathematics Society Vice-President Academic;

Elected/Appointed

a) One member of Faculty Council from each of 1) Actuarial Science 2) Applied Mathematics 3) Centre for Education in Mathematics and Computing ~~3)~~ 4) Combinatorics and Optimization 5) Mathematics Undergraduate Group ~~4)~~ 6) Pure Mathematics ~~5)~~ 7) Statistics chosen by a procedure approved by the relevant unit.

b) Two members of Faculty Council from the Cheriton School of Computer Science, chosen by a procedure approved by the School;

c) ~~One member of Faculty Council from the Math/Business and Accountancy plans chosen by a procedure approved by the Director of the Mathematics Business and Accountancy plans;~~

~~d)~~ One undergraduate student representative majoring in Computer Science, chosen by the undergraduates majoring in Computer Science by a procedure authorized by the Director of the Cheriton School of Computer Science;

III.2.iii The chair of the UAC shall be the Associate Dean, Undergraduate Studies. Meetings of the UAC shall be closed to everyone other than members of the UAC and those invited to attend at the request of the chair of UAC.

III.2.iv Recommendations for changes in curriculum and regulations governing undergraduate programs for the next academic year shall be submitted to the UAC by a date to be specified by the UAC in consultation with the chair of Faculty Council. Except as otherwise provided in this Article III.2, the UAC shall present its recommendations ~~and copies of submissions~~ to Faculty Council for approval.

III.3 Undergraduate Standings and ~~Promotions~~ Petitions Committee (the "S&P")
III.3.i The S&P shall:
a) Implement existing policies concerning standings, ~~promotions,~~ withdrawals, and related matters;
b) Receive, evaluate, and adjudicate on ~~all~~ petitions for ~~special consideration related to standing and promotions~~ exceptions to academic rules as per Policy 70;
c) Report, and make recommendations, to the UAC on policies related to standings and ~~promotions~~ petitions.

III.3.ii The S&P shall consist of the following members, all of whom shall be voting members unless otherwise noted:
Ex Officio
a) The Dean;
b) The Associate Dean, Undergraduate Studies~~, who shall be Chair~~;
c) The Assistant Dean for Students;
d) The Director of the Mathematics Undergraduate Office, or delegate;
~~c)~~ e) The ~~Co-operative Education & Career Action~~ Co-operative and Experiential Education (CEE) Faculty Relations Manager, Mathematics ~~Co-op~~; and
~~d)~~ f) The Associate Dean, Co-op Studies.
Elected/Appointed
a) Not more than two academic advisors from each of 1) Applied Mathematics 2) Combinatorics and Optimization 3) Computer Science 4) Pure Mathematics 5) Statistics and Actuarial Science appointed by the Chair or Director of the relevant unit;
~~(b) Not more than two academic advisor from the Mathematics Business and Accountancy Plans appointed by the Director of the Mathematics Business and Accountancy Plans.~~
b) Not more than one academic advisor appointed by the Director of the relevant plans for each of 1) Honours Mathematics, 2) Mathematical Studies, 3) Computational Mathematics, 4) Mathematics Business.

III.3.iii Meetings of the S&P shall be closed to everyone other than members of S&P and those invited to attend at the request of S&P.

III.3.iv The Chair of S&P shall be the Associate Dean, Undergraduate Studies or delegate

III.4 Graduate Studies Committee (the "GSC")

III.4.i The GSC shall:
a) Be responsible for the development and operation of graduate studies in the Faculty, and shall oversee the promotion of research within Faculty, subject to the approval of Faculty Council, the Senate Graduate Council, the ~~Dean of Graduate Studies~~ Associate Vice President, Graduate Studies and Postdoctoral Affairs, Graduate Studies and Postdoctoral Affairs ~~the Graduate Studies Office, the Senate Research Council~~, the Senate and other bodies and offices with mandated responsibility for development and operation of graduate studies ~~and research~~ at the University;
b) Consider all proposed new graduate courses and programs and all proposed changes in existing graduate courses and programs, and ~~to~~ make recommendations to Faculty Council in those respects;
c) Determine the requirements for Sole Supervisory Privilege Status ~~qualification as approved doctoral dissertation supervisors~~ within the Faculty;
d) Recommend to Faculty Council candidates meeting all requirements for the ~~post-baccalaureate~~ graduate degrees offered by the Faculty;
e) Oversee the preparation of calendar and other informational material related to the graduate programs of the Faculty, and ~~to~~ coordinate such material prepared by Departments and Schools of the Faculty;
f) Make recommendations to the appropriate bodies on the financial requirements for graduate student support, and for the promotion of research; and
g) Have responsibility for the admissions policies and procedures for graduate students, subject to approval by Faculty Council.

III.4.ii The GSC shall consist of the following as members, all of whom shall be voting members of the GSC unless otherwise noted:
Ex Officio
a) The Dean;
b) The Associate Dean, Graduate Studies, who shall be Chair;
c) The graduate officers from each of 1) Applied Mathematics 2) Combinatorics and Optimization 3) ~~Computational Mathematics 4)~~ Computer Science ~~5)~~ 4) Pure Mathematics ~~6)~~ 5) Statistics and Actuarial Science 6) Master of Mathematics for Teachers
d) The Associate Dean, Research;
e) ~~The Associate Provost, Graduate Studies~~ The Associate Vice-President, Graduate Studies and Postdoctoral Affairs.
f) The Chair of the Math Graduate Student Association
Elected/Appointed
a) One faculty member of Faculty Council from each of 1) Applied Mathematics 2) Combinatorics and Optimization 3) Computer Science 4) Pure Mathematics 5) Statistics and Actuarial Science chosen from among the ~~approved doctoral dissertation supervisors~~ Sole Supervisory Privilege Status 2 holders by a procedure approved by the relevant unit, each to serve a two-year term;
b) ~~Two~~ One full-time graduate student~~s~~ in the Faculty, elected for a 2-year term~~s~~ ~~(except for 1-year terms when need to provide for retirement in alternate years)~~ by the graduate students of the Faculty.

III.4.iii Meetings of the GSC shall be closed to everyone other than members of the GSC and those invited to attend at the request of the chair of GSC.

III.5 Faculty Tenure, Permanence and Promotion Committee (the "FTPPC")
III.5.i The ~~TPC~~ FTPPC shall serve as the Faculty Tenure, Permanence and Promotion Committee as outlined in University Policy #77~~, "~~ – Tenure and Promotion of Faculty Members~~" ("Policy 77")~~.
III.5.ii Membership on the ~~TPC~~ FTPPC shall be as provided ~~for Faculty Tenure and Promotion Committees~~ in Policy 77, with the following additional requirements:
a) Where Policy 77 requires "at least five tenured or permanent faculty members broadly representative of Faculty program areas," this shall mean one faculty member of Faculty Council from each of 1) Applied Mathematics 2) Combinatorics and Optimization 3) Computer Science 4) Pure Mathematics 5) Statistics and Actuarial Science 6) either the Centre for Education in Mathematics and Computing, or the Mathematics Undergraduate Group elected by the relevant unit(s);
b) Members of the ~~TPC~~ FTPPC elected pursuant to paragraph ~~III.6.ii.a)~~ III.5.ii.a) shall serve three-year non-renewable terms;
c) Nominations of members to serve as elected members of ~~TPC~~ FTPPC shall be in writing and must be signed by five members of the electorate as defined in Policy 77, except that the electorate shall be limited to members of the unit for which such nomination is made.
d) Elections pursuant to this sub-Clause ~~II.5.ii~~ III.5.ii shall be conducted by the Dean's Office on behalf of each unit, and shall be by secret ballot conducted among members of the electorate in each unit for which such election is held.

III.6 Honorary Degrees Committee (the "HDC")

III.6.i The HDC shall:
a) Consider issues of policy concerning honorary degrees and distinguished professor emeritus appointments, and make recommendations on these matters to the appropriate bodies;
b) Recommend candidates for honorary degrees, and refer suitable nominees to the Senate Nominating Committee for Honorary Degrees, according to the criteria established by that Senate Committee; and
c) Advise the Dean on recommendations for distinguished Professor Emeritus appointments received by the Dean from Chairs and Directors of the Faculty. In considering nominations, the Chair or Director will first consult with and seek the advice of the Department or School Tenure and Promotion Committee before deciding to forward a recommendation to the Dean. The Dean in turn will consult with the Faculty Honorary Degrees Committee, consider its advice in his/her final decision, and forward approved nominations to the Senate Nominating Committee for Honorary Degrees.

III.6.ii The HDC shall consist of the following as voting members:
a) The Dean;
b) A faculty ~~Faculty~~ member holding a tenured appointment ~~in the professorial ranks~~, appointed by the AC to serve as Chair; and
c) One faculty member of Faculty Council from each of 1) Applied Mathematics 2) Combinatorics and Optimization 3) Computer Science 4) Pure Mathematics 5) Statistics and Actuarial Science appointed by the Chair or Director of the relevant unit, each to serve a two or three year term.

III.6.iii Meetings of the HDC shall be closed to everyone other than members of the HDC and those invited to attend at the request of the HDC.

III.7 Computing Advisory Committee (the "CAC")

III.7.i The CAC shall:
a) Advise the Associate Dean Computing and Faculty Council on procedures and priorities for the use of computing resources within the Faculty; and
b) Participate in continuous long-term planning for the renewal of computing resources in the Faculty, including attention to the relationship with central computing resources for the University.

III.7.ii The CAC shall consist of the following as voting members:
Ex Officio
a) The Dean;
b) The Associate Dean, Computing, who shall be Chair;
c) The Director of Infrastructure of the Cheriton School of Computer Science;
Elected/Appointed
a) One faculty member from each of 1) Applied Mathematics 2) Centre for Education in Mathematics and Computing 3) Combinatorics and Optimization ~~3)~~ 4) Computer Science ~~4)~~ 5) Mathematics Undergraduate Group 6) Pure Mathematics ~~5)~~ 7) Statistics and Actuarial Science appointed by the Chair or Director of the relevant unit;
b) One full-time graduate student in the Faculty, elected by the graduate students of the Faculty by a procedure approved by the Associate Dean;
c) One undergraduate student in the Faculty, chosen by the ~~graduate~~ undergraduate students in the Faculty by a procedure approved by the Associate Dean; and
d) Such additional (non-voting) persons as the Chair shall from time to time appoint.

III.7.iii The chair of the CAC shall be the Associate Dean, Computing. Meetings of the CAC shall be closed to everyone other than members of the CAC and those invited to attend at the request of the chair of the CAC.

III.8 Faculty Committee on Student Appeals (the "FCSA")

III.8.i The FCSA shall:
a) Exercise the jurisdiction vested in faculty committees on student appeals by section 3 of University Policy 72, "Student Appeals" ("Policy 72"); and
b) Advise Faculty Council on matters referred to in paragraph III.8.i.a) ~~III.9.i.a)~~.

III.8.ii The FCSA shall consist of the following as members, all of whom shall be voting members of the FCSA:
a) The Dean;
b) A member of the Faculty holding tenured or permanent appointment ~~in the professorial ranks~~, appointed by the AC, to serve as Chair;

c) Two faculty members of Faculty Council from each of 1) Applied Mathematics 2) Combinatorics and Optimization 3) Computer Science 4) Pure Mathematics 5) Statistics and Actuarial Science 6) either the Centre for Education in Mathematics and Computing, or the Mathematics Undergraduate Group appointed by the Chair or Director of the relevant unit, each to serve a two-year term, provided that one of such appointees from each unit shall retire in each year;
d) Three or more undergraduate students in the Faculty, chosen on a termly basis by the undergraduate students in the Faculty by a procedure approved by the Dean ~~for one or two year terms~~; and
e) Two or more full-time graduate students in the Faculty, chosen by the graduate students in the Faculty by a procedure approved by the Dean, for one- or two-year terms.

III.8.iii Meetings of the FCSA shall be closed to everyone other than members of the FCSA and those invited to attend at the request of the FCSA.

IV
AD HOC COMMITTEES
IV.1.i Faculty Council shall be entitled to establish such other standing or ad hoc committees as it sees fit, to determine the composition and terms of reference of such committees, and to appoint the initial members of such committees, provided that:
a) no such committee shall remain a committee of Faculty Council for more than two years from the date of the meeting of Faculty Council at which it was established unless its composition and terms of reference are incorporated in this Constitution or its bylaws; and
b) all elections subsequently necessary to fill positions on such committees are held pursuant to the provisions of Clause V.3 below.

V
ELECTIONS AND VACANCIES
V.1 Election of Chair of Faculty Council
V.1.i Except as otherwise provided for in valid University or Senate documents, the election of the chair of Faculty Council shall take place during a period (the "Election Period") assigned by the AC, and shall be conducted in accordance with the following procedures:
a) Not less than four weeks prior to the start of the Election Period, the AC shall circulate to members of Faculty Council a call for nominations to be received in the office of the Secretary of Faculty Council not later than two weeks prior to the start of the Election Period.
b) All nominations submitted pursuant to paragraph V.1.i.a) shall be endorsed by three faculty members of Faculty Council and the nominee.
c) At the start of the Election Period, the chair of Faculty Council shall issue a notice of election, and in issuing that call shall append a list of those nominated pursuant to paragraph V.1.i.a).
d) The chair of Faculty Council shall be elected from among the nominees listed pursuant to paragraph V.1.i.c) by a simple majority of the votes cast during the Election Period. The ballot shall include the option "none of the above" and if this option wins, the nomination and election process shall restart.
V.1.ii The office of chair of Faculty Council shall be deemed to be vacated should the incumbent be absent from the University for longer than six consecutive months.

V.1.iii Should the Administrative Committee determine that the office of chair of Faculty Council ~~become~~ is vacant ~~for any reason whatsoever~~, then the remaining members of the AC shall appoint another faculty member of Faculty Council to serve in that office until a replacement is elected in accordance with the provisions of sub-Clause V.1.i. Such election shall be held within ~~twelve~~ four months of the creation of the vacancy.

V.2 Election/Appointment of Council Members

V.2.i Graduate Student representative. The Graduate Student representative will be chosen to serve a one-year term through a nomination/election process administered by the Mathematics Graduate ~~Office~~ Student Association.

V.2.ii Undergraduate Student representatives. The Mathematics Society President, and the Mathematics Society Vice-President Academic shall serve as the Undergraduate Student representatives.

V.2.iii Post-Doctoral Fellow representative. The Post-Doctoral Fellow representative will be chosen to serve a one-year term through a nomination/election process administered by the Mathematics Graduate Office.

V.2.iv Representatives from other Faculties. The representative from each of the other Faculties will be appointed to serve a one-year term, chosen through the process determined by that Faculty.

V.3 Vacancies on Committees of Faculty Council

V.3.i ~~Any elected member of a committee of Faculty Council shall be deemed to have vacated the position should the incumbent be absent from the University for longer than six consecutive months.~~

~~V.3.ii~~ Should a vacancy occur ~~for any reason whatsoever~~ in any elected position on a committee of Faculty Council, then the remaining members of that committee shall appoint another member of Faculty Council to serve in that position in accordance with the provisions of this Constitution by which the relevant committee is established until a replacement is elected in accordance with the provisions of this Constitution by which the relevant committee is established. Such election shall be held within ~~twelve~~ four months of the creation of the vacancy.

V.4 University and Senate Committees and Councils

V.4.i The following processes are used to appoint or elect members to University and Senate Committees or Councils from the Faculty of Mathematics, as specified in the bylaws and/or policies associated with those committees:
a) Senate Graduate & Research Council. Membership of this Senate Committee is described in Senate Bylaw 2. The two elected/appointed members from Mathematics will be the Associate Dean, Graduate Studies, and the Associate Dean, Research. The Associate Deans serve on the Council without term limits.

b) Senate Undergraduate Council. Membership of this Senate Committee is described in Senate Bylaw 2. The elected/appointed Faculty representative is elected from the faculty ~~Faculty~~ members at large, for a term of two years.

c) University Committee on Student Appeals. Membership of this University Committee is described in University Policy 72. ~~The~~ Any Faculty representative requested by Policy 72 is appointed by the Dean from the faculty ~~Faculty~~ members at large, for a term of two years.

d) Dean Nominating Committee. Membership ~~of these committees~~ is described in University Policy 45. The six faculty members are elected as follows:
One regular faculty ~~Faculty~~ member elected by the members of the relevant unit(s) from each of 1) Applied Mathematics 2) Combinatorics and Optimization 3) Computer Science 4) Pure Mathematics 5) Statistics and Actuarial Science ~~elected by the members of the relevant unit~~;
One regular faculty ~~Faculty~~ member is elected from the faculty ~~Faculty~~ members at large and will satisfy the gender requirements specified in University Policy 45~~.~~;
If and when Senate approves for the Faculty of Mathematics Dean Nominating Committee to have seven faculty members, an additional member shall be elected from the combination of the Centre for Education in Mathematics and Computing and the Mathematics Undergraduate Group.

~~IV.1.iii~~ e) The Constitution of the councils of the other Faculties may include representative membership from the Faculty of Mathematics. These positions will be filled according to those constitutional requirements; if there are no specific requirements, the representatives from the Faculty of Mathematics shall be appointed as per a process approved by Administrative Committee ~~by the Dean~~.

VI
BYLAWS AND CONSTITUTIONAL AMENDMENTS

VI.1 Bylaws of Faculty Council shall be adopted by a two thirds majority of the votes cast at a duly constituted meeting of Faculty Council at which a quorum is present. Notice of proposed amendment, repeal or adoption of bylaws must be given in writing not less than 30 days prior to the meeting at which those proposals are intended to be considered.

VI.2 Any amendments to this Constitution shall require the following: ~~e)~~ a) A recommendation for such amendments ratified by a simple majority at a meeting of Faculty Council. Notice of such a recommendation must be brought to Faculty Council at least 30 days prior to its discussion. b) ~~f)~~ A ballot (including the use of electronic voting) of all members of Faculty Council, on the recommendation of Faculty Council. There shall be at least seven days' notice before the start of the voting period, and the voting period shall have a duration of fifteen business days. The ballot must carry by at least a 60% majority of all members of Faculty Council. c) ~~g)~~ Approval of the University Senate.

Ratified ~~Approved~~ at a meeting of Faculty Council held ~~November 10, 2016~~ 22 April 2025 and subsequently approved by ballot.
Approved at a meeting of Senate held ~~January 16, 2017~~ TBD.

UNIVERSITY OF WATERLOO

2024-2025 Senate Work Plan

Secretariat

Senate Agenda Items · expected *as needed	May 6, 2024	June 10, 2024	September 23, 2024	October 21, 2024	November 25, 2024	January 27, 2025	March 3, 2025	April 7, 2025	May 5, 2025	June 9, 2025
REGULAR AGENDA (including items for information and discussion)										
Minutes	·	·	·	·	·	·	·	·	·	·
Business Arising	·	·	·	·	·	·	·	·	·	·
LEADERSHIP UPDATES[6]										
Report of the Vice-President, Academic & Provost	*	*	*	*	*	*	*	*	*	*
Report of the Vice-President, Research and International	*	*	*	*	*	*	*	*	*	*
COMMITTEE/COUNCIL REPORTS										
Executive Committee	*	*	*	*	*	*	*	*	*	*
Graduate & Research Council (GRC)	·	·	·	·	·	·	·	·	·	·
Undergraduate Council (UC)	·	·	·	·	·	·	·	·	·	·
Long Range Planning Committee				·		·		·		
Fall Update, University Operating Budget				·						
Joint Report of GRC & UC, Academic Calendar Dates[1]					·					
University Committee on Student Appeals Annual Report[1] (Policy 72)					·					
University Appointment Review Committee annual report[1] (Policy 76)										·
Finance Committee - Budget Update[3]							·			
Finance Committee - Budget recommendation[2, 3]								·		
OTHER SENATE AGENDA ITEMS										
New Senator Orientations (before meeting)			·							
Meeting technology overview for Senate room			·	·						
Teaching Awards Committee, appointment of members							·			
Delegation for Editorial Amendments to Senate Bylaws, Guidelines								·		
Delegation of Roster of Graduands								·		
Report on Roster of Graduands			·		·					
Convocation Report – summary of this years' ceremonies					·					
Undergraduate and Graduate Admissions Update						·				
Conduct Self-Assessment Survey[1]									·	
Appointment of COU Academic Colleague	Current appointment runs to April 30, 2025									
SENATE PRESENTATIONS										
Presentations from Presidents - Faculty Association, Waterloo Undergraduate Association and Graduate Student Association[1]							·			
Strategic Plan Accountability Update[1] (June)		·								
PART Annual Update		·								

[1] Annual item
[2] Board of Governors approval
[3] Presented by the Vice-President Academic and Provost
[4] Presented by the President and Vice-Chancellor, and Chair of Senate
[5] Presented by the University Secretary
[6] Leadership updates may include such topics as: Talent, We Accelerate Report, Communities (EDI, Sustainability), Waterloo International, etc.

Senate Agenda Items · expected *as needed	May 6, 2024	June 10, 2024	September 23, 2024	October 21, 2024	November 25, 2024	January 27, 2025	March 3, 2025	April 7, 2025	May 5, 2025	June 9, 2025
CONSENT AGENDA										
Reports from Faculties (e.g., appointments, administrative appointments, sabbaticals)[2]	·	·	·	·	·	·	·	·	·	·
Tenure and Promotion Report[4]			·							
University Professor Designation[3]								·		
Call for Nominations for University Professor[3]			·							
Call for Nominations for Honorary Degree Recipients[4]						·				
Report of the COU Academic Colleague[1]										·
Senate Committee Appointments[5]	*	*	*	*	*	*	*	*	*	*
CLOSED AGENDA										
Minutes	·	·	·	·	·	·	·	·	·	·
Business Arising	·	·	·	·	·	·	·	·	·	·
Reports from Committees and Councils	*	*	*	*	*	*	*	*	*	*
Honorary Degree Recommendations	*	*	*	*	·	·	*	*	*	*
Reports from Search and Review Committees for Policy-based Senior Leadership Appointments and Reappointments	*	*	*	*	*	*	*	*	*	*
Report of VP Advancement on Policy 7[1]		·								·

Special Topics for 2024-2025 to be Scheduled:

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

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

[1] Annual item
[2] Board of Governors approval
[3] Presented by the Vice-President Academic and Provost
[4] Presented by the President and Vice-Chancellor, and Chair of Senate
[5] Presented by the University Secretary
[6] Leadership updates may include such topics as: Talent, We Accelerate Report, Communities (EDI, Sustainability), Waterloo International, etc.

UNIVERSITY OF WATERLOO | Senate

For Information **Open Session - Consent**

To:	Senate
From:	Senate Graduate and Research Council
Presenter(s):	Charmaine Dean Vice-President, Research & International Clarence Woudsma Interim Co-Associate Vice-President, Graduate Studies and Postdoctoral Affairs
Date of Meeting:	June 9, 2025
Agenda Item:	**11.2 Report of the Senate Graduate & Research Council**

Summary

Senate Graduate & Research Council met on May 6, 2025 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. New Scholarships

   Council approved three awards and bursaries: the Graduate Student Association's Award for Black and Indigenous Students; William Johns Engineering Graduate Bursary; and the OAA Guild Master's Award.

2. Membership on Research Ethics Boards

   Council approved the appointment of one new member each to the Human Research Ethics Board and the Clinical Research Ethics Board.

3. Curricular Submissions
   Council approved curricular minor academic plan changes as well as new graduate courses, the deletion of graduate courses, and proposed minor changes to existing graduate courses and programs for:
   a. Faculty of Environment
   b. Interdisciplinary Studies

Jurisdictional Information

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

c. 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.

Governance Path

Senate Graduate and Research Council – May 6, 2025

UNIVERSITY OF WATERLOO | Senate

For Information **Open Session - Consent**

To:	Senate
From:	Senate Academic Quality Enhancement Committee
Presenter(s):	David DeVidi
	Associate Vice-President, Academic
Date of Meeting:	June 9, 2025
Agenda Item:	**11.4 Report: Senate Academic Quality Enhancement Committee**

Summary

Senate Academic Quality Enhancement (AQuE) Committee conducted an e-vote concluding on April 21, 2025 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:

a. Final Assessment Report for Mathematics/Information Technology Management (BMath), Mathematics/Business Administration (BMath), Business Administration and Mathematics (BBA/BMath) (Double Degree with WLU), Mathematics/Chartered Professional Accountancy (BMath), Mathematics/Financial Analysis and Risk Management (BMath), Mathematical Economics (BMath)
b. Final Assessment Report for Mathematics (BMath, Minor), Mathematical Studies (BMath), Mathematical Studies Business Specialization (BMath)
c. Final Assessment Report for Mathematics/Teaching (BMath), Mathematics for Teachers (MMT)
d. Cyclical Program Review Progress Report for Computer Science (BCS, BMath, Minor, MMath, PhD), Computer Science - Data Science (BCS), Business Administration and Computer Science (BBA/BCS), Computing (Option)

Approved final assessment reports and cyclical program review progress reports can be viewed on the AQuE Committee Reporting page. There were no issues noted in the reports or concerns raised by the committee.

Jurisdictional Information

As outlined in the committee's Terms and Reference, Senate Academic Quality Enhancement Committee is empowered to make approvals on behalf of Senate for a variety of operational matters:

2. On behalf of Senate, consider and approve all Final Assessment Reports and Progress Reports within the University's IQAP, and provide Senate with a summary of the committee's deliberations in this regard. Any matter of controversy that might arise may be referred to Senate.

Governance Path

Senate Academic Quality Enhancement Committee: 04/21/2025

UNIVERSITY OF WATERLOO | Senate

For Information

Open Session

To:	Senate
From:	James Rush, Vice-President, Academic & Provost
Presenter:	Gerry Schneider Chair, University Appointments Review Committee
Date of Meeting:	June 9, 2025
Agenda Item:	**11.5 Report of the Provost: University Appointments Review Committee**

Summary

Annual UARC Report

Members of the University Appointments Review Committee (UARC), appointed by the Vice-President, Academic & Provost in consultation with Deans' Council and the President of the Faculty Association, advise on regular faculty appointments with a duration of more than two years. UARC members review hiring processes and provide advice to the Dean before a hiring recommendation is sent to the Vice- President, Academic & Provost for approval. Generally, UARC monitors the hiring process to ensure that positions were properly advertised, that both the letter and the spirit of the hiring procedure were followed and that there was a thorough search for candidates with attention to equity. In accordance with Policy 76 – Faculty Appointments, the committee reports to Senate annually, via the Vice-President, Academic & Provost, on its activities and operations. As of July 1, 2024 UARC is overseen by the Associate Vice-President, Faculty Planning and Policy.

From 1 September 2023 to 31 August 2024, UARC reviewed a total of 77 proposals for regular faculty appointments. Of these 77 proposals, 71 offers were actually extended that resulted in 46 accepted offers. For comparison purposes, the total number of proposals reviewed in years past was as follows:

YEAR	NUMBER OF PROPOSALS
1 September 2009 – 31 August 2010	58
1 September 2010 – 31 August 2011	79
1 September 2011 – 31 August 2012	87
1 September 2012 – 31 August 2013	68
1 September 2013 – 31 August 2014	70
1 September 2014 – 31 August 2015	85
1 September 2015 – 31 August 2016	69
1 September 2016 – 31 August 2017	90
1 September 2017 – 31 August 2018	102
1 September 2018 – 31 August 2019	87
1 September 2019 – 31 August 2020	50
1 September 2020 – 31 August 2021	66
1 September 2021 – 31 August 2022	135
1 September 2022 – 31 August 2023	91
1 September 2023 – 31 August 2024	77

POINTS OF INTEREST:

Of the files reviewed, the following information can be extracted (with figures from the last cycle (2022- 2023) provided):

CATEGORY	2023-2024	2022-2023
Female candidates	34 (of 77)	35 (of 91)
Male candidates	41 (of 77)	54 (of 91)
Gender unknown	2 (of 77)	2 (of 91)
Tenured	8 (of 77)	3 (of 91)
Probationary Appointments	56 (of 77)	72 (of 91)
Definite Term Appointments	13 (of 77)	16 (of 91)
Total Candidates	77	91

Length of the Review Process

Appointment proposals from academic units and faculties were generally timely, and department chairs/school directors have been very helpful in providing any additional information requested. Advance notice of proposals continues to be important to ensure speedy turnaround. Policy 76 specifies five working days for the review process. During the past year, UARC members were able to complete most reviews within five working days unless there was some missing information and discussions with the chair/director or dean were required. Consultation between the UARC Chair and Chairs/Directors/Deans continues to grow.

Administration

Administrative information concerning UARC can be found at:

https://uwaterloo.ca/faculty-planning-policy/recruitment/university-appointments-review-committee

Associate Vice-President, Faculty Planning and Policy, Christine McWebb

UARC Membership

Chair: Gerry Schneider
Secretary: Katherine Thorne, Director, Faculty Relations

Faculty of Arts:
Julie Robson
Julia Roberts

Faculty of Engineering:
Marianna Polak
Ladan Tahvildari

Faculty of Environment:
Jennifer Dean
Dan Cockayne

Faculty of Health:
Lora Giangregorio
Scott Leatherdale

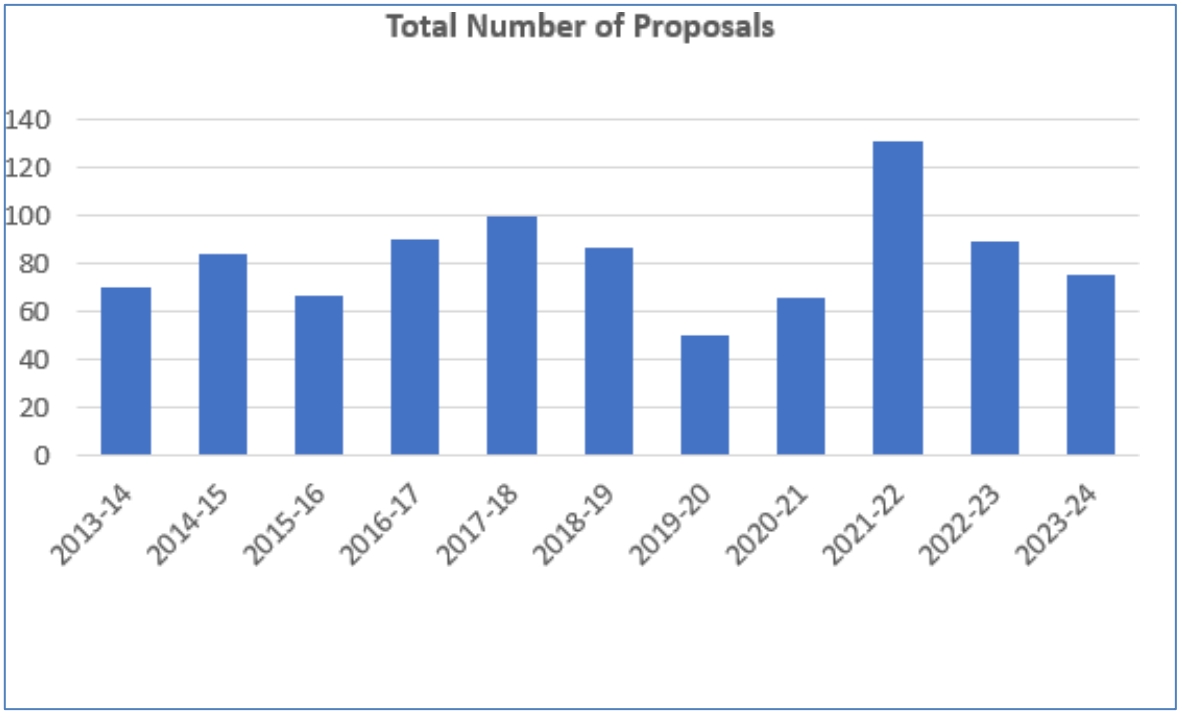
Faculty of Mathematics:
Pengfei Li
Kevin Hare

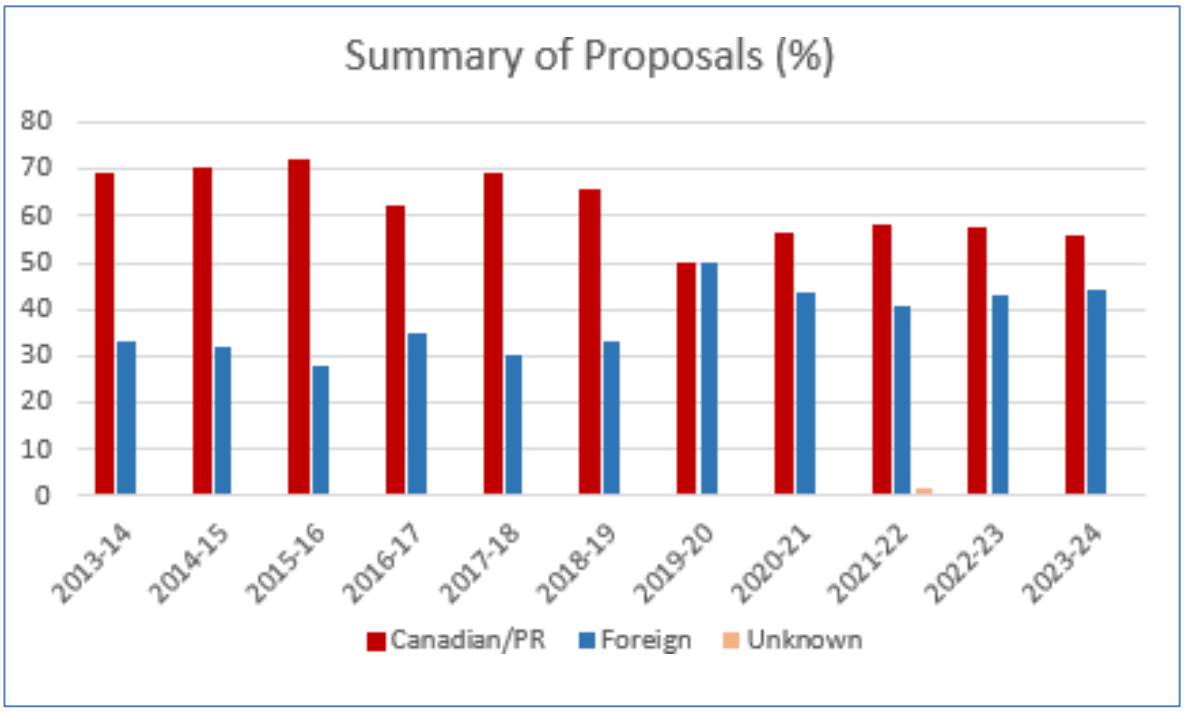
Faculty of Science:
Brian Dixon
Shoufa Lin

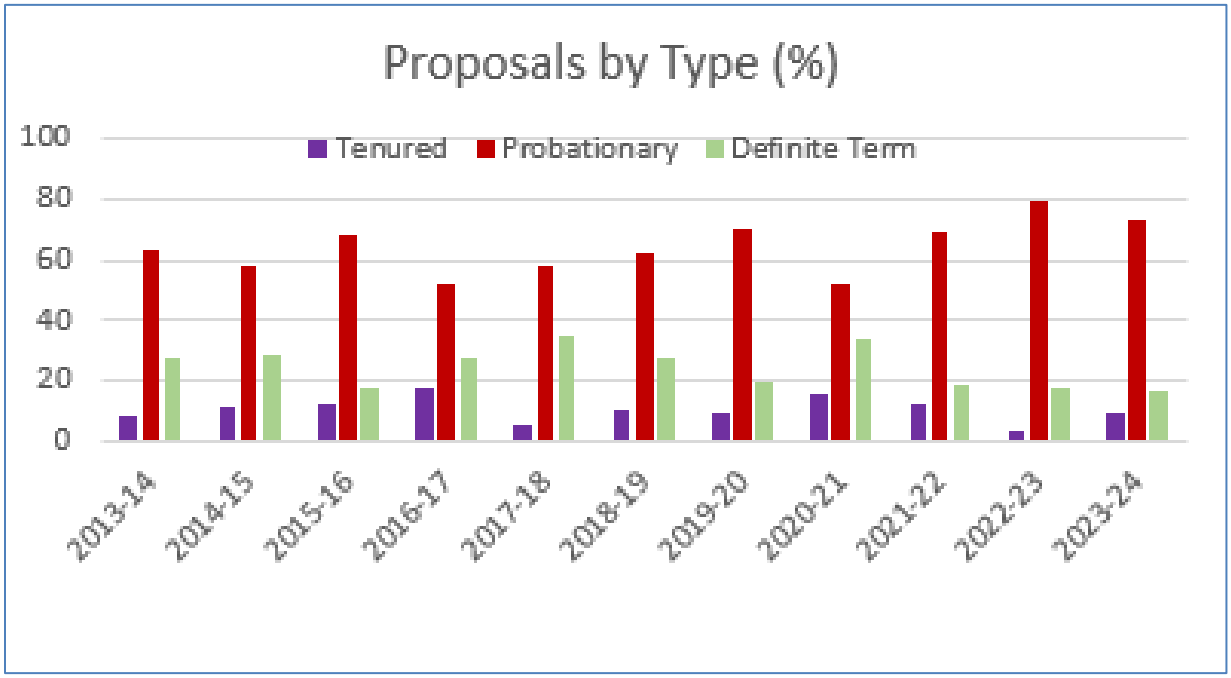
Summary of Proposals for Regular Faculty Appointments for Two Years or More
Reviewed by UARC
September 2023 – August 2024

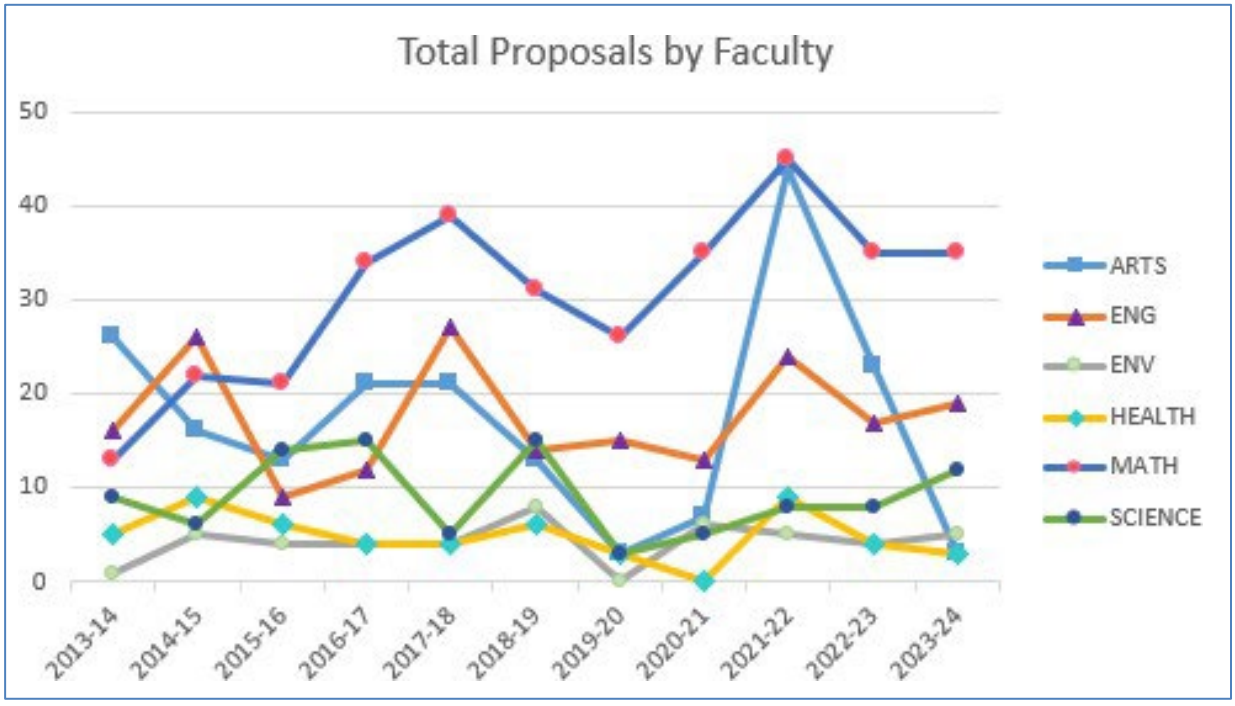
Faculty	Files	Gender			Residency				Appointment Type										
		Female	Male	Unknown	Canadian	Permanent Resident	Foreign Academic	Unknown	Tenure			Probationary				Definite Term			
										F	M		F	M	U		F	M	U
ARTS	3	1	1	1	2	0	1	0	1	1	0	0	0	0	0	2	0	1	1
ENG	19	11	8	0	11	4	4	0	3	2	1	11	6	5	0	5	3	2	0
ENV	5	4	1	0	4	1	0	0	2	2	0	3	2	1	0	0	0	0	0
HEALTH	3	3	0	0	2	0	1	0	0	0	0	2	2	0	0	1	1	0	0
MATH	35	9	25	1	9	3	23	0	2	2	0	31	7	23	1	2	0	2	0
SCIENCE	12	6	6	0	7	0	5	0	0	0	0	9	5	4	0	3	1	2	0
TOTAL	77	34	41	2	35	8	34	0	8	7	1	56	22	33	1	13	5	7	1

Faculty	Professorial Rank0														Results				
	Lecturer				Assistant Professor				Associate Professor			Full Professor			Offers	No Offers	Accepted	Declined	**Pending**
		F	M	U		F	M	U		F	M		F	M					
ARTS	2	0	1	1	0	0	0	0	1	1	0	0	0	0	3	0	3	0	0
ENG	5	3	2	0	10	6	4	0	4	2	2	0	0	0	18	1	15	3	0
ENV	0	0	0	0	3	2	1	0	0	0	0	2	2	0	5	0	5	0	0
HEALTH	1	1	0	0	2	2	0	0	0	0	0	0	0	0	3	0	3	0	0
MATH	2	0	2	0	30	7	22	1	1	0	1	2	2	0	30	5	13	17	0
SCIENCE	3	1	2	0	9	5	4	0	0	0	0	0	0	0	12	0	7	5	0
TOTAL	13	5	7	1	54	22	31	1	6	3	3	4	4	0	71	6	46	25	0


Total Number of Proposals
140
120
100
80
60
40
20
0
2013-14
2014-15
2015-16
2016-17
2017-18
2018-19
2019-20
2020-21
2021-22
2022-23
2023-24


Summary of Proposals (%)
80
70
60
50
40
30
20
10
0
2013-14
2014-15
2015-16
2016-17
2017-18
2018-19
2019-20
2020-21
2021-22
2022-23
2023-24
Canadian/PR
Foreign
Unknown


Proposals by Type (%)
Tenured
Probationary
Definite Term
100
80
60
40
20
0
2013-14
2014-15
2015-16
2016-17
2017-18
2018-19
2019-20
2020-21
2021-22
2022-23
2023-24


Total Proposals by Faculty
50
40
30
20
10
0
2013-14
2014-15
2015-16
2016-17
2017-18
2018-19
2019-20
2020-21
2021-22
2022-23
2023-24
ARTS
ENG
ENV
HEALTH
MATH
SCIENCE

UNIVERSITY OF WATERLOO | Senate

For Information **Open Session - Consent**

To:	Senate
From:	Vice-President, Academic and Provost Cooperative and Experiential Education Graduate Studies and Postdoctoral Affairs
Presenter(s):	Norah McRae Associate Provost, Co-operative and Experiential Education Clarence Woudsma Interim Co-Associate Vice-President, Graduate Studies and Postdoctoral Affairs
Date of Meeting:	June 9, 2025
Agenda Item:	**11.7 Graduate Work-integrated Learning (GradWIL) Initiative: Final Report**

Summary

Please find attached the final report for Graduate Work-integrated Learning (GradWIL), a signature initiative of the University's 2020-25 Strategic Plan.

This document outlines the findings and deliverables based on our extensive efforts these past several years. We believe that the outcomes and learnings provided will be valuable for future strategic initiatives. The structure developed through this project will support and catalyze programs in developing GradWIL offerings, ensuring WIL continues to grow and be embraced as a graduate student differentiator at the University of Waterloo.

Documentation Provided

- Graduate Work-integrated Learning (GradWIL) Initiative: Final Report

Graduate Work-integrated Learning (GradWIL) Initiative: Final Report

At Senate in January 2022, a proposal was presented, a signature objective towards the goal of enhancing graduate studies through the expansion of Work Integrated Learning (WIL) opportunities at the graduate level. Connecting with both the University's strategic 2020-25 commitment towards developing talent for a complex future as well as the vision for Waterloo at 100, our GradWIL vision included (but not limited to) *WIL opportunities for all graduate students*. Since that time, GSPA and CEE have been partnering toward the **overarching goal of creating the structure that supports and catalyzes individual programs in developing their GradWIL offerings.**

The University of Waterloo is a global leader in WIL. Our cornerstone co-op program has enabled students to gain invaluable hands-on experience while earning their degrees. Additionally, WIL occurs on our campus in research, coursework, and internships. Through this initiative we now have the means to showcase these differentiators to prospective students, add value to our current student experiences and enhance the distinctiveness of graduate studies at Waterloo.

GradWIL activities at a glance

Consultations

Faculties

- 7 academic units with interest in piloting WIL, in some capacity, via this initiative
- Associate Deans, Grad & Co-op/WIL, some of whom partnered with us in WIL course pilots
- Multiple WIL course instructors consulted
- Graduate Operations Committee and Faculty Grad Committees on multiple occasions

Staff significant engagement from CEE, GSPA and across academic support units including CEL, CTE, RO

Students consulted through a variety of channels to inform

- Review of 2022 CGPSS data
- GSA meeting presentation
- GSA VP Admin – attendance at monthly GradWIL steering committee meeting
- Grad student focus groups and individual interviews
- Surveys via co-op, internship, and WIL 611 pilots

Pilots

- 3 academic programs involved in co-op pilots spanning two years
- 2 academic programs involved in internship pilots spanning two years
- 2 course (CIR) Faculty-based pilots
- 3 centrally offered WIL course pilots (PS 699 and WIL 611)

Working groups

14 working groups with students and staff representing:

- CEE, GSA, GSPA, IAP, IBP

Deliverables and Findings

WIL Pedagogy

WIL involves students integrating knowledge from their coursework and research into practical application in a WIL experience and carrying this knowledge forward into their career objectives.

Articulating quality WIL

To raise awareness and establish consistent definitions, quality WIL concepts were articulated and codified in the Graduate Studies Academic Calendar (see 10.1 Graduate work-integrated learning). This work involved defining WIL models to provide consistency in how WIL experiences are offered, recorded and tracked across academic programs. This work also involved the development of a Learning Development Process to help guide how WIL is offered at Waterloo and create the conditions for purposeful work in WIL.

Supporting before, during and after WIL: WIL 601, reflection, and career integration

CEE-supported models of WIL are designed to provide comprehensive support the pedagogy of WIL before, during, and after the WIL experience. WIL 601: Career Foundations for Work-Integrated Learning is a course designed to provides students with the tools, strategies and resources to effectively prepare for their upcoming WIL experiences. Additionally, CEE incorporates reflective practices and career integration components to enhance learning and professional development throughout the student's WIL journey.

Financial sustainability

Roadmap for Financial Sustainability for GradWIL

A comprehensive roadmap for financial sustainability was developed, outlining the necessary steps to maintain CEE-supported WIL programming along with consultation and supports for instructors to integrate WIL in their courses. The roadmap includes strategic planning, budget allocation, and resource management to ensure long-term viability.

Co-op: Equitable Funding Model for UG and Grad

At the Board of Governors meeting in February, changes were approved to the timing and frequency of co-op fee assessments for graduate students. These changes, coming into effect Fall 2025, will improve alignment of assessment practices for undergraduate and graduate students.

Teach WIL website

The Teach WIL website has been a crucial resource for promoting WIL sustainability in courses. The website provides comprehensive information and self-guided resources, and support for instructors implementing and maintaining WIL courses, ensuring that courses are accessible and effective.

WIL Menu

The WIL menu offers a variety of options for graduate programs to incorporate work-integrated learning. This menu includes co-op, internship, and the Graduate Certificate in Work-integrated Learning, providing flexibility and choice to meet diverse program needs and student interests. Programs interested in learning more about the WIL Menu can contact their Faculty Relations Manager. When appropriate, more WIL options for graduate programs will continue to be added to the menu to meet campus needs.

Co-op and Internship: Enhanced supports for students and programs

Through pilots with four programs, across Engineering, Environment and Mathematics, CEE developed and tested a graduate student support model. This model has been well received by grad students with positive feedback in terms of employment rate, survey feedback, and direct feedback. Additionally, our pilot program partners have highlighted the value of the model and the positive impact toward them and their students. To this end, we are seeing interest in continued growth in graduate co-op; In the past 16 months, 4 graduate programs have added a Co-op option or submitted a new program proposal.

Graduate Certificate in WIL: Catalyzing programs to embed WIL sustainably

The introduction of a Certificate in WIL has been a significant step towards embedding WIL sustainably within graduate programs. This certificate serves as a formal recognition of the skills and experiences gained through WIL and provides the means for programs to leverage the WIL they may already have or more effectively introduce and integrate WIL into their curricula. Programs can bundle their existing applied research and/or course work WIL activities that are already part of a student's degree requirements. As such, this option doesn't require students to take time off from their degree studies to add practical work experience. CEE resources are positioned to help programs build out their own certificate, ensure quality WIL is offered, and where needed, support their operations.

Interdisciplinary WIL courses

A key component of delivering on the "GradWIL options for all" has been the development of WIL 611: Interdisciplinary Community/Industry Research Project. This course allows students to engage in WIL as part of an interdisciplinary team, working on projects with an industry or community partner focused on one of the five Global Futures. Currently in development and scheduled for pilot in Fall 2025 is WIL 612: Leadership and Project Management, a course that further bridges the gap between academic learning and real-world application, providing graduate students with a unique opportunity to develop leadership, mentorship, and professional communication skills.

If a program lacks piece(s) of WIL or are looking for a more cost-effective way to deliver WIL, CEE offers (any of) 3 interdisciplinary courses (WIL 601, 611, 612) that could be embedded in the program's certificate of WIL.

Work Experience WIL

The *Work Experience WIL* model is being explored to enable students to engage in a full-time, 4-month WIL experience when WIL is not already embedded in their academic program. This model may lead to a new fee structure, with future implications for undergraduate programs as well.

Applied Research WIL

Through our consultations, many graduate students expressed interest in applied research WIL as part of their thesis or as an additional project. Waterloo is known as a research leader with exceptional connections to industry and community and many of our Master's and Doctoral students are fully engaged in applied research WIL already. Across all graduate students, there is clear demand for practical and research-based learning experiences that complement academic studies. To support students as they engage in all stages of applied research, the team has developed a set of resources, including the Pre-WIL: Seeking an opportunity webpage.

Outcomes and Innovations

The outcomes of GradWIL have been diverse, with some unintended benefits and innovations paving the way for future developments. The initiative has provided valuable learning opportunities for GSPA and CEE and has enhanced the overall structure and coherence of WIL programs.

Learning Process

One of the key aspects of GradWIL has been the learning process, where challenges such as "I don't know who has the answer to this" or "we have never done that before" were approached with a mindset of cross-unit collaboration (i.e., 'One Waterloo') to identify and test solutions. This has led to innovative approaches and enhanced problem-solving capabilities throughout our interactions with Faculty and ASU partners.

Calendar Changes, Template Language, Governance Path

To support the implementation of GradWIL, several graduate calendar changes, template language updates, and governance paths were uncovered and codified. These changes are crucial for maintaining clarity and coherence in the processes and systems involved in WIL. Alongside this, these early challenges emphasized the importance of role clarity across all elements of graduate WIL programming, resources and supports, ensuring that Faculty partners know who to contact.

Navigating Systems Limitations and Identifying Innovative Solutions

Throughout the GradWIL initiative, navigating system limitations and identifying innovative solutions has been a key learning process. This involves overcoming barriers, leveraging existing strengths, and ensuring that new approaches are effective and sustainable. A key example was from our Internship pilot, where our team and CEE partners leveraged CEE's key strengths in processes and systems to develop an innovative approach for integrating internship in WaterlooWorks and Quest.

Conclusion

The GradWIL initiative has been a transformative journey, providing structure, coherence, and sustainability to WIL programs, courses and applied research at the graduate level. By navigating challenges, leveraging existing strengths, and introducing innovative solutions, this CEE and GSPA collaborative has created the structure to support and catalyze individual programs in developing their GradWIL offerings. While the official initiative has ended, we have established the governance, ownership, and resource responsibilities to ensure GradWIL continues to grow and be embraced as a graduate student differentiator at the University of Waterloo.

Want to learn more?

Information for current graduate students

- Graduate Work-integrated Learning (WIL)
- What is Graduate WIL?

Information for future graduate students

- Why choose Waterloo? > Graduate work-integrated learning (WIL)
- Programs > Explore experiential and work-integrated learning (WIL)

Information for faculty and program coordinators

- Graduate Studies resources > Graduate WIL
- WIL resource hub for course instructors: Teach WIL
- GSAC > 10.1 Graduate work-integrated learning

Want to get involved in GradWIL?

Please reach out to your CEE Faculty Relations Manager.

UNIVERSITY OF WATERLOO | Senate

For Information **Open Session**

To:	Senate
Presenter(s):	Charmaine Dean Vice President, Research and International
Date of Meeting:	June 9, 2025
Agenda Item:	**11.8 Awards, Distinctions, Grants, Waterloo International Engagements, Commercialization Activity**

Recommendation/Motion

This item is for information purposes.

Summary

This report summarizes successful commercialization, research and international outputs and outcomes for the period April 2025.

It also provides a summary of the key outcomes arising from the Office of the Vice-President, Research and International review.

Proposal/Rationale

This report provides a summary of significant monthly outputs related to commercialization and entrepreneurship; funded research; awards and distinctions and activities towards strategic internationalization. The designation of these outputs are primarily based from students attending University of Waterloo commercialization and entrepreneurship training and faculty members.

Jurisdictional Information

N/A

Governance Path

N/A

Documentation Provided

Attached – Vice-President, Research and International: Report to Senate, June 2025.

Vice-President, Research & International
Report to Senate
June 2025

Introduction

This report to Senate highlights successful research, international and commercialization outputs and outcomes for the period April 2025.

Awards and Distinctions

Xiao Hu (School of Computer Science)
Best Paper Award - 2025 ACM SIGMOD/PODS International Conference on Management of Data
Recognized for her research on optimizing join-aggregate queries. The ACM SIGMOD/PODS conference is the premier international forum for database researchers, practitioners and developers.

Milad Kamkar (Mechanical and Mechatronic Engineering)
Materials Horizons Emerging Investigator award
Kamkar has been awarded this honor for his contributions to soft matter engineering. Specifically, he develops nanomaterial- and polymer-based hydrogels and aerogels with novel morphologies to support applications such as electromagnetic shielding, wastewater treatment and carbon capture.

Anita Layton (Applied Mathematics)
Canadian Applied and Industrial Mathematics Society (CAIMS) Research Prize
The society's pre-eminent research award recognizes innovative and exceptional research contributions in applied or industrial mathematics.

Funded Research Awards

Crown Indigenous Relations and Northern Affairs Canada

The Nunavut General Monitoring Plan (NGMP)
The NGMP program collects and analyzes long-term data on Nunavut's environment, people, communities, and economy. It integrates traditional and scientific knowledge, identifies monitoring gaps, and supports initiatives to fill these gaps.

The following project was successful:

Greg Vey (Geography and Environmental Management)
Title: Research Data Management Support from the Polar Data Catalogue/Waterloo Climate Institute to the Nunavut General Monitoring Plan, 2024-2025
Amount: $42,700

Early Career Researcher Awards (ECRA)
The Provincially funded Early Career Researcher Awards give funding to new researchers working at publicly funded Ontario research institutions to build a research team. The following ECRAs were awarded in this period:

Kaylena Ehgoestz Martens (Kinesiology and Health Sciences)
Title: Combining digital outcomes of mobility with mobile brain imaging to understand and predict future neurodegeneration
Amount: $140,000

Parsin Haji Reza (Systems Design Engineering)
Title: Revolutionizing Oncological Outcomes with Next-Generation Imaging Innovations
Amount: $140,000

Subha Kalyaanamoorthy (Chemistry)
Title: Developing novel biocatalysts for a sustainable environment: Reducing CO2 emission and managing plastic wastes
Amount: $140,000

Gautam Kamath (Computer Science)
Title: Broadening Connections between Robustness and Privacy
Amount: $140,000

Nima Maftoon (Systems Design Engineering)
Title: A novel device for treating otitis media
Amount: $140,000

Chul Min Yeum (Civil and Environmental Engineering)
Title: Advanced Real-Time Visual Inspection for Lifeline Infrastructure
Amount: $140,000

Yimin Wu (Mechanical and Mechatronic Engineering)
Title: Advancing the next generation of artificial leaves for carbon dioxide reduction
Amount: $140,000

Linda Zhang (School of Architecture)
Title: Heritage beyond the White City: Reclaiming Heritage as Community Stewardship
Amount: $140,000

Jian Zhao (School of Computer Science)
Title: Coding with AI: Enhancing Software Development through Visual Interfaces
Amount: $140,000

Waterloo International

In April 2025, Waterloo International accomplished the following work towards its three strategic goals:

1) Enhancing International Priorities and Partnership Connections:

- Signed an Erasmus+ (European Commission programme for education, training, youth and sport) Agreement with the Faculty of Health to send and receive graduate students and faculty with Saxion University of Applied Sciences in the Netherlands.
- Signed a University of Strathclyde Pathways Agreement with the Faculty of Science, establishing a 4+1 Pathways Agreement allowing UW students who have completed a four-year BSc a pathway into a MSc Forensic Science at Strathclyde.

2) Supporting International Talent Pipeline Development and Student Mobility:

- Signed an Inter-Institutional Agreement with University of Graz, Austria in support of student and faculty mobility through the Erasmus + program.
- Registered 239 international university-sanctioned trips and monitored over 1200 active travellers.
- Monitored 18 high-risk global incidents of which 1 required follow up.

3) Developing New International Opportunities:

- Engaged in partnership discussions with Co-Creation Hub (CCHub) in Nigeria, a leading pan-African creative and innovation ecosystem enabler to accelerate the application of social capital and technology for economic prosperity across Africa with the Faculty of Arts, the Faculty of Engineering and WATSpeed.

Commercialization and Entrepreneurship Highlights

2025 Digital Health Summit Showcase

During April, the University of Waterloo co-hosted a two-day Digital Health summit with Times Higher Education (THE). It with an impressive line-up of health experts including speakers from global organizations such as Pfizer, Samsung Health and the World Health Organization, and from local and Canadian organizations such as the Trillium Health Partners and the Care Next Coalition. Velocity entrepreneurs were pleased to showcase innovative digital health solutions — highlighting the urgent need for transformative change and the gap between innovation and adoption.
The following University of Waterloo - Velocity led companies presented at the summit:

Pedro Augusto Da Silva E Souza Miranda (PhD, current and Co-founder) - Skopien
Skopien is a platform that centralizes data from all brands of ICU bed monitors onto a single dashboard that is accessible for staff review anytime.

Youssef Helwa (MASc.'17 and Co-founder) - FluidAI Medical
FluidAI Medical combines real-time EHR data with novel, proprietary hardware to capture physiological insights never before collected for post operative care.

Moufeed Kaddoura (BSc.'16 and Co-founder) - Kenota Health
Kenota Health is transforming the allergy testing experience for patients by giving allergists a better, faster way to obtain highly specific test results with next generation medical diagnostic tools.

Christy Lee (BASc.'24 and Co-founder) - PatientCompanion
PatientCompanion modernizes the traditional call bell system by prioritizing the urgency of patients' requests and, in turn, supports nurses to deliver more responsive and personalized care.

Brian Li (BASc.'24 and Co-founder) - Quip Medical
Quip Medical has developed an AI-powered platform to alleviate the burden of manual documentation for physicians.

Sadegh Raeisi (PhD'14 and Co-founder) - Foqus Technologies Inc.
Foques Technologies Inc. is a software solution that leverages proprietary Quantum technologies and Machine Learning algorithms to speed up MRI scan times.

Mazhar Shahen (MASc.- current and Co-founder) Shiv Naik (BSc. ’22 and Co-founder) - NewGen Health
NewGen Health is revolutionizing early kidney disease detection with rapid screening through new software solutions.

Parthipan Siva (MASc.'07, professor in the Department of Systems Design Engineering and Co-founder) and Shannon White (MMath'93 and Co-founder) - Chirp
Chip uses AI algorithms to build behavior models that detect falls and other movement of individuals.

Rui Su (PharmD’18 and Co-founder) - MedMe Health (YC W21)
MedMe Health empowers pharmacies to deliver clinical services at scale by using their cloud-based platform to manage pharmaceutical scheduling and service delivery.

Atefeh Zarabaid (PhD’15 and Co-founder) - AiimSense
AiimSense combines electromagnetic imaging and AI to develop portable brain scanners for early stroke diagnosis.

Past University of Waterloo students supported by Velocity in April

Keith Cleland (MASc’22 and Co-founder) - Aqua-cell Energy Inc.
Leveraging a passion for environmental sustainability and expertise in electrochemistry Aqua-Cell Energy Inc. designs affordable and safe energy storage solutions for commercial and industrial solar power.

Alex Maierean (Mmath’24 and Co- Founder) - *Phantom Photonics*
Phantom Photos creates quantum sensors that can detect faint signals by using advanced techniques to ignore background noise with applications in marine and space operations.

UNIVERSITY OF WATERLOO | Senate

For Information **Open Session**

To:	Senate Executive Committee
From:	Gen Gauthier-Chalifour, University Secretary
Agenda Item:	**4. Report of the University Secretary**

Summary

The University Secretary will discuss two items:

i. 4.1 Senate Governance Review - Remaining activity through 2026

Discussion of remaining initiatives and projects pertaining to the review, as well as potential ways to engage the committee and/or senators. Additionally, a status update on the 'Senate Governance Processes' item that was deferred from the May 2025 meeting of Senate.

ii. 4.2 Update on Senate Visitor Guidelines

New practices for handling visitors to Senate will be discussed.