

**University of Waterloo**  
**SENATE**  
**Notice of Meeting**

**Date:** Monday 17 January 2022

**Time:** 3:30 p.m.

**Place:** Microsoft Teams Videoconference

	<b>OPEN SESSION</b>		<b>PAGE #</b>
3:30	<b><u>Consent Agenda</u></b> <b>Motion:</b> To approve or receive for information by consent items 1-4 below.		
	1. Minutes of the 15 November 2021 Meeting	Decision	3
	2. Reports from Committees and Councils		
	a. Senate Graduate & Research Council	Information	9
	b. Senate Undergraduate Council	Information	11
	3. Report of the President		
	a. Recognition and Commendation	Information	37
	4. Reports from the Faculties	Information	41
	<b><u>Regular Agenda</u></b>		
3:35	5. Business Arising from the Minutes		
3:40	6. Reports from Committees and Councils		
	a. Senate Graduate & Research Council	Decision	43
	b. Senate Undergraduate Council	Decision	45
	c. University Committee on Student Appeals	Information	51
4:00	7. Report of the President		
	a. Talent	Information	53
	b. Senate Governance Review Terms of Reference	Information/Discussion	69
	c. President's Update		
5:15	8. Report of the Vice-President, Academic & Provost	Update	
5:25	9. Report of the Vice-President, Research & International	Information	71
5:35	10. Other Business		
	<b>CONFIDENTIAL SESSION</b>		
5:40	11. Minutes of the 15 November 2021 Meeting	Decision	8
5:45	12. Business Arising from the Minutes		
5:50	13. Report of the President	Information	
5:55	14. Other Business		

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**University of Waterloo**  
**SENATE**  
**Minutes of the Monday 15 November 2021 Meeting**

**Present:** John Abraham, Nasser Mohieddin Abukhdeir, Sheila Ager, Jean Andrey, Mike Ashmore, Sandra Banks, Lisa Bauer-Leahy, Michael Beauchemin, Anne Bordeleau, Carmen Bruni, Jeff Casello, Trevor Charles, Robyn Clarke, Joan Coutu, Neil Craik, Lori Curtis, Kristine Dalton, Charmaine Dean, David DeVidi, Catherine Dong, Benjamin Easton, Paul Fieguth, Wendy Fletcher, George Freeman, Martha George, Mark Giesbrecht, Moira Glerum, Vivek Goel (chair), Kelly Grindrod, David Ha, Kevin Hare, Dennis Huber, Karen Jack (secretary), Martin Karsten, Achim Kempf, Zabeen Khamisa, Jennifer Kieffer, Veronica Kitchen, Alysia Kolentsis, Christiane Lemieux, Robert Lemieux, Xianguo Li, Lili Liu, Kristina Llewellyn, Carol Ann MacGregor, Ellen MacEachen, Blake Madill, Peter Meehan, Samantha Meyer, Ian Milligan, Zoran Miskovic, Graham Murphy, Richard Myers, Cathy Newell Kelly, Oudy Noweir, Erin O'Connell, Daniel O'Connor, Troy Osborne, Nicholas Pfeifle, Luke Potwarka, William Power, Neil Randall, James Rush, Matthew Schwarze, Marcus Shantz, Karkirat Singh Dhillon, Siv Sivaloganathan, Siva Sivoththaman, Chao Tan, Bruno Tremblay, Sharon Tucker, Graeme Turner, Diana Vangelisti, Johanna Wandel, Paul Ward, Mary Wells, Stan Woo, Nancy Worth, Clarence Woudsma, En-Hui Yang, Samer Zu'Mot

**Guests:** Jean Becker, Bruce Campbell, Aldo Caputo, Donna Ellis, Barbara Forrest, Brian Forrest, Anne Galang, Amanda Garcia, Diana Goncalves, Sarah Hadley, Candace Harrington, Narveen Jandu, Danielle Jeanneault, Ross Johnston, Andrea Kelman, Nick Manning, Norah McRae, Bessma Momani, Fayaz Noormohamed, Ian Rowlands, Daniela Seskar-Hencic, Sean Speziale, Allan Starr, Sherri Sutherland, Sean Thomas, Catherine Thompson, Marilyn Thompson, Chris Wilson-Smith, Kathy Winter

**Absent:** Dominic Barton\*, Cindy Forbes\*, Onurcan Gokkaya, Natalie Hutchings, Beth Namachchivaya, Naima Samuel

\*regrets

**OPEN SESSION**

**CHAIR'S REMARKS**

The chair welcomed two new undergraduate student senators: Nicholas Pfeifle (engineering) and Harkirat Singh Dhillon (science). He advised that a decision regarding the December meeting will be made and communicated before the end of the month. [Secretary's note: senators were advised on 22 November 2021 that the December meeting was cancelled.]

**Consent Agenda**

Following a reminder that a revised consent report from Senate Graduate & Research Council was distributed on 12 November, Senate heard a motion to approve or receive for information the items on the consent agenda.

Freeman and Easton.

**1. MINUTES OF THE 18 OCTOBER 2021 MEETING**

Senate approved the minutes of the meeting.

**2. REPORTS FROM COMMITTEES AND COUNCILS**

**a. Senate Graduate & Research Council**

**Motion:** To approve the following Graduate Studies Academic Calendar changes, effective 1 January 2022.

Senate received the remainder of the report for information.

**b. Senate Undergraduate Council**

**i. Academic Plan Changes**

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**Faculty of Engineering – Systems Design Engineering**

**Motion:** That Senate approve the addition of technical electives lists (formerly housed on departmental website), effective 1 September 2022.

**Faculty of Engineering – Biomedical Engineering**

**Motion:** That Senate approve the addition of technical electives lists (formerly housed on departmental website), effective 1 September 2022.

**Faculty of Environment – School of Planning**

**Motion:** That Senate approve the changes to the Honours Planning average requirements, effective 1 September 2022.

**Motion:** That Senate approve the changes to the Honours Planning specialization average requirements, effective 1 September 2022, for the following 4 specializations:

- Decision Support and Geographic Information Systems
- Environmental Planning and Management
- Land Development Planning
- Urban Design

**Faculty of Environment and Faculty of Health**

**Motion:** That Senate approve the administration/ownership change to the minor in tourism, effective 1 September 2022.

**Faculty of Health**

**Motion:** That Senate approve the academic plan changes to the diploma in gerontology, effective 1 September 2022.

**ii. Academic Regulation Changes**

**Faculty of Arts**

**Motion:** That Senate approve the updated list of mutually exclusive plans, effective 1 September 2022.

**Motion:** That Senate approve the changes to the Bachelor of Arts Breadth Requirements, effective 1 September 2022.

**Faculty of Engineering**

**Motion:** That Senate approve the list of courses fulfilling the undergraduate communication requirement for all Engineering degree programs, effective 1 September 2022.

**Faculty of Health**

**Motion:** That Senate approve the updated co-operative education requirements and regulations, effective 1 September 2022.

**Motion:** That Senate approve revisions to academic standing regulations, effective 1 September 2022.

**Motion:** That Senate approve revisions to Health's foundation term regulations, effective 1 September 2022.

**Faculty of Science**

**Motion:** That Senate approve the revisions to the undergraduate communication requirement, effective 1 September 2022.

Senate received the remainder of the report for information.

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**3. REPORT OF THE PRESIDENT**

**Recognition and Commendation.** Senate received the report for information.

**4. REPORTS FROM THE FACULTIES**

Senate received the reports for information.

**5. REPORT FROM THE COU ACADEMIC COLLEAGUE**

Senate received the report for information.

The question was called and the motion carried unanimously.

**Regular Agenda**

**6. BUSINESS ARISING FROM THE MINUTES**

The chair noted that the joint report from the councils that was tabled in October is on this meeting's agenda at item 8.b.

**7. PRESENTATION – RESEARCH ANNUAL REPORT – DR. CHARMAINE DEAN**

Dean walked members through her slides, commenting on: research, innovation, and commercialization at Waterloo; advancing research for global impact; particular research strengths in solving real world problems; global leadership in innovation and entrepreneurship initiatives; leveraging partnerships for research impact; Indigenous initiatives and equity, diversity and inclusivity activities; impacts; future activities and opportunities. She invited senators to reach out to her directly on any matters of discussion.

**8. REPORTS FROM COMMITTEES AND COUNCILS**

**a. Senate Graduate & Research Council – Jeff Casello**

Senate heard a motion to approve the dissolution of Waterloo Research Institute in Insurance, Securities and Quantitative Finance (WatRISQ), as presented.

Casello and Hare. Carried unanimously.

**b. Joint Report from Senate Graduate & Research Council and Senate Undergraduate Council – Jeff Casello and David DeVidi**

Senate heard a motion to approve the 2022-2023 academic calendar dates and calendar guidelines for establishing academic dates as presented.

Newell Kelly and DeVidi.

In response to questions, Newell Kelly advised that reasons for the selection of the proposed start date in January 2023 included aligning with Wilfrid Laurier University and many other Ontario universities, and, that in consultations, her office heard significant support from many instructors for that date.

The question was called and the motion carried with one vote against.

**c. Senate Undergraduate Council – David DeVidi**

**i. New academic Plans**

Senate heard a motion to approve the proposed new Diploma in Black Studies and the Diploma in Fundamentals of Anti-Racism Communication, effective 1 September 2022.

DeVidi and Ager.

At the chair's invitation, Ager spoke to the gap in academic programing that these two important new diplomas fill, and she acknowledged the exceptional work undertaken by the implementation team of Drs. Kathy Hogarth, Vershawn Young, and Christopher Taylor in developing the suite of courses and diploma programs. The chair echoed her comments.

The question was called and the motion carried unanimously. A round of applause followed.

Senate heard a motion to approve the proposed new Politics and Business Minor, effective 1 September 2022.

DeVidi and Ager. Carried unanimously.

Senate heard a motion to approve the proposed new Diploma in Future Cities, effective 1 September 2022.

DeVidi and Andrey.

At the chair's invitation, Andrey spoke to the program's alignment with the University's Strategic Plan and the availability of the diploma to many students across the University. The chair offered congratulations on this important new diploma.

The question was called and the motion carried unanimously.

#### **ii. Academic Plan Changes**

Senate heard a motion to approve changes to the mechatronics option, effective 1 September 2022.

DeVidi and Wells. Carried unanimously.

#### **iii. Academic Plan Inactivations**

Senate heard a motion to approve the inactivation of the Honours Tourism Development academic plan, effective 1 September 2022.

DeVidi and Liu. Carried unanimously.

### **9. REPORT OF THE PRESIDENT**

The president provided a wide-ranging report including: condolences regarding the recent passing of Wendy Mitchenson and Andrew Levitt; kudos to researchers who were recently recognized (Donna Strickland, Craig James, and Paul Stolee) and the six University of Waterloo women who were named among the top 100 most powerful women in Canada by the Women's Executive Network; an update on recent activities, including notable recent research announcements and innovation achievements, and his formal installation as president. He also spoke to the recent federal cabinet shuffle, and coming work at the Senate Executive Committee to undertake a Senate governance review.

### **10. Q&A PERIOD WITH THE PRESIDENT**

There were no questions.

### **11. REPORT OF THE VICE-PRESIDENT, ACADEMIC & PROVOST**

The provost offered commentary on: fall term student registration, placements, and aid; fall 2021 class sections and winter course availability; the third Strategic Mandate Agreement, including: a performance overview, performance metrics, year one and year two performance, and reporting metrics; a brief update on policies 76 and 77.

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In discussion: from Curtis, agreement with Rush's comments regarding the collegial discussion at the Faculty Relations Committee regarding policies 76 and 77; confirmation from Norah McRae that the co-op employment numbers provided in the provost's presentation do not include those individuals in the Waterloo Experience Accelerate program.

**12. OTHER BUSINESS**

There was no other business.

Senate convened in confidential session.

22 November 2021

Karen Jack  
University Secretary

**CONFIDENTIAL SESSION**

The confidential minutes have been removed

The meeting was adjourned at 5:07 p.m.

22 November 2021

Karen Jack  
University Secretary



**University of Waterloo**  
**SENATE GRADUATE & RESEARCH COUNCIL**  
**Report to Senate**  
**17 January 2022**

Senate Graduate & Research Council met on 8 November 2021 and 13 December 2021 and agreed, in accordance with [Senate Bylaw 2](#) (section 4.03), to forward the following item to Senate for information as part of the consent agenda.

Further details are available at: <https://uwaterloo.ca/secretariat/committees-and-councils/senate-graduate-research-council>

## **FOR INFORMATION**

### **CURRICULAR SUBMISSIONS**

On behalf of Senate, council approved new courses, course revisions, course inactivation's, and minor program revisions for the Faculty of Arts (English, Accounting, Political Science, Peace and Conflict Studies, Stratford School Interaction Design and Business, Sociology, Psychology), Faculty of Engineering (Nanotechnology, Chemical Engineering, Civil Engineering, Electrical and Computer Engineering, Systems Design Engineering, Mechanical and Mechatronics Engineering, Management Sciences, Conrad School of Entrepreneurship and Business), Faculty of Environment (Geography and Environmental Management), and Faculty of Health (Kinesiology, School of Public Health Sciences).

### **ACADEMIC PROGRAM REVIEWS**

On behalf of Senate council approved, as presented:

- Two-Year Progress Report: Accounting
- Final Assessment Report: French Studies
- Final Assessment Report: Earth & Environment Sciences

### **UNIVERSITY RESEARCH ETHICS**

On behalf of Senate, council approved the following:

- Human Research Ethics Board – membership renewal (1) and new member (1)

### **GRADUATE AWARDS**

On behalf of Senate, council approved the General Graduate Studies Fund (GGSF GRS) – (trust), Steelcon Group of Companies Graduate Scholarship – (trust), and Faculty of Mathematics Graduate Research Excellence Award – (operating), Graduate Studies Award of Excellence in French Studies – (trust), Graduate Engagement and Leadership Award in French Studies – (trust), C.J. Dick & Ruth A. Sprenger Graduate Scholarship – (endowment), Sharon Lamont Student Award – (trust), Croatian Language Learning Awards – (endowment), and the Croatian Travel Awards – (endowment).

*/mh kw* Jeff Casello  
Associate Vice-President, Graduate Studies and  
Postdoctoral Affairs

Charmaine Dean  
Vice President, Research & International

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**University of Waterloo**  
**SENATE UNDERGRADUATE COUNCIL**  
**Report to Senate**  
**17 January 2022**

Senate Undergraduate Council met on November 9, 2021 and agreed to forward the following items to Senate. Council recommends that these items be included for information or approval, as noted, in the consent agenda.

Further details are available at: [uwaterloo.ca/secretariat/committees-and-councils/senate-undergraduate-council](https://uwaterloo.ca/secretariat/committees-and-councils/senate-undergraduate-council)

## **FOR INFORMATION**

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### **ACADEMIC PROGRAM REVIEWS**

**Final Assessment Report – Human Resources Management.** Following discussion, Council approved the final assessment report on behalf of Senate. See Attachment #1.

**Final Assessment Report – Spanish.** Following discussion, Council approved the final assessment report on behalf of Senate. See Attachment #2.

### **MINOR PLAN & CURRICULAR MODIFICATIONS**

Council approved the following on behalf of Senate:

- minor plan changes for the Faculty of Mathematics (combinatorics and optimization, computer science – human computer interaction specialization, computer science, computer science minor, computing minor, BA/BCS double degree, data science, computing and financial management, mathematical finance, actuarial science, statistics, biostatistics, three-year general).
- academic plan admission requirement changes for the Faculty of Mathematics (computer science).
- new courses for the Faculty of Mathematics (combinatorics & optimization).
- course changes for the Faculty of Mathematics (combinatorics & optimization, computer science, commerce, mathematics, pure mathematics, statistics).
- course inactivations for the Faculty of Environment (environment, resources and sustainability); Faculty of Health (public health sciences, kinesiology, recreation and leisure studies).

/dj

David DeVidi  
Associate Vice-President, Academic

Attachment #1

# Final Assessment Report

## Human Resources Management (Minor/Diploma)

### October 2020

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#### Executive Summary

External reviewers found that the Human Resources Management Minor and Diploma, delivered by the Department of Psychology, were in good standing.

“It is the opinion of the reviewers that UW’s HR Minor, housed in the department of Psychology, is an excellent program that deserves protection, nurture and investment. It is, in a word, a “gem.””

A total of eight recommendations were provided by the reviewers, regarding marketing and recruitment, staffing resources, and minor curriculum improvements. In response, the program created a plan outlining the specific actions proposed to address each recommendation as well as a timeline for implementation. The next cyclical review for this program is scheduled for 2025-2026.

#### Student Complement Over the Past Three Years

	Minor	Diploma
Fall 2019	245	21
Fall 2018	262	22
Fall 2017	249	25

\*based on Active Students Extract pulled from Quest February 5, 2020

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#### Background

In accordance with the University of Waterloo’s Institutional Quality Assurance Process (IQAP), this final assessment report provides a synthesis of the external evaluation and the internal response of the Minor and Diploma in Human Resources Management (HRM) delivered by the Department of Psychology. A self-study (Volume I, II, III) was submitted to the Associate Vice-President, Academic on October 19, 2018. The self-study (Volume I) presented the program descriptions and learning outcomes, an analytical assessment of the programs, including the data collected from a student survey, along with the standard data package prepared by the Office of Institutional Analysis & Planning (IAP). The CVs for each faculty member with a key role in the delivery of the program(s) were included in Volume II of the self-study.

From Volume III, two arm's-length internal reviewers were selected by the Associate Vice-President, Academic: Dr. Geoff Malleck, Continuing Lecturer, Department of Economics, and Dr. Mark Weber, Professor, Conrad School of Entrepreneurship and Business.

Reviewers appraised the self-study documentation and conducted a site visit to the University on March 27, 2019. The visit included interviews with the Associate Vice-President, Academic, Dean of the Faculty of Arts, Chair of Psychology, HRM Program Director, faculty and lecturers, staff, alumni and current students.

Following the site visit, the external reviewers submitted a report on their findings, with recommendations. In response, the program responded to each recommendation and outlined a plan for implementation of the recommendations. The Dean of Arts provided endorsement and commentary on the program response and implementation plan on November 24, 2019.

This final assessment report is based on information extracted, in many cases verbatim, from the self-study, the external reviewers' report and the program response.

### **Program Characteristics**

**Human Resources Management (Minor):** The HRM Minor is available to University of Waterloo students enrolled in degree studies in the Faculty of Arts, and other Faculties with some restrictions. The HRM Minor requires successful completion of a minimum of eight courses with a cumulative average of at least 70%. The HRM Minor includes courses required by the Human Resources Professionals Association (HRPA) towards the Certified Human Resources Leader (CHRL) /Certified Human Resources Professional (CHRP) designations.

**Human Resources Management (Diploma):** The HRM Diploma is designed for individuals who are currently working in Human Resources who wish to expand and update their current skills, or those who desire to gain entry into this exciting field. The HRM Diploma requires successful completion of a minimum of eight courses with a cumulative average of at least 70% and can be completed on a full- or part-time basis. The HRM Diploma includes courses required by the Human Resources Professionals Association (HRPA) towards the Certified Human Resources Leader or Professional (CHRL/P) designations.

### **Summary of Strengths, Challenges and Weaknesses based on Self-Study**

#### **Strengths**

- **Quality of HRM Lecturers:** Lecturers have a wide range of relevant experience in industry, and can engage students with real life examples of how the curriculum translates in the working world. These lecturers also act as mentors and coaches to HRM students regarding career development.

- **Quality of Courses:** Course content is updated regularly to reflect the core objectives of HR including required changes that address new legislation, changes in employment standards, and human rights considerations. Several of the HRM courses highlight current issues in the HR industry, and include practical, applied assignments.
- **Professional Designation:** The HRM program offers students (Minor and Diploma) the opportunity to complete all academic requirements (all 9 courses) to then write the national exam for certification as a Certified Human Resources Professional or Certified Human Resources Leader through the Human Resources Professionals Association (HRPA).
- **Student Satisfaction:** Approximately, 90% of alumni who responded to our survey felt that the HRM curriculum prepared them for work in the HR field. 100% of alumni felt that HRM courses prepared them for the CHRP/L exams.
- **HRM Student Club:** the HRM Society at UW is run by and for students and offers students diverse opportunities: resume writing workshops, guest speakers, panels with HRM Lecturers, networking events, and social events. The HRM club has built a sense of community which connects students with the same interests and career aspirations.

### **Challenges**

- **HRM 200:** Although the addition of an online course option helped, the program is unable to keep up with the student enrolment demand in HRM 200. Still, close to 100 students per term are not able to get into the course. HRM 200 classes are also very large (400 students in the in-class section and 325 in the online section); therefore, we only have a few options in delivery design. Adding a smaller enrollment HRM 200 class that is tailored to students planning to take the HRM Minor/Diploma would help to address this challenge.
- **Director's Role:** Currently, the HR Director's contract states that 20% of time is to be spent on service, the remaining 80% on teaching. However, far more than 20% of time is currently allocated to service (e.g., creating connections in the community, linking students up with internships, etc.). There is a need to reassess the current time commitment as (20%) is not sufficient.
- **Internal competition:** There is some overlap with other minor programs in terms of course content (e.g., the Management Studies Minor). This may confuse students as to which program is the best match for their goals and career aspirations. Student enrollment from other programs has also declined as a result of curriculum changes in other departments.
- **External competition:** The HRM Minor program also faces competition from other institutions offering various HRM programs. To attract high quality students, we need to be marketing this program in the same fashion as is done by other Universities and Colleges.
- **Lecture format:** Many of the HRM courses are 3-hour lectures once a week. This is considered too long by some students, particularly since classes start at 6:30pm. On the

other hand, this evening 3-hour scheduling does accommodate contract Lecturers who are employed elsewhere. The schedule also benefits Diploma students who may be working full time during office hours.

### **Weaknesses**

- Course scheduling: Some courses are only offered twice a year (PSYCH 238, PSYCH 340, PSYCH 339, and HRM 301.) and the program is unable to provide students with a defined schedule more than one term in advance. This could dissuade potential Diploma students from applying to our program because of the firm commitment that they receive from other institutions where they can complete the program in one year.
- HRM Management Committee: The committee was dissolved several years ago. Although the current HRM Director and the Chair of Psychology work closely together, it would be beneficial to re-establish the committee, and to expand the roles and responsibilities of the HR committee as the HR program grows.
- Compensation/commitment: The reviewers' report of the HRM Program dated February 28, 2012 recommended that Lecturers be given three year contracts with a per course compensation of \$12,000. Lecturers currently receive \$10,000 per course with a four-month contract (i.e., term by term). In the past, offers have been declined as a result of the compensation level for the work required and the commitment needed. The major concern is our ability to attract and retain high quality lecturers.

### **Summary of Key Findings from the External Reviewers**

"It is the opinion of the reviewers that UW's HR Minor, housed in the department of Psychology, is an excellent program that deserves protection, nurture and investment. It is, in a word, a "gem." The program in its current form is intelligently designed, particularly for students with an interest in CHRP designations. Indeed, its novel capacity to meet the professional designation requirements is a noteworthy accomplishment and strength. [...] Students and alumni offer very favorable assessments of their courses and their experience. [...] As reviewers we see opportunities in program promotion, program expansion, and addressing issues of faculty and administrative stability."

### **Program Response to External Reviewers' Recommendations**

1. Staffing: Throughout the report, we have highlighted some staffing challenges that, in our view, should be addressed. We are highly sensitive to the financial realities of UW and the Faculty of Arts at this time. Therefore, in making recommendations here, we are deliberate in avoiding "pie in the sky, optimal" solutions. What we propose feels prudent, responsible, and eminently do-able.

- 1.1 Hire an additional full-time lecturer. In our estimation, this is the single most important recommendation we are making. Well-selected, a new lecturer can help to address stability, the risk associated with the current “single point of failure” problem, and free up a little more of Vince’s time to devote to service in the interest of program development and prominence in the professional community. We would actually suggest hiring two such additional people would be appropriate and advisable, but we consider one to be necessary. Candidates considered for this role should be people who, themselves, have significant leadership capacity, both to support Mr. Di Ruzza and to act as a backup.
- 1.2 Multi-term sessional contracts. In order to provide stability and give the Director the capacity to attract great sessional lecturers, the Faculty should find a way to permit the Director to make multi-term offers to sessional lecturers. This has no cost, but the meaningful benefit of potentially freeing up some of the Director’s precious time.

### **Response**

The reviewers recommend two major changes to the staffing of the HRM program (see Recommendations 1.1, 1.2).

First, they suggest that the program hire an additional full-time lecturer. The program agrees in full with this recommendation, as they recognize that the demands placed on the current Director are extraordinary. Of all the recommendations, this should be the program’s top priority. An additional dedicated lecturer will provide the person-power to both sustain and enhance the program in accord with several of the other reviewer recommendations (e.g., Recommendations 3, 4, 7). The program is well aware of the current financial realities of UW and the Faculty of Arts. The Chair of Psychology and the Dean of Arts discussed this and while both agreed it would certainly enhance the program, it was judged to be unaffordable at this time.

Second, the reviewers recommend multi-term sessional contracts. *It should be clearly noted that this was a key recommendation made by last set of program reviewers in 2011 yet this never came to fruition.* As such, the program feels that this is an issue that must be resolved. As is apparent in the self-study and the report of the reviewers, the HRM program is reliant upon a large number of professionals in the region who generously teach courses as sessional instructors. These instructors are highly committed to the program and most teach regularly. The current model of securing many recurring single-term contracts is not efficient for program administration, nor is it efficient for the instructors themselves. Thus, there is desire to provide multi-term contracts to most, if not all, of the established Instructors. The program is in support of this but have will pend until January 2021 until there is a better understanding of budget and course delivery methods. Pending until January 2021 will also allow the



program to investigate student enrollment numbers and appropriately review course offerings each term.

2. Accounting Course: We had triangulating feedback from students, alumni, and faculty, that the current required accounting course is problematic. Frequent comments suggest it is appropriate for those who have taken accounting in high school; however, it can be demoralizingly inappropriately matched to the capacities and preparation of a new HR minor student without that experience. (We note, it is our understanding that high school accounting is not, in fact, a required pre-requisite for AFM 123.) Further evidence suggests that students deliberately avoid taking the course early in their minor, because the likely grade may force them out of the program. This is clearly a concern that needs to be addressed. We do not pretend to know the best way to do so, but possible solutions might include a dedicated section of AFM 123 targeted at this audience or the development of a different course more appropriately targeted at this audience. This latter solution raises another valuable question, which is whether AFM 123 is in fact “the right course” for the program. Again, we are not equipped to offer a recommendation in that respect. We encourage new collaborative efforts with the content experts in SAF, and the involvement of SAF’s leadership in that process as appropriate.

### **Response**

The reviewers note “triangulated” feedback that the current AFM 123 course is problematic for students in the HRM program for many reasons. The program agrees and proposes to partner with Finance and Accounting to seek a reasonable alternative to this course. Should a partnership with Accounting and Finance not be reached to address concerns by HRM students regarding AFM 123, proposal to build HRM finance and accounting course will be completed for September 2020 Implementation. Preliminary discussions were postponed and will be held in January 2021 once evaluations of the on-line course delivery has been received.

3. Expansion of the target audience / streaming: As noted, the program is very well designed and delivered for its current target audience – students who may wish to pursue formal HR accreditation with a professional body. It is our reflection that there may be many students who have passing-to-deep interest in HR-relevant material who are less interested in the accreditation than current students. In fact, one of the alumni we met fit this description. Our reflection, for the consideration of the program leadership, is that it may be worthwhile to add additional HR-relevant courses to the acceptable list that do not, necessarily, meet CHRL requirements. For example, there may be students in Peace and Conflict Studies who have two or three courses related to conflict management that could very legitimately be counted towards a minor in HR who, if they knew they could count two courses towards an HR minor, might consider doing the minor when they might not otherwise have done so. This could broaden the number of students who explore the possibility, and enrich the offering for

students who are less narrowly focused around the “profession” of HR. This requires no new courses and no new resources financial or otherwise.

### **Response**

The reviewers noted that the HRM program is so well received that it should consider expanding the scope to encourage students across campus with a “passing-to-deep interest” in HR-relevant materials to pursue this minor even if they do not wish to seek formal professional accreditation. A non-professional accreditation stream would entail a more flexible set of courses (vs. the strict requirements for professional certification eligibility). The program planned to discuss this option in the Fall of 2019, but conversations were put on hold until January 2021.

In February 2020, the program was approached by Finance and Accounting to review a certificate program in HRM for Accounting and Finance students. The program is in support of this however is unable to move forward as per University requirements for certificate programs.

4. Continuity of HR Club: It was noted that the strength of the HR Club was variable from term to term, and that when strong, it was a significant positive contributor to the student experience and the program’s reputation in a number of ways. We simply note that the staffing recommendations made here may create capacity to better support the strength of this important club.

### **Response**

The reviewers recommend that increased staffing of the HRM program would allow for greater continuity in the size and success of the HRM Club. The Department has very active undergraduate and graduate student groups, and is committed to providing a comparable experience for students in the HRM program.

6. HR Software: As noted earlier, students and alumni unanimously agreed that exposure to HR platforms (e.g., WorkDay, PeopleSoft, Cognos) would be advantageous to students, and significantly enhance their capacity to compete for jobs in the marketplace. We recommend that the program investigate ways to make this possible. Strategies could include incorporation into existing courses, the development of a new course, or collaboration with colleagues elsewhere on campus. In this last respect, we note that the Conrad School is in the process of developing a “technology platforms” course to be made available to students across campus. It is early in that development process, and engagement may allow some specialization of content that would facilitate HR students.

### **Response**

The reviewers recommend developing a course that would introduce students to common HR platforms. The program's response to this suggestion will be subsumed under the discussions of Recommendations 2 (Accounting Course) and 3 (Expansion of Target Audience), as it could play a role in the redesign of the Accounting course and/or be included a part of a broader, more flexible non-accreditation stream curriculum. Once consideration is developed for the target audience under Section 5 of this report, the next step would be to review courses and course development. Currently, 8 courses are required for the minor and the program offers all 9 courses students require if they wish to pursue the CHRP/L designation.

7. Edge and Co-op: The Director noted the importance of enhancing the work integrated learning opportunities for HR minor students. He identified a desire for more attention from co-op, and a sense of hopefulness about the role that the new Edge program might play in addressing those needs. We simply recommend that the Director continue to pursue these strategies, and that his Department Chair and Dean offer what support they can to his efforts. We acknowledge that the active engagement of a Chair and/or Dean can sometimes be necessary to advance an agenda in a complicated landscape.

#### **Response**

The program is strongly committed to providing work integrated learning opportunities for HRM students. Given the number of students, though, this is an enormous task. The program requires dedicated support from the Edge and/or Co-op office to identify HR-specific placements in the community. This job is simply too much for the Director to take on in addition to his other responsibilities. The program is happy to discuss collaborative strategies with Edge/Co-op, especially if granted permission to hire a full-time lecturer to support the HRM program.

8. Marketing: Put simply, not enough people on this campus know about this fabulous program. Further, prospective students of the university may also be less aware than they should be. We encourage the program, the department, the faculty, and Marketing and Undergraduate Recruitment to invest effort and resources in addressing the "awareness deficit" that we perceive. (This might also be worth considering for all / most minors, especially where they are "profession relevant".)

#### **Response**

In the words of the reviewers "...not enough people on this campus know about this fabulous program." The program is proud to hear this sentiment and agrees! The program met with Arts Marketing staff in Fall 2019 to discuss strategies for raising student awareness of the program as part of initial recruitment efforts (i.e., presentations to high schools) and to

existing students who could complement their major with an HR minor. The program continues to market this program whatever possible, realizing that there are limitations to the marketing of this program given it is only a minor and not a major.

### **Recommendations Not Selected for Implementation**

5. If new financial resources are required: If it is determined that some of the recommendations here, or other future directions of value, require additional financial resources, we have a suggestion for how to raise them. Specifically, program leadership could investigate slightly fewer offerings of some classes with slightly larger class sizes. When students were asked whether classes of 40-45 would still be sufficiently intimate to achieve objectives (vs. 30-ish currently), their response was “generally yes”. They did, however, note that this was truer for some classes than others.

### **Response**

The reviewers were highly sensitive to the financial realities currently faced at UW. As such, they noted that by increasing the enrollment caps on some HRM courses, the program could, in essence, generate funds to support the need for more staffing. The enrollment cap for all HRM 300 level courses has been set at 80 students. We will continue to monitor our enrollment caps carefully and always provide overrides to HRM students who require a specific 300 level HRM course. No HRM student will be denied enrollment if the cap of 80 is reached.

## Dean's Response

The Faculty of Arts is currently facing financial challenges, and there is a hiring freeze in effect. Departments are being encouraged to review their curriculum in order to identify ways to make course offerings more flexible and degree programs more accessible. Growing course offerings rather than shrinking them is not very viable at the moment, and all Departments should be thinking about strategic use of their existing resources. It may mean doing things differently as we move forward; we need to pay close attention to student interests and design curriculum that is meaningful to them. The extremely positive reviewers' report on the HRM Minor suggests that this program is indeed meaningful to our students, and I applaud the idea of expanding the program's audience.

With respect to the staffing concerns raised by the reviewers and the Department, I note the following:

1. The reviewers recommend, and the Department agrees, that an additional "full-time lecturer" be hired. I take this to mean a continuing lecturer, rather than a definite-term lecturer. Hiring processes at UW do not allow for the immediate hire of a continuing lecturer; individuals must generally serve in a couple of definite-term positions before they can be converted to a continuing lecturer. Unfortunately, as mentioned above, the Faculty is currently in a hiring freeze and I cannot add an incremental position to the HRM program. Nevertheless, I will be keeping this request in mind as I move forward with complement planning.
2. Another recommendation is to issue "multi-term sessional contracts". I take this to mean hiring definite-term lecturers to cover a suite of courses over the period of a year or two, rather than issuing single-course contracts. Definite-term lecturers do represent an additional cost to the Faculty (sessional labour is less costly on a course per course basis). If the recommendation is instead that a sessional instructor who is engaged to teach a course in September should at the same time be issued a contract to teach in January, there is no reason why that could not be done.



24 November 2019

	Recommendations	Proposed Actions	Responsibility for Leading and Resourcing (if applicable) the Actions	Timeline for addressing Recommendations
1.	<p><i>Staffing.</i></p> <p>1. <i>Hire an additional full-time lecturer.</i> In our estimation, this is the single most important recommendation we are making.</p> <p>2. <i>Multi-term sessional contracts.</i> In order to provide stability and give the Director the capacity to attract great sessional lecturers, the Faculty should find a way to permit the Director to make multi-term offers to sessional lecturers.</p>	<p>September 30, 2019</p> <ul style="list-style-type: none"> <li>- Conduct meeting to determine role and responsibilities of proposed new position plus budget options and financial implications.</li> </ul> <p>September 30, 2019</p> <ul style="list-style-type: none"> <li>- Determine if multi term contracts can be provided to several Lecturers.</li> </ul> <p>To consider for full time Lecturer:</p> <ul style="list-style-type: none"> <li>- Courses</li> <li>- Relationship with I/O</li> <li>- Other responsibilities</li> </ul>	<p>Heather Henderson Vince Di Ruzza Janice da Silva</p> <p>Janice da Silva Vince Di Ruzza</p>	<p>December 2019</p> <ul style="list-style-type: none"> <li>- If approval provided, implementation plan will be put in place for 2020 hire.</li> </ul> <p>December 2019</p> <ul style="list-style-type: none"> <li>- If approved, January 2020 contracts will be multi term.</li> </ul> <p>May 2020</p> <ul style="list-style-type: none"> <li>- Full time lecturer cannot be supported at this time. Sessional contracts will be reviewed again in Jan 2021. Goal was to implement September 2020 but will be postponed until campus re-opens and demand for courses is established.</li> </ul>
2.	<p><i>Accounting Course.</i> We had triangulating feedback from students, alumni, and faculty, that the current required accounting course is problematic. We do not pretend to know the best way to do so, but possible solutions might include a dedicated section of AFM 123 targeted at this audience or the development of a different course more appropriately targeted at this audience. This latter solution raises another valuable question, which is whether AFM 123 is in fact “the right course” for the program. Again, we are not equipped to offer a recommendation in that respect. We encourage new collaborative efforts with the content</p>	<p>October 2019</p> <ul style="list-style-type: none"> <li>- Will conduct meeting with partners in Finance and Accounting to discuss course, and current problems.</li> <li>- Will determine if partnership/changes will be considered.</li> </ul>	Vince Di Ruzza	<p>April 2020</p> <p>Should partnership with Accounting and Finance faculty not be reached to address concerns by HRM students regarding AFM 123, proposal to build HRM finance and accounting course will be completed for September 2020 Implementation.</p> <p>Jan 2021</p> <p>Talks will resume with AFM.</p>

	experts in SAF, and the involvement of SAF's leadership in that process as appropriate.			
3.	<i>Expansion of the target audience / streaming.</i> As noted, the program is very well designed and delivered for its current target audience – students who may wish to pursue formal HR accreditation with a professional body. Our reflection, for the consideration of the program leadership, is that it may be worthwhile to add additional HR-relevant courses to the acceptable list that do not, necessarily, meet CHRL requirements.	November 2019 - Meeting to be held to discuss implementation of HRM program separate from CHRP designation.	Vince DiRuzza Heather Henderson Richard Eibach HR Program/Student advisor	March 2020 If decision in November is to move forward with minor that is not geared towards CHRP designation core design of courses will be completed. Jan 2021 – committee will be established to review next steps and process.
4.	<i>Continuity of HR Club.</i> It was noted that the strength of the HR Club was variable from term to term, and that when strong, it was a significant positive contributor to the student experience and the program's reputation in a number of ways. We simply note that the staffing recommendations made here may create capacity to better support the strength of this important club.	September 30, 2019 - Once new term begins, meeting will be planned for October with HR Society executive.	Vince Di Ruzza Plus HR Program/Student Advisor	Ongoing support and guidance will be provided to the HR Society. Full support will be provided by all HRM Lecturers. Winter 2020 – meeting held with newly established Club executive. All plans for end of March cancelled. Plans to re-establish once campus opens up.
6.	<i>HR Software.</i> As noted earlier, students and alumni unanimously agreed that exposure to HR platforms (e.g., WorkDay, PeopleSoft, Cognos) would be advantageous to students, and significantly enhance their capacity to compete for jobs in the marketplace. We recommend that the program investigate ways to make this possible.	Ongoing Fall term 2019 Will be considered once we determine action plans for item 2, 3.  Special note: students pursuing CHRP qualifications require 9 courses. The minor requires 8 therefore all courses for these students are pre-determined. If we move forward with item 3 we could change the design of course content for students interested only in an HRM minor and not to pursue CHRP.	Vince Di Ruzza  Changes to Minor Committee (Proposed): Vince Di Ruzza Richard Eibach Tammy Neil HR Program Co-ordinator/Student Advisor	January 2021

7.	<i>Edge and Co-op.</i> The Director noted the importance of enhancing the work integrated learning opportunities for HR minor students. He identified a desire for more attention from co-op, and a sense of hopefulness about the role that the new Edge program might play in addressing those needs. We simply recommend that the Director continue to pursue these strategies, and that his Department Chair and Dean offer what support they can to his efforts. We acknowledge that the active engagement of a Chair and/or Dean can sometimes be necessary to advance an agenda in a complicated landscape.	Ongoing <ul style="list-style-type: none"> <li>- Meeting to be planned with Edge.</li> <li>- Meeting to be planned with Co-op.</li> </ul> Purpose: Partnership building. Implementation of strategies to support the challenges faced by HRM minor students.	Vince Di Ruzza Program Co-ordinator To be determined.	Jan 2021 - Discussion will commence
8.	<i>Marketing.</i> Put simply, not enough people on this campus know about this fabulous program. Further, prospective students of the university may also be less aware than they should be. We encourage the program, the department, the faculty, and Marketing and Undergraduate Recruitment to invest effort and resources in addressing the “awareness deficit” that we perceive.	Ongoing <ul style="list-style-type: none"> <li>- September 2019 – hold meeting with Arts Marketing staff.</li> </ul>	Vince Di Ruzza	Ongoing

The Department Chair/Director, in consultation with the Dean of the Faculty shall be responsible for the Implementation Plan.



**Date of next program review** 2025-2026  
Date

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**Signatures of Approval**

Heather Henderson 09/08/2021  
Chair/Director Date

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AFIW Administrative Dean/Head (*For AFIW programs only*) Date

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Sheila Ager 24/06/2021  
Faculty Dean Date  
**Note:** AFIW programs fall under the Faculty of ARTS; however, the Dean does not have fiscal control nor authority over staffing and administration of the program.

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Dan De Vidi March 26, 2020  
Associate Vice-President, Academic Date  
(For undergraduate and augmented programs)

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Associate Vice-President, Graduate Studies and Postdoctoral Affairs Date  
(For graduate and augmented programs)

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Attachment #2

## Final Assessment Report

### Spanish (BA, Minor), Latin American Literatures and Cultures (Minor), Spanish/English Translation (Minor, Diploma) December 2020

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#### Executive Summary

External reviewers found that the programs (BA, Minors, Diploma) delivered by the Department of Spanish and Latin American Studies (SLAS) were in good standing.

“These programs are currently in good standing (especially the BA and the Minor in Spanish) but only due to the hard work of its few members.”

A total of four recommendations were provided by the reviewers, regarding resource needs, and program marketing and recruitment. In response, the program created a plan outlining the specific actions proposed to address each recommendation as well as a timeline for implementation. The next cyclical review for this program is scheduled for 2026-2027.

#### Total Number of Students Registered in All Undergraduate Year Levels

	3-Year General	4-Year General	Honours	Honours Co-op
Fall 2020	0	0	8	0
Fall 2019	0	0	8	0
Fall 2018	0	0	10	0

\*Enrolment based on Active Students Extract retrieved from Quest Dec 17, 2020

#### Number of Students Graduating with a Minor/Diploma

	Spanish Minor	Latin American Literatures and Cultures Minor	Spanish/English Translation Minor	Spanish/English Translation Diploma
2018	5	0	0	0
2017	4	0	0	0
2016	6	0	0	0

\*data provided by Institutional Analysis and Planning as part of the Self-Study

## **Background**

In accordance with the University of Waterloo's Institutional Quality Assurance Process (IQAP), this final assessment report provides a synthesis of the external evaluation and the internal response of the BA, Minors and Diploma delivered by the Department of Spanish and Latin American Studies. A Self-Study (Volume I, II, III) was submitted to the Associate Vice-President, Academic on August 30, 2019. The Self-Study (Volume I) presented the program descriptions and learning outcomes, an analytical assessment of the programs, including the data collected from a student survey, along with the standard data package prepared by the Office of Institutional Analysis & Planning (IAP). The CVs for each faculty member with a key role in the delivery of the program(s) were included in Volume II of the Self-Study.

From Volume III, two arm's-length external reviewers were selected by the Associate Vice-President, Academic: Dr. Sophie Lavoie, Associate Professor of Culture and Media Studies, University of New Brunswick, and Dr. Enriqueta Zafra, Associate Professor of Language, Literatures and Cultures, Ryerson University.

Reviewers appraised the Self-Study documentation and conducted a site visit to the University on November 14-15, 2019. An internal reviewer from the University of Waterloo, Dr. Susan Elliott, Professor of Geography and Environmental Management, was selected to accompany the external reviewers. The visit included interviews with the Associate Vice-President, Academic; Acting Dean of the Faculty of Arts; Chair of the Department, as well as faculty members, staff and current undergraduate students. The Review Team also had an opportunity to meet with representatives from the library.

Following the site visit, the external reviewers submitted a report on their findings, with recommendations. Subsequently, the program and Dean responded to each recommendation and outlined a plan for implementation of the recommendations.

This Final Assessment Report is based on information extracted, in many cases verbatim, from the Self-Study, the External Reviewers' Report, Program Response and Dean's Response.

## **Program Characteristics**

Spanish: In addition to providing a fluent knowledge of the Spanish language, the Spanish program offers a multiplicity of practical applications ranging from business to broadcasting and from social work to diplomatic service. At the same time, it provides a deep knowledge of and appreciation for Hispanic literatures and cultures. Spanish is offered in the following credentials:

- Minor (4.0 units/8 courses in Spanish)
- 3-Year General (15.0 units/30 courses, including 6.0 units/12 courses in Spanish)
- 4-Year General (20.0 units/40 courses, including 8.0 units/16 courses in Spanish)
- 4-Year Honours program (20.0 units/40 courses, including 8.0 units/16 courses in Spanish)

This report also technically covers these since-inactivated credentials:

The *Minor in Latin American Literatures and Cultures* (4.0 units/8 courses) aimed to examine the literatures and cultures of Latin America from pre-Columbian times to the present. Students study the major trends in literary and cultural criticism, while developing strong research skills at the same time. The Minor was inactivated effective September 1, 2019 due to low enrolment.

The *Minor in Spanish/English Translation* (4.0 units/8 courses) provided an opportunity for students enrolled in any degree program to examine a variety of linguistic and stylistic issues directly relevant to understanding culture, civilization, business, and industry. Students were be introduced to current issues of translation (business, technical, literary) and technological resources used today in translation, while acquiring important research skills. The Minor was inactivated effective September 1, 2019 due to low enrolment.

The *Diploma in Spanish/English Translation* (4.0 units/8 courses) provided an opportunity for non- and post-degree students to examine a variety of linguistic and stylistic issues directly relevant to understanding culture, civilization, business, and industry. Students will be introduced to current issues of translation (business, technical, literary) and technological resources used today in translation, while acquiring important research skills. The Diploma was inactivated effective September 1, 2019 due to low enrolment.

### **Summary of Strengths, Challenges and Weaknesses based on Self-Study**

#### **Strengths**

- Dedicated and caring instructors who are invested in their students' success.
- Smaller class sizes in advanced classes allow students a more personalized educational experience.
- Cultural Identities Minor and interdepartmental collaboration with Germanic and Slavic Studies (GSS).
- Strong sense of community among students and faculty.
- A unique opportunity to study the art of translation.

#### **Challenges**

- Attracting more majors and improving enrollment, especially in upper-year courses. One avenue that may be pursued is to foster a stronger relationship with high school teachers in terms of outreach and professional development. This would be mutually beneficial as they would get professional training and the program would attract better prepared students coming into university and more awareness of the programs at the high school level.
- Converting minors into majors.

- Fostering a “learning narrative” between courses so that students can more easily make connections during their learning experiences in Spanish classes.
- Having an office manager who is at the “front line” only 4 hours a day.

### **Weaknesses**

- A very small faculty complement constrains the number of initiatives that can be undertaken at any one time in the Department.
- Large size of first-year courses.
- Lack of resources to offer courses in Spring and Summer to accommodate the needs of co-op students who would like to pursue studies in Spanish.

### **Summary of Key Findings from the External Reviewers**

The reviewers felt that these programs are currently in good standing (especially the BA and the Minor in Spanish) but only due to the hard work of its few members. They felt that this is not sustainable in the long run and the programs’ good standing requires the urgent hiring of a tenure-track position to maintain programs’ requirements. When asked to establish a top priority for the program to address, the reviewers felt that this was a tough question as many of the programs’ perceived issues are interrelated. However, reviewers judged that the renewal of the definite-term position with the possibility of conversion into a tenure-track position once the hiring freeze is over should be the top priority. This would show the Administration’s willingness to support SLAS, for all the reasons provided in this report, and provide some hope for SLAS faculty members, all the while consolidating the department.

### **Program Response to External Reviewers’ Recommendations**

1. SLAS urgently needs a tenure-track position to fulfil program requirements and solve an unsustainable situation in the department. Perhaps the Faculty of Arts could consider a renewal of the definite-term position with the possibility of conversion into a tenure-track position once the hiring freeze is over.

### **Program Response**

The request for a tenure-track position has been denied at this time due to the hiring freeze in place. SLAS feels fortunate, however, to have had their Definite Term appointment extended for another three years. The new appointment begins August 2020. This extension provides SLAS with some breathing room, and the instructor will be able to continue teaching seven courses per year. Nevertheless, SLAS struggles to divide service duties amongst three tenure stream members, while also participating in faculty initiatives (such as Arts First). Moreover, their ability to plan and implement significant changes to their curriculum will also be impacted, but they remain hopeful that the Faculty will be in a stronger financial situation in three years, and that the position they lost to a retirement in 2017 will be reinstated.

### **Dean's Response**

The Department is correct in noting that the hiring freeze, in addition to the financial situation of the Faculty, places serious constraints on our current ability to hire tenure-line faculty. We are engaged in ongoing complement planning for the Faculty as a whole, as well as a strategic planning process. We will gain a clearer picture of needs and opportunities over the coming year.

2. Hire a full-time Administrative Assistant who is at the front lines of the department.

### **Program Response**

SLAS do not see this happening. The Department has always only had a 0.5 position in the Administrative Manager Role. For many years they shared a person with Classical Studies, so although they only had an assistant for half of the work week, she was in the office 40 hours a week, and she split her time between the two departments. When Classical Studies was awarded a 1.0 position in the role, the shared assistant took the spot and SLAS continued with the 0.5. There has been a good deal of turnover in recent years, as people take on the position and then move on to full time work elsewhere in the University. SLAS has lost 4 people since 2009.

The argument has been made on many occasions to change the position to a full-time role, particularly in light of how much additional work has been downloaded to people holding the spot but has been unsuccessful. SLAS conducted a search to cover a secondment that has been extended and hired a replacement who began on December 1, 2020.

Faculty members and teaching staff have learned to work around this situation and have become accustomed to handling various responsibilities independently but running a department with a part time administrative assistant has presented several challenges. An example of this can be as simple as having to re-arrange a workday schedule to allow for their Admin. Manager to attend a meeting or workshop that requires SLAS representation, or as complicated as having no one in the office.

### **Dean's Response**

Our current structures in the Faculty of Arts present some operational challenges, of which the situation with the SLAS admin manager is an example. With the strategic planning process currently underway in the Faculty, we should be able to identify such challenges and address the structural issues contributing to them.

**3. Solve the Conversation Class Director issue.**

**Program Response**

SLAS will continue to make their case for this important position. They hope to be able to offer a sessional rate of pay to the individual in charge of teaching, assessing and offering support to approximately 200 SPAN 101/SPAN 102 students per week. SLAS will not be able to attract someone with the necessary level of maturity and expertise if they continue to offer them merely 16.00 an hour (the rate of pay currently given to undergraduate students).

**Dean's Response**

The 2020/21 budget year has been a particularly challenging one, with the 15% holdback. If the University's financial situation moving forward is more secure, it may be that we will be able to revisit this request.

**4. Market programs in creative ways to attract students.**

**Program Response**

The Department has an active presence on Twitter, Instagram and Facebook, and will continue to be active on these platforms. Moreover, SLAS is in regular contact with local teachers at the secondary school level and have organized events for them to come to campus with students so as to showcase their programs and campus. SLAS has also contacted several of their alumni and have been working with Creative Services to create a video highlighting what Alumni have been doing since graduating with a degree from the Department. SLAS plans to share these video segments with their secondary school contacts, as well as online and on various platforms.

Finally, in light of their remote reality, they have held departmental Town Hall meetings to give students currently enrolled in our courses and plans the opportunity to get their questions answered in real time with staff and faculty. These have been well attended and offer the students the chance to connect with SLAS outside of a "remote" classroom setting.

Although the Review Team did not specifically recommend that SLAS make substantive changes to their various academic plans, they have begun to do just that. They understand that the Faculty is looking for all departments to streamline their plans with a view to making them more flexible for students. SLAS is in the process of cleaning up their section of the calendar, removing intensive specializations and changing the lens through which their courses are offered. After a great deal of discussion, SLAS has decided to move away from a program focused on Literary Studies and will shift their focus to Cultural Studies. This change will be reflected in the language of instruction in their upper level courses. While they will continue to offer all levels of language courses, their senior content courses will be offered in English and will hopefully open the pathway for students across the Faculty of Arts to engage

in their offerings. Once these changes are approved it is their hope that SLAS courses can be “cross-listed” or “held with” other departments and that students can then opt to combine Spanish and Latin American Studies more easily with other majors.

When teaching Hispanic cultural production, SLAS emphasizes the shared complex and oppressive heritage of the colonial experience and traces the historical evolution of the sociocultural forms created by colonial power. They frame much of the study of cultural production around a postcolonial critique of these power structures and examine the creation of alternative epistemologies to highlight the creativity of cultures faced with oppression.

After a lengthy application process the Department of Spanish and Latin American Studies was thrilled to learn that it had been selected once again to participate in the [PRAGDA Film Festival](#) in 2020-2021. SLAS intends to re-apply for the rights to participate in the festival on a yearly basis. The festival will be tied to all course offerings and will create a narrative across their curriculum.

SLAS also collaborated with the Kitchener-Waterloo Public Library and showed movies in their space where members of the K-W community came to enjoy the films and the follow-up discussion that was moderated by one of their faculty members. With the help of technology, the bi-weekly screenings have continued throughout the COVID crisis and attendance at the virtual screenings has been very consistent and strong. SLAS is hopeful that their collaboration with [PRAGDA](#) will continue and that the new course in Film Studies can be supported by this ongoing collaboration.

In addition to the film festival and the shift to offering courses in English and through a cultural studies lens, SLAS is a co-founder of the Cultural Identities Minor. A collaboration with the Department of Germanic and Slavic Studies, the Cultural Identities Minor is an interdisciplinary program that brings together colleagues from multiple departments eliminating the necessity for additional resources. This Minor focuses on the complex role culture plays in the formation, negotiation, and interpretation of individual and group identities. It rests on the research and teaching strengths in the two hosting departments, which integrate different approaches to cultural analysis and have developed a particular emphasis on transcultural perspectives. It also adds complementary perspectives from other departments and programs in Arts.

Our sense of our own identity and place in the world relies on our understanding of shared values and practices, which includes beliefs, customs and activities, languages, and discourses. Aspects of cultural identity also guide our perceptions of other cultures and our interactions with other people. To navigate these challenges effectively we need to develop



not only an understanding of how cultural identity helps us derive a sense of who we are and what our place in the world is, but also a respectful appreciation of how different cultural backgrounds provide others with a different, and irreducible, sense of who they are and their place in the world. SLAS is proud of their involvement in the CI Minor and are working with colleagues on how best to help it grow. In the interim SLAS has cross-listed several of their newer/updated courses with the CI program so that students can benefit from content offered in their department while pursuing the Minor in CI.

**Dean's Response**

I am pleased to see the Department's forward-looking and innovative plans for its curriculum. I did not see a reference to the new(ish) interdisciplinary Cultural Identities plan in the Department's response, but that too represents a genuine effort by the Department to establish curriculum attractive to students.

### Implementation Plan

	Recommendations	Proposed Actions	Responsibility for Leading and Resourcing (if applicable) the Actions	Timeline for addressing Recommendations
1.	SLAS urgently needs a tenure-track position to fulfil program requirements and solve an unsustainable situation in the department. Perhaps the Faculty of Arts could consider a renewal of the definite-term position with the possibility of conversion into a tenure-track position once the hiring freeze is over.	The current Definite Term Appointment, which ends July 31, 2020, has been extended for another 3 years. Dean: As stated above, resource constraints mean that no action on a tenure-line position is being contemplated at this time.	Dean of Arts Office	We will have our current Definite Term Lecturer until August 2023. At that time we will request a tenure track appointment. As we have said elsewhere, this position would not be an incremental gain, but a recovery of the position we lost to retirement.
2.	Hire a full-time Administrative Assistant who is at the front lines of the department.	Likely not to happen. Dean: Under the current structures, it is not feasible to hire a full-time Administrative Manager for SLAS. However, with some structural changes, we may be able to alleviate the current problem.	Dean of Arts Office	Please see my comments made elsewhere on the history of the Administrative Manager Role in Spanish and Latin American Studies.
3.	Solve the Conversation Class Director issue.	We will continue to make the case for this important position.	Dean of Arts Office	Ongoing.
4.	Market programs in creative ways to attract students.	We are already active on social media and we are collaborating with the Kitchener Public Library (with the PRAGDA film festival)	Department Members and Student Society	Ongoing.

The Department Chair/Director, in consultation with the Dean of the Faculty shall be responsible for the Implementation Plan.

		<p>1. Continue to make connections across the Faculty to include more courses that align with Cultural Identities</p> <p>2. Look to adapt existing SPAN courses or create new ones in our Department that offer a cultural studies perspective</p> <p>3. Continue our work to develop the BA in Cultural Identity</p>	<p>1. Members of Spanish and Latin American Studies with our partners in Germanic and Slavic Studies</p> <p>2. Dean of Arts Office</p> <p>3. Members of Spanish and Latin American Studies</p>	<p>1. It will likely take 2-3 years to get the BA in Cultural Identities on the books</p> <p>2. Our Department's own curriculum updating is ongoing</p> <p>3. Ongoing</p>
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The Department Chair/Director, in consultation with the Dean of the Faculty shall be responsible for the Implementation Plan.

**Date of next program review**

**2026-2027**

Date

**Signatures of Approval**

Chair/Director



March 10, 2021

Date

AFIW Administrative Dean/Head (*For AFIW programs only*)

Date

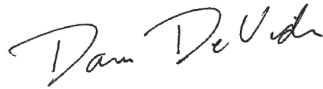


June 10, 2021

Faculty Dean

Date

**Note:** AFIW programs fall under the Faculty of ARTS; however, the Dean does not have fiscal control nor authority over staffing and administration of the program.



March 11, 2021

Associate Vice-President, Academic  
(For undergraduate and augmented programs)

Date

Associate Vice-President, Graduate Studies and Postdoctoral Affairs  
(For graduate and augmented programs)

Date

**University of Waterloo**  
**SENATE**  
**Report of the President**  
**17 January 2022**

**FOR INFORMATION**

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**Recognition and Commendation**

**Honours relating to Advancing Research for Global Impact**

A major annual publication has recognized nine University of Waterloo faculty members as being among the most cited in the world. A list published by the global analytics firm Clarivate identifies researchers who demonstrated “significant influence in their chosen field or fields through the publication of multiple highly cited papers during the last decade.” Their names are drawn from the publications that rank in the top one per cent by citations for field and publication year in the company’s global citation index.

- **Zhongwei Chen** (CRC) – Faculty of Engineering – Chemical Engineering
- **Geoffrey T. Fong** – Faculty of Arts – Psychology
- **Bernard R. Glick** – Faculty of Science – Biology
- **David Hammond** – Faculty of Health – School of Public Health Sciences
- **Sharon I. Kirkpatrick** – Faculty of Health – School of Public Health Sciences
- **Linda F. Nazar** – Faculty of Science – Chemistry
- **Will Percival** – Faculty of Science – Physics and Astronomy
- **Daniel Scott** – Faculty of Environment – Geography
- **Xuemin (Sherman) Shen** – Faculty of Engineering – Electrical and Computer Engineering

(Adapted from the [Daily Bulletin, 18 November 2021](#))

Stecie Fellowship winner pushes the potential of ultrasound. **Alfred Yu** is focused on two distinct lines of research as he works to develop the next generation of ultrasound technology – one involving diagnosis and the other involving therapy. To help reach his ambitious goal, Yu was announced by the Natural Sciences and Engineering Research Council of Canada as one of six nation-wide winners of 2021 E.W.R. Steacie Memorial Fellowships for highly promising researchers.

(Adapted from the [Daily Bulletin, 19 November 2021](#))

**Jonathan Li**, professor of geospatial data science and remote sensing at the Department of Geography and Environmental Management and cross-appointed at the Department of Systems Design Engineering was selected as the 2021 winner of the Geomatica Award granted by the Canadian Institute of Geomatics (CIG). The Geomatica Award is presented by CIG to someone who has contributed to the advancement of geomatics in Canada in an exceptional manner. Li’s extensive research and contributions in urban remote sensing and geospatial data science, especially in intelligent extraction of geometric and semantic information from earth observation images and LiDAR point clouds using artificial intelligence algorithms have significantly impacted the geomatics industry in Canada.

(Adapted from the [Daily Bulletin, 26 November 2021](#))

Cheriton School of Computer Science Professor **Ihab Ilyas** has been named a Fellow of the Institute of Electrical and Electronics Engineers for his contributions to data integration, data cleaning and rank-

aware query processing. IEEE Fellowships are a prestigious professional recognition and an important career achievement. A Fellow is the highest grade of IEEE membership and it is conferred to those with an outstanding record of accomplishments. Each year, the total number of IEEE members recognized as Fellows does not exceed one-tenth of one per cent of the Institute's total voting membership.

(Adapted from the [Daily Bulletin, 1 December 2021](#))

### **Honours relating to Developing Talent for a Complex Future**

**Shihabur R. Chowdhury** has received the 2021 Alumni Gold Medal for outstanding academic performance in a doctoral program. Conferred by Waterloo's Office of Alumni Affairs, the award has honoured top graduating students at convocation since 1970. Shihab is a senior data engineer at Apple. He completed his PhD at the Cheriton School of Computer Science. His PhD research spanned several areas of systems and networking, focusing specifically on network function virtualization, network virtualization, software-defined networking, and cloud computing.

(Adapted from the [Daily Bulletin, 22 October 2021](#))

**Kathryn Plaisance**, an associate professor in the Department of Knowledge Integration has received a 2020-2021 Ontario Confederation of University Faculty Associations (OCUFA) Teaching Award for her outstanding contributions to the quality of higher education at Ontario's universities. Professor Plaisance was one of seven OCUFA teaching award winners named this year.

(Adapted from the [Daily Bulletin, 28 October 2021](#))

A company founded at the University of Waterloo's flagship incubator Velocity has performed the first autonomous robotic intramuscular injection, paving the way to improved patient care in an industry faced with labour shortages. **Cobionix**, an autonomous robotics company located in Kitchener-Waterloo, performed the injection—without needles—using their Cobi platform. "Cobi is a versatile robotics platform that can be rapidly deployed to complete tasks with 100 per cent autonomy," said Tim Lasswell, co-founder and CEO of Cobionix. "We outfitted Cobi to use a needle-free injection technology and to demonstrate that patients could receive intramuscular injections, such as vaccines, without needles and no involvement from a healthcare professional."

(Adapted from the [Daily Bulletin, 3 November 2021](#))

The Centre for Extended Learning (CEL) has been helping Waterloo instructors design, develop and deliver online courses since 1997. CEL recently announced the winners of the latest Excellence in Online Teaching and Design Awards for those who have gone above and beyond to provide excellent learning opportunities for their students. Intermediate Spoken French (FR 250), created by **Kanstantsin Tsedryk** and **Nicolas Hebbinckuys**, has been awarded the 2020 Excellence in Online Course Design Award. **Fiona Dunbar** is the recipient of Waterloo's 2020 Excellence in Online Instructor Award for Math 128 - Calculus 2 for the Sciences. She was nominated by her students for "putting in an incredible amount of effort in making sure her students are able to learn, participate and ... enjoy her course."

(Adapted from the [Daily Bulletin, 10 November 2021](#))

The University of Waterloo's **School of Optometry and Vision Science** is amongst the top optometry schools in the world, according to one of the field's top scientific journals. The rankings were published

in *Clinical and Experimental Optometry*, naming Waterloo 5<sup>th</sup> overall, out of 245 optometry schools in the world. The listing also leaves Waterloo's School of Optometry and Vision Science as #1 in Canada, and #3 of optometry schools in North America.

(Adapted from the [Daily Bulletin, 22 November 2021](#))

Congratulations to **Professor Richard Epp** for being awarded the 2021 Canadian Association of Physicists (CAP) Medal for Excellence in Teaching Undergraduate Physics, and to **Professor Roger Melko** for being awarded the 2021 CAP/Division of Condensed Matter and Materials Physics Brockhouse Medal for outstanding contributions to research in condensed matter physics in Canada.

(Adapted from the [Daily Bulletin, 14 December 2021](#))

### **Honours relating to Strengthening Sustainable and Diverse Communities**

Two Waterloo professors attended a COP26 activity on November 11 at an event dedicated to the preservation of peatlands, an important influencer of climate change. As part of the 26th UN Climate Change Conference of the Parties (COP26), the United Nations Environment Programme's (UNEP) Global Peatlands Initiative (GPI) created a "Peatlands Pavilion" as a hub to exchange knowledge and experience on peatlands policy, practice, research and innovation. World-wide, peatlands store a vast amount of greenhouse gases (GHG) which can be released through land disturbances such as fire or drainage. **Maria Strack**, professor and Canada Research Chair, Department of Geography & Environmental Management and **Fereidoun Rezenezhad**, research associate professor, Department of Earth and Environmental Sciences, participated in the Peatlands Pavilion virtual side event co-hosted by the United Nations Environment Programme's (UNEP) Global Peatlands Initiative (GPI), the University of Waterloo's Interdisciplinary Centre on Climate Change (IC3) and the Water Institute, entitled "*Canada's Peatlands as a Nature-based Solution to Climate Change*".

(Adapted from the [Daily Bulletin, 1 November 2021](#))

Co-directors **Dr. Corey Johnson** and **Dr. Diana Parry** from the Department of Recreation and Leisure Studies have founded the Collaboratory on Digital Equity Research (CODER), which aims to mobilize research in the digital humanities and social sciences to inform public culture, policy, practice, and everyday social relations to create a more equitable and just society. Other team members include Dr. Stefanie Duguay, Assistant Professor in the Department of Communication Studies at Concordia University, and Ph.D. students **Eric Filice**, **Jasmine Nijjar**, **Luc Cousineau**, and **Harrison Oakes** of the University of Waterloo. CODER has recently conducted several projects related to geo-social networking applications, otherwise known as dating apps, such as Tinder, Grindr, and Bumble. Among other things, they have looked at the networking application's cultural impacts and influence on gender identities, sexual practices, public and private spaces and users' quality of life.

(Adapted from the [Daily Bulletin, 11 November 2021](#))

The University of Waterloo has earned a "Silver" rating through the **Sustainability Tracking, Assessment, and Rating System (STARS)**, a third-party sustainability reporting framework specifically for post-secondary institutions. Hosted by the Association for the Advancement of Sustainability in Higher Education, STARS is a transparent and democratically developed platform for campuses from around the world to report on the many ways that sustainability is imbedded into campus planning, practice, and performance. Institutions respond to 63 different credits which span efforts to imbed sustainability in academics, operations, engagement, and coordination and planning. Over 670

institutions have submitted more than 1000 reports through STARS, enabling ongoing benchmarking and development of best practices as a sector.

(Adapted from the [Daily Bulletin, 19 November 2021](#))

Warriors quarterback **Tre Ford** has been named the recipient of the 2021 Hec Crighton trophy for the most outstanding player in U SPORTS. He becomes the first player in the history of the Warriors football program to claim the storied award. The recognition caps a dominant career: since becoming the full-time starter in 2018, Ford leads the nation in passing yards and passing touchdowns, while sitting second in rushing yards.

(Adapted from the [Daily Bulletin, 3 December 2021](#))

The Waterloo Centre for German Studies is pleased to announce the winner of its prize for the best first book published in 2020. *Mobilizing Black Germany: Afro-German Women and the Making of a Transnational Movement*, by **Tiffany N. Florvil** and published by University of Illinois Press, was selected from a shortlist of six excellent academic monographs. The prize includes a cash award of CAD \$3,000. In selecting *Mobilizing Black Germany* as the winner, jurors called it an “immensely important book” that breaks new ground in German social history. Florvil traces the modern history of Black German women, their struggle against discrimination, their important role in the transnational Black women’s movement, and their significance for the development of German feminism in the last forty years. This book will become indispensable to German studies scholars while also providing more general audiences with an accessible introduction to a less familiar chapter of German history.

(Adapted from the [Daily Bulletin, 15 December 2021](#))



**University of Waterloo**  
**REPORT TO SENATE FROM THE FACULTIES**  
**17 January 2022**

**FOR INFORMATION**

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

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<sup>1</sup> [https://uwaterloo.ca/secretariat/sites/ca.secretariat/files/uploads/files/reports\\_from\\_fac\\_jan\\_2022.pdf](https://uwaterloo.ca/secretariat/sites/ca.secretariat/files/uploads/files/reports_from_fac_jan_2022.pdf)

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**University of Waterloo**  
**SENATE GRADUATE & RESEARCH COUNCIL**  
**Report to Senate**  
**17 January 2022**

Senate Graduate & Research Council met on 13 December 2021 and agreed, in accordance with [Senate Bylaw 2](#) (section 4.03), to forward the following item to Senate for approval as part of the regular agenda.

Further details are available at: <https://uwaterloo.ca/secretariat/committees-and-councils/senate-graduate-research-council>

## **FOR APPROVAL**

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### **PROGRAM CHANGES**

#### **Faculty of Arts**

1. **Motion:** To approve the addition of a regular online/virtual classroom in the part-time stream of the Master of Taxation (MTax) program, effective 1 May 2022, as presented.

**Rationale:** The School of Accounting and Finance is committed to expanding the Master of Taxation program to reach into new avenues, including the expansion of the part-time stream. Specifically, the addition of the virtual classroom is an important avenue that builds on the program's strengths and expands its reach into a much broader professional community and significantly increase enrolment opportunities.

2. **Motion:** To approve making the Graduate Studies Internship milestone optional, rather than required, for the MASc in Industrial and Organizational Psychology, effective 1 May 2022, as presented.

**Rationale:** The department of Psychology is petitioning to change a requirement that students complete an internship as part of their MASc degree to be optional. There are several reasons for this change, including: (a) that students in their second year do not necessarily have the knowledge, skills, and abilities (KSA) necessary to fully benefit from an internship and it is believed that students and internship employers will benefit from having students complete internships in their 1st or 2nd year of PhD training (i.e., 3rd or 4th year overall), (b) the I-O division is moving away from encouraging terminal MASc degrees, and instead is pivoting toward using the MASc as a "degree along the way" to a PhD. thus, students will have the opportunity to complete the internship in their 3rd or 4th year when their KSAs are more developed, and (c) students sometimes have trouble finding internships, which has been exacerbated by covid19, within the tight time parameters set by the current MASc degree (i.e., the entire degree requires 2 years, meaning there is only 1 viable term to seek an internship [summer of 2nd year]).

### **NEW PROGRAM**

#### **Faculty of Environment**

1. **Motion:** To approve the addition of a Ph.D. in Sustainability Management - Water program, effective 1 May 2022, as presented.

**Rationale:** The School of Environment, Enterprise and Development (SEED) is joining the Collaborative Water Program to add a PhD in Sustainability Management - Water program. Water resources sustainability is a key dimension of the Sustainability Management (SUSM) program in SEED and is consistent with the Faculty of Environment and Waterloo strategic plans. SEED has consistently been receiving students who are specifically interested in water and water related topics as their doctoral research—several of whom have already shown their interest in the Collaborative

Water Program. A total of seven SEED faculty members are affiliated to the Water Institute based on their research experience and expertise, and see value in adding a PhD in SUSM - Water program. Further, SEED is already a member of the Collaborative Water Program and has offered a MES in SUSM – Water program since the beginning and adding our PhD to the Water program may be considered a logical extension.

*/mh kw* Jeff Casello  
Associate Vice-President, Graduate Studies and  
Postdoctoral Affairs

Charmaine Dean  
Vice President, Research & International

**University of Waterloo**  
**SENATE UNDERGRADUATE COUNCIL**  
**Report to Senate**  
**17 January 2022**

Senate Undergraduate Council met on November 9, 2021 and agreed to forward the following items to Senate for approval in the regular agenda.

Further details are available: <https://uwaterloo.ca/secretariat/committees-and-councils/senate-undergraduate-council>

## **FOR APPROVAL**

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### **ACADEMIC PLAN CHANGES**

#### **Faculty of Mathematics** **Computational Mathematics**

1. **Motion:** That Senate approve the following changes to the honours computational mathematics and the computational mathematics minor academic plan, effective 1 September 2022.

**Rationale and Background:** These interdisciplinary programs are composed of foundational and specialized computational mathematics courses that are offered by the Faculty of Mathematics as a whole, including courses from all four departments (Applied Mathematics, Combinatorics & Optimization, Pure Mathematics, Statistics and Actuarial Sciences) and the School of Computer Science. A review of the programs has identified the need to update some of the course options and make some refinements to the structure of the programs (without changes to the total number of required courses). The changes fall under 4 categories, labelled A to D below.

- A) The following changes are being made to Computational Mathematics academic plans (honours, minor):
- [A1] Add to list of “additional” approved courses a number of courses that are either new and a good fit, or that increase the interdisciplinary breadth of the programs: AMATH 343, AMATH 383, AMATH 391, AMATH 455, AMATH 477, CO 463, CO 466, CO 471, CS 479
  - [A2] Put a restriction on the “additional courses list” to require that courses be taken from at least two different subject codes and a note that AMATH 382/BIO 382 is considered an AMATH subject for the purpose of this rule.
  - [A3] Update language of a note regarding the fact that a certain number of courses are restricted to Computer Science students.
  - [A4] Import a number of rules from the honours plan to the minor for consistency, including: Add CS 431 as alternative to CS 451, and add CO 255 as alternative to CO 250.
- B) The following changes are made to the Computational Mathematics (honours) plan:
- [B1] To ensure depth, require that at least two of the “four additional courses” are taken at the 400 level
  - [B2] to increase the breadth for students, split the current heterogeneous list of “four out of six core courses” (ranging between years two and four) into two more focused lists out of which students are required to take two courses with different subject codes:
    - a first list of “two out of four (second-year, foundational) courses” (CO 250 or CO 255; CS 245 or PMATH 330; CS 246; and additional courses specified in [B3]).
    - a second list of “two out of five (upper-year) core courses” (AMATH 342; CS 475; STAT 340 or STAT 341; and additional courses specified in [B3]).

By contrast, in the current setup students could take three CS courses. With the new core course list, students will be required to take at least two upper-year CM core courses that have full focus on CM

topics, whereas the previous core list contained several second-year courses that are more of a preparatory nature without full focus on core CM material.

- [B3] Add
  - to first list of foundational courses: AMATH 250 or 251 or 350 (all considered equivalent)
  - to second list of core courses: CO 367 or CO 353; PMATH 370
  - to list of additional courses: the possibility to take courses from the core list.
- [B4] Allow students who take CO 255 (Advanced Level Introduction to Optimization) to take CO 466 or CO 450 as a core course instead of CO 367 or CO 353. This is in line with the setup of the CO major and the prerequisites of these courses, where strong students who take the advanced CO 255 instead of CO 250 may directly enter CO 466 or CO 450 without having to first take CO 367 or CO 353.
- [B5] To prevent confusion and simplify advising, add specific lists of Science and Engineering subject codes departments that are eligible for the course concentration component, specifically:
  - For science: BIOL, CHEM, EARTH, MNS, PHYS
  - For engineering: AE, BME, CHE, CIVE, ECE, GEOE, ENVE, ME, MTE, MSCI, NE, or SYDE.

C) The following changes are made to the Computational Mathematics Minor:

- [C1] Remove a restriction that at most three courses may also be used to satisfy an explicit choice list course requirement of the student's major. Without that restriction, and with the additional breadth requirement of part A2, most students are required to take, among their 7 required CM minor courses, at least 3 courses that cannot be counted as courses for their major, in addition to needing to choose several other courses in their major area specifically in the area of Computational Mathematics (among a broad choice of non-CM courses in their major). This is an appropriate balance.
- [C2] There are two exceptions to C1 that must be addressed explicitly:
  - For Data Science majors, at most five courses can have (or be cross-listed with courses having) a CS or STAT subject code.
  - For Computer Science majors, at most four courses can have (or be cross-listed with courses having) a CS subject code.

Current rules are too generous to Data Science students (who can claim the CM minor by taking as little as one elective, CS 371, that cannot be used towards their explicit major course requirement), and too restrictive for Computer Science majors compared to other programs of the Faculty (for example, Statistics majors pursuing a CM minor need, in the new rules proposed here, to take at least 3 non-STAT courses in CM in addition to explicitly choosing 4 STAT courses that are part of the CM minor).

- [C3] Add Software Engineering (SE) accepted alternatives and indicate they are restricted to SE students only:
  - SE 212 for CS 245 or PMATH 330
  - CS 247 for CS 246

D) A number of editorial changes are made to the Computational Mathematics (honours) plan to simplify the presentation, prevent student and advisor confusion, and simplify further updates.

- [D1] Add a note concerning course replacements that have enrolment restricted to Computer Science students. For those students:
  - CS 241 may be substituted for CS 230
  - CS 240 may be substituted for CS 234

The previous calendar text suggested to students to take one course from each pair.

- [D2] Remove information about prerequisites for certain courses as the information is better maintained in the course descriptions.

**Plan requirements (Honours Computational Mathematics):**

Students in this plan must fulfil all the requirements in [Table 1](#) and [Table 2](#). This must include at least 26 math courses and the following specific requirements:

One of

[MATH 237](#) Calculus 3 for Honours Mathematics  
[MATH 247](#) Calculus 3 (Advanced Level)

One of

[MATH 239](#) Introduction to Combinatorics  
[MATH 249](#) Introduction to Combinatorics (Advanced Level)

All of

[AMATH 242/CS 371](#) Introduction to Computational Mathematics

One of

[CS 230](#) Introduction to Computers and Computer Systems  
[CS 234](#) Data Types and Structures

Note: Computational Mathematics majors currently or previously enrolled as Computer Science students may substitute: [A1]

- [CS 241](#) for [CS 230](#)
- [CS 240](#) for [CS 234](#)

Two of the following foundational courses, with different subject codes (AMATH, CO, CS, PMATH) [B2]

[AMATH 250](#) Introduction to Differential Equations or [AMATH 251](#) Introduction to Differential Equations (Advanced Level) or [AMATH 350](#) Differential Equations for Business and Economics [B3]

[CO 250](#) Introduction to Optimization or [CO 255](#) Introduction to Optimization (Advanced Level)

[CS 245](#) Logic and Computation or [PMATH 330](#) Introduction to Mathematical Logic  
[CS 246](#) Object-Oriented Software Development

Two courses from the following list of core courses [B2]

[AMATH 342](#) Computational Methods for Differential Equations

[CO 367](#) Nonlinear Optimization or [CO 353](#) Computational Discrete Optimization [B3]

[CS 475](#) Computational Linear Algebra

[PMATH 370](#) Chaos and Fractals [B3]

[STAT 340](#) Stochastic Simulation Methods or [STAT 341](#) Computational Statistics and Data Analysis

Four additional courses that may include any of the courses on the core course list above [B3], or may be chosen from the following list, using at least two different subject codes (from AMATH, CO, CS, PMATH, and STAT) [A2], and at least two of which must be 400-level courses [B1]



<a href="#">AMATH 343</a> Discrete Models in Applied Mathematics	[A1]
<a href="#">AMATH 382/BIOL 382</a> Computational Modelling of Cellular Systems (see note 4)	[A2]
<a href="#">AMATH 383</a> Introduction to Mathematical Biology	[A1]
<a href="#">AMATH 391</a> From Fourier to Wavelets	[A1]
<a href="#">AMATH 442</a> Computational Methods for Partial Differential Equations	
<a href="#">AMATH 455</a> Control Theory	[A1]
<a href="#">AMATH 477</a> Stochastic Processes for Applied Mathematics	[A1]
<a href="#">CO 351</a> Network Flow Theory	
<a href="#">CO 370</a> Deterministic OR Models	
<a href="#">CO 372</a> Portfolio Optimization Models	
<a href="#">CO 452</a> Integer Programming	
<a href="#">CO 454</a> Scheduling	
<a href="#">CO 456</a> Introduction to Game Theory	
<a href="#">CO 450</a> Combinatorial Optimization	
<a href="#">CO 463</a> Convex Optimization and Analysis	[A1]
<a href="#">CO 466</a> Continuous Optimization	[A1]
<a href="#">CO 471</a> Semidefinite Optimization	[A1]
<a href="#">CO 485</a> The Mathematics of Public-Key Cryptography	
<a href="#">CO 487</a> Applied Cryptography	
<a href="#">CS 341</a> Algorithms	
<a href="#">CS 431</a> Data-Intensive Distributed Analytics or <a href="#">CS 451</a> Data-Intensive Distributed Computing	
<a href="#">CS 466</a> Algorithm Design and Analysis	
<a href="#">CS 476</a> Numerical Computation for Financial Modeling	
<a href="#">CS 479</a> Neural Networks	[A1]
<a href="#">CS 480</a> Introduction to Machine Learning	
<a href="#">CS 482</a> Computational Techniques in Biological Sequence Analysis	
<a href="#">CS 485</a> Statistical and Computational Foundations of Machine Learning	
<a href="#">CS 487</a> Introduction to Symbolic Computation	
<a href="#">STAT 440</a> Computational Inference	
<a href="#">STAT 441</a> Statistical Learning - Classification	
<a href="#">STAT 442</a> Data Visualization	
<a href="#">STAT 444</a> Statistical Learning - Function Estimation	

Three (1.5 units) non-math courses, at least one of which must be at the 200-, 300-, or 400-level, from exactly one of the following ~~departments~~ Science, Engineering or Economics subject codes: AE, BIOL, BME, CHE, CHEM, CIVE, EARTH, ECE, ECON, ENVE, GEOE, ME, MNS, MSCI, MTE, NE, PHYS, SYDE (other course concentrations may be eligible subject to approval by a Computational Mathematics advisor):

~~Economics~~  
~~any one Science department~~  
~~any one Engineering department~~ [B5]

## Notes

- ~~CS 240 requires CS 245 and CS 246 as prerequisites, CS 241 requires CS 246 as a prerequisite. CS 240 and CS 241 have restricted access for non-Computer Science majors.~~
- ~~CS 245 and CS 246 require CS 136 as a prerequisite.~~ [D2]
- ~~CS 341, CS 451, CS 466, CS 480, and CS 485 have restricted access for non-Computer Science majors.~~ are restricted to Computer Science students only. [A3]
- Students who take [CO 255](#) may take [CO 466](#) or [CO 450](#) as a core course instead of [CO 367](#) or [CO 353](#). [B4]
- Engineering courses may not be open to Mathematics students or may not easily fit schedules.
- In the "Four Additional courses" list, BIOL 382 counts as an AMATH course for the purpose of the "at least two different subject codes" rule. [A2]



**Plan requirements (Computational Mathematics Minor):**

One of

[AMATH 242/CS 371](#) Introduction to Computational Mathematics  
[CS 370](#) Numerical Computation

Three of

[AMATH 342](#) Computational Methods for Differential Equations

[CO 250](#) Introduction to Optimization or [CO 255](#) Introduction to Optimization  
(Advanced Level) [A4]

[CS 245](#) Logic and Computation or [PMATH 330](#) Introduction to Mathematical Logic  
or [SE 212](#) Logic and Computation [C3]

[CS 246](#) Object-Oriented Software Development or [CS 247](#) Software Engineering  
Principles [C3]

[CS 475](#) Computational Linear Algebra

[STAT 340](#) Stochastic Simulation Methods or [STAT 341](#) Computational Statistics and  
Data Analysis

Three additional courses from the following list, using at least two different subject codes  
(from AMATH, CO, CS, PMATH, or STAT) [B2]

[AMATH 343](#) Discrete Models in Applied Mathematics [A1]

[AMATH 382/BIOL 382](#) Computational Modelling of Cellular Systems (see note 5)  
[A2]

[AMATH 383](#) Introduction to Mathematical Biology

[AMATH 391](#) From Fourier to Wavelets [A1]

[AMATH 442](#) Computational Methods for Partial Differential Equations

[AMATH 455](#) Control Theory [A1]

[AMATH 477](#) Stochastic Processes for Applied Mathematics [A1]

[CO 351](#) Network Flow Theory

[CO 353](#) Computational Discrete Optimization

[CO 367](#) Nonlinear Optimization

[CO 370](#) Deterministic OR Models

[CO 372](#) Portfolio Optimization Models

[CO 450](#) Combinatorial Optimization

[CO 452](#) Integer Programming

[CO 454](#) Scheduling

[CO 456](#) Introduction to Game Theory

[CO 463](#) Convex Optimization and Analysis [A1]

[CO 466](#) Continuous Optimization [A1]

[CO 471](#) Semidefinite Optimization [A1]

[CO 485](#) The Mathematics of Public-Key Cryptography

[CO 487](#) Applied Cryptography

[CS 341](#) Algorithms

[CS 431](#) Data-Intensive Distributed Analytics or [CS 451](#) Data-Intensive Distributed  
Computing [A4]

[CS 466](#) Algorithm Design and Analysis

[CS 476](#) Numerical Computation for Financial Modeling

[CS 479](#) Neural Networks [A1]

[CS 480](#) Introduction to Machine Learning

CS 482 Computational Techniques in Biological Sequence Analysis  
CS 485 Statistical and Computational Foundations of Machine Learning  
CS 487 Introduction to Symbolic Computation  
PMATH 370 Chaos and Fractals  
STAT 440 Computational Inference  
STAT 441 Statistical Learning - Classification  
STAT 442 Data Visualization  
STAT 444 Statistical Learning - Function Estimation

#### Notes

1. CS 341, CS 451, CS 466, CS 480, and CS 485 ~~have restricted access for Computer Science majors~~ are restricted to Computer Science students only. [A3]
2. CS 247 and SE 212 are restricted to Software Engineering students only. [C3]
3. ~~At most three courses may also be used to satisfy an explicit choice list course requirement of the student's major.~~ [C1]
3. For Data Science majors, a maximum of five CS or STAT courses (or their cross-listing) can be used to fulfil the requirements of the Minor. [C2]
4. For Computer Science majors, ~~at most three~~ a maximum of four CS (or their cross-listing) can be used to fulfil the requirements of the Minor. ~~courses can have (or be cross-listed with courses having) a CS subject code.~~ [C2]
5. In the "Three additional courses from" list, BIOL 382 counts as an AMATH course for the purpose of the "at least two different subject codes." [A2]

/dj

David DeVidi  
Associate Vice-President, Academic

**University of Waterloo**  
**UNIVERSITY COMMITTEE ON STUDENT APPEALS (UCSA)**  
**REPORT TO SENATE**  
**17 January 2022**

**FOR INFORMATION**

In accordance with Policy 72 – Student Discipline, the UCSA is to provide an annual report to Senate on the number of student discipline cases heard at the University and Faculty levels, their nature and such recommendations as it sees fit to make with respect to matters under its jurisdiction. Provided in this report is the required information for 1 September 2020 to 31 August 2021, as well as the required information for the two years prior.

The numbers reported in the chart below include findings of guilt for graduate and undergraduate students at the University and Faculty levels.

In an attempt to preserve confidentiality, cases are not reported by Faculty, unit or program. Annual summaries (with identifying student and Faculty names removed) of discipline cases, grievances and appeals are posted to the Secretariat's website: <https://uwaterloo.ca/secretariat/committees-and-councils/university-committee-student-appeals>.

<b>DISCIPLINE OFFENCE</b>	<b>2017-2018</b>	<b>2018-2019</b>	<b>2019-2020</b>	<b>2020-2021</b>
<b>ACADEMIC</b>				
Academic or admission fraud	14	14	0	0
Altering or falsifying a relevant document	13	26	0	4
Cheating	324	544	1340	2394
Contravention of statute	0	0	0	0
Impersonation	38	25	57	14
Misrepresentation	125	92	25	226
Obtaining confidential academic materials	0	0	4	16
Plagiarism	1477	1625	1922	2198
Theft of intellectual property	53	26	98	405
Unauthorized aids or assistance	56	93	604	1482
Unauthorized co-operation or collaboration	821	1464	1366	3647
Unauthorized resubmission of work	75	49	12	19
Violation of examination regulations	40	27	159	153
Other	12	12	1	83
<b>NON-ACADEMIC</b>				
Contravention of a statute	0	0	0	0
Disruptive, dangerous, aggressive or threatening behaviour	31	21	14	7
Infringing unreasonably on the work of others	9	0	1	0
Mischief	0	1	0	0
Misuse of University resources	1	21	2	0
Theft	0	0	0	0
Unauthorized use of equipment	4	0	0	0
Unethical behaviour	61	5	0	14
Other	10	37	10	83

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## 2020-2025 Strategic Plan Thematic Spotlights on Talent

To support strategic engagement with the university's current strategic plan and opportunities for ongoing enhancement, Senators will receive presentations from senior management who are leading the planning and implementation of strategic plan initiatives. Over the course of the next three Senate meetings, these spotlights will cover our plan's three thematic areas: (1) Developing Talent for a Complex Future, (2) Strengthening Sustainable and Diverse Communities, and (3) Advancing Research for Global Impact. These presentations aim to stimulate generative discussion that can potentially catalyze new and/or refined developments into our planning, execution, and tracking and continuous improvement phases.

At this meeting of the Senate in the Winter term, our focus is on a set of key initiatives under the theme Developing Talent for a Complex Future. In Spring, members can expect to hear from management leads supporting the theme Strengthening Sustainable and Diverse Communities. In a Summer meeting, we conclude with spotlights on initiatives under Advancing Research for Global Impact. Finally, next Fall, Senators will receive an annual update on implementation progress across all goals and initiatives of the strategic plan with a focus on performance indicators, impact made, and activities forecasted for the following year.

This report compiles briefing notes on each of the strategic initiatives being spotlighted at the January 17<sup>th</sup> Senate meeting. These overviews cover rationale, objectives and desired outcomes, key approaches and activities, and planning/implementation timelines of the various initiatives featured. The Talent theme of our strategic plan is constituted by four goals, and the respective goals being addressed directly and indirectly by each initiative are indicated at the top of each brief.

In sum, the Talent goals are:

### Developing Talent for a Complex Future

- T1** Educate global citizens for the future of work and learning to thrive in an age of rapid change by putting learners at the centre of everything we do.
- T2** Enhance graduate and post-doctoral studies by emphasizing the unique attributes of the University of Waterloo and our talented and diverse graduate student community.
- T3** Continue to lead the world in co-operative education and support the workforce of the future through fully integrated academic and experiential learning opportunities.
- T4** Establish a unique Waterloo approach to support learning at various stages of individuals' professional lives.

To facilitate discussion and engagement by Senators at the meeting, we provide broad questions for consideration as you review this report. We have allotted time for a moderated discussion where you can bring your perspectives on these questions as well as questions/comments of your own at the meeting.

## Discussion questions

1. Reflecting on the goals, what are additional opportunities or pathways to enhance the design of a given initiative?
2. Reflecting on internal and external factors, what challenges do you foresee or risks we should plan for given the approaches and planning described across the initiatives?
3. Is there anything else important missing from our plans, to help ensure relevance and effectiveness?

## 1. The Future Ready Talent Framework

Directly addressing Goal **T3** | Indirectly addresses Goals **T1**, **T2**, and **T4**

### What is the Future Ready Talent Framework (FRTF)?

The FRTF is a competency framework prepared by the University of Waterloo, which outlines the skills, knowledge, and behaviours required to succeed in a course, program, role, profession, career, and life-long learning. Labour market and career/professional development experts indicate that many individuals and organizations are not clear on what skills are needed to buffer against an increasingly volatile, uncertain, complex, and ambiguous (VUCA) world. Not only is there a proliferation of artificial intelligence, automation, robots, and the “gig” economy to consider, but there are also the impacts of accelerating climate change and a wide variety of social and political movements that are certain to influence the world of work.

Our FRTF is designed to provide a language for use across the Co-operative and Experiential Education (CEE) portfolio as we support students in identifying the development of these competencies during their Work-Integrated Learning experiences. It profiles the transferable skills expected to be in demand in the emerging economy and can be used to guide students and employers in unpacking these concepts within a future-oriented context. The FRTF is shown in Table 1.

**Table 1.** The University of Waterloo’s Future Ready Talent Framework (FRTF)

<b>Expand + Transfer Expertise</b>	<b>Develop Self</b>	<b>Build Relationships</b>	<b>Design + Deliver Solutions</b>
Context & discipline-specific skills	Self-management	Communication	Innovation mindset
Information & data literacy	Self-assessment	Collaboration	Critical thinking
Technological agility	Lifelong learning & career development	Intercultural Effectiveness	Implementation



The framework has been designed through consultation and an examination of existing competency frameworks, and various national and international reports on the skills needed for success in the future. The framework has been validated with employers, both UW co-op employers and employers more broadly.

## Use of the FRTF within CEE and Across the University of Waterloo

Beginning in Fall 2020, all University of Waterloo students who are part of a co-operative education or work-integrated learning program began to see the FRTF in CEE programming. The framework was introduced in the pre-first work term courses for co-op students. It has also been incorporated into the mandatory Co-op Student Performance Evaluations. Continued work will be done on integrating the FRTF through the PD courses that co-op and EDGE<sup>1</sup> students take, the workshops and appointments offered by the Centre for Career Action, as well as other touch points that students have with CEE. To date, over 6,300 students have completed their e-check-ins where they identified which three FRTF competencies they had focused on during their work-term.

As the rollout of the framework progresses with students, it is also being shared with our employer partners. They were first exposed to it when the changes to the Co-op Student Performance Evaluation were implemented in Winter 2021. Beyond that, we envision it serving as a tool for our employer facing staff to use in their conversations with employers about their talent needs and a way to communicate those needs through job advertisements and interviews to describe both what they are looking for, and what opportunities exist within their organizations for students to develop these talents.

As a pilot within UW's Faculties, we partnered with the department of Recreation and Leisure in the Health Faculty undertaking a mapping between the FRTF and the learning outcomes listed in the syllabi of their courses. That pilot is helping us develop a process that could be used with other departments if they were interested in using the framework as a way of helping students track the development of their future ready talents in the context of their academic courses, beyond their co-op, career, and work-integrated learning experiences. This pilot is part of a larger conversation the Developing Talent Action Team<sup>2</sup> is trying to foster regarding making better use of information available in CEE to support our efforts in the evolution of academic programs. Discussions are happening, or will soon be happening, with Faculty leaders at Undergraduate and Graduate Operations Committees and with other Support Units such as the Centre for Teaching Excellence and the Quality Assurance office. These discussions will help us determine what information will be of use to those developing or revising curriculum, what form it should take, and when they need it, for it to be of most value. If we develop effective ways to

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<sup>1</sup> EDGE is UW's experiential education certificate program offered to non-co-op students by Work-Integrated Learning programs. Further information can be found at: <https://uwaterloo.ca/edge/>.

<sup>2</sup> The Developing Talent Action team is one of the action teams formulated to develop actions to forward the goals of the strategic plan. The team is comprised of David DeVidi, Associate Vice-President, Academic; Jeff Casello, Associate Vice-President, Graduate Studies and Postdoctoral Affairs; Norah McRae, Associate Provost, Co-operative and Experiential Education; Sanjeev Gill, Executive Director, WatSPEED; Cathy Newell-Kelly, Registrar; and Aldo Caputo, Director, Centre for Extended Learning.



do this, it will be one more way that Waterloo is an international leader in truly integrating co-op and work-integrated learning into the learning experiences of students.

We are also using the framework within our CEE portfolio for staff to consider our individual and collective future readiness, and to internalize the framework for our work with key stakeholder groups. We have developed an introductory training module for use across the portfolio to convey the rationale, creation, and planned use of the framework to create a shared understanding across CEE teams. The first training module was released in December 2020.

A microsite for the FRTF has been created as a main landing page for those interested in learning more, available at <https://uwaterloo.ca/future-ready-talent-framework/>.

## 2. The Teaching Innovation Incubator

Directly addressing Goal **T1** | Indirectly addresses Goal **T2**

### The Vision

The Teaching Innovation Incubator (TII) will provide the opportunity and necessary support to develop, “test drive”, and evaluate ideas that have the potential to be part of the next generation of teaching and learning at Waterloo. By doing so, the University will be able to make sound decisions about whether to scale up:

- New ways of teaching (e.g., new uses of technology)
- New types of courses and learning opportunities
- New types of programs that benefit society and motivate students to choose Waterloo
- New ways of doing things (e.g., models for interdisciplinary programs/credentials)

### The Need

- The campus community wants what the TII can provide: an incubator was the number one recommendation arising out of the Teaching and Learning consultations during the strategic planning process in 2019-20.
- Waterloo has many existing supports for incremental improvements of teaching and learning aimed at programs, instructors, and students (the Centre for Teaching Excellence, Centre for Extended Learning, Writing and Communication Centre, Library, Co-op and Experiential Education, Student Support Office, and more), but less opportunity to develop and experiment with bold ideas.
- Those with bold ideas need access to a coordinated network of professionals and professional and technical supports with whom they work together to move their idea forward to being innovative, testable pilot projects and, if successful, to implementation. The TII can provide access to expertise on an as needed basis to facilitate important steps in

this process (e.g., market feasibility studies, business plans, student recruitment plans, strategies for gaining governance approval, curriculum mapping, etc.).

## The Value

Creation of a Teaching Innovation Incubator will:

- Enhance a culture that values teaching innovation at Waterloo.
- Develop, evaluate, and amplify ideas from all the sources possible (e.g., Faculties, faculty members, students, staff). The idea is not to create a unit that does innovative thinking for the rest of us, but to create a space for innovation by us.
- Advance many strategic priorities of the University by:
  - Creating flexible new learning possibilities for students
  - Facilitating development of interdisciplinary academic programs, lifelong learning projects, etc.
  - Increasing students' agency and involvement in developing their own educational opportunities (including involving them directly in Incubator projects)

## The Concept

**The TII will serve as a hub, catalyst, and launch pad for the development of transformative teaching ideas at Waterloo. It will provide an effective and efficient method to mobilize this development and to gain information so the University can evaluate which ideas it should invest in bringing to scale.**

- A forum for networking, a place to showcase innovations, and a mechanism for publicizing good work already happening in priority areas (e.g., existing interdisciplinary opportunities).
- Collaboration spaces and access to relevant technologies to encourage experimentation when developing new types of programs and offerings or upgrading existing ones, and in the development of new teaching techniques and strategies.
- One-stop access to cross-unit teams that provide relevant expertise to support the development, test driving, and evaluation of ideas.
- A generator of coordinated activity where all can be involved in the evolution of teaching and learning: as learners during “test-drives” of new approaches, (mostly graduate) students as designers of new learning resources that capitalize on their cutting-edge knowledge, and as members of teams pursuing Incubator projects.

**Access to Incubation** will be on a competitive basis. The items on this list are to be determined in a consultative project to begin early in 2022, but the basic ideas are:

- Targeted calls for expressions of interest and appropriately designed selection procedures will ensure developments are aligned with strategic priorities while still allowing mould-breaking ideas to be pursued.

- Not all good ideas are incubator ideas. Incubator ideas are ones that require input from many sources and a primary value of the Incubator is putting together teams and work plans that allow all relevant aspects of the idea to be developed and investigated (for impact, for feasibility, for fit with other University initiatives, etc.).
- Project proposals will include an evaluation plan to determine effectiveness and transferability of innovations, and to monitor uptake of the innovations that show promise.

**The Incubator will work in both physical and virtual collaborative spaces,** including at least:

- A large workshop space that can serve multiple purposes, including:
  - A makerspace where instructors have access to materials, design processes, research, and implementation expertise to support their explorations.
  - In-person and online modes where faculty, students, and staff members meet for networking, cross-pollination of ideas, and to launch collaborative projects.
- An EdTech “sandbox” space to advance the University’s “digital transformation” of education by enabling instructors to test and learn how to use emerging technologies such as extended reality tools.

## Plans for 2022

Early in 2022, a working group will be set up to consult with the community and make recommendations to senior leadership on the details for launching the Teaching Innovation Incubator, including turning the concept sketch above into a concrete plan. The consultations, research, and writing of the report will take six to eight months.

Until the recommendations of the working group can be implemented, one or two projects per year will be launched and funded for incubation through what we can term a Beta-Incubator. This approach will allow us to familiarize the campus community with the Incubator idea, generate momentum for it, produce some important teaching and learning opportunities for students, and learn about what works well and what doesn’t in our preliminary understanding of how teaching innovation incubation will work.

For 2022, two projects will be launched through the Beta-Incubator:

- *Cross-Faculty, Graduate Student Designed Interdisciplinary Courses focused on Wicked Problems.* More information about this project is provided further in this report and through a spotlight presentation at this Senate meeting.
- The details of the second project remain a work in progress. A partnership involving, among others, the Sustainability Office and ideas about building genuine understanding of sustainability into the curriculum in many types of programs is under discussion.

### 3. Novel Interdisciplinary Courses Offered by Emerging Scholars – Graduate Studies Programming

Directly addressing Goal **T2** | Indirectly addresses Goal **T1**

The graduate studies community, led by the Faculty Associate Deans Graduate Studies and Postdoctoral Affairs (GSPA), has been working collaboratively to mobilize strategic initiatives resulting from the Developing Talent framework of the strategic plan. Our primary goal, as articulated in the strategic plan is to enhance graduate and post-doctoral studies by emphasizing the unique attributes of the University of Waterloo and our talented and diverse graduate student community.

Our interpretation of this objective is to expand and make better known the strengths and differentiators of graduate studies at the University of Waterloo. We believe these unique attributes include:

- excellence in student-centered (and often student-led) academic programming that support diverse pathways and outcomes for our students – the focus of this brief;
- unmatched opportunities to have our students' learning be integrated with and influence the activities of external partners, further catalyzing students' goals of being transformative in their research fields. The strategic initiatives being developed in this area are covered in the GradWIL brief.

Concurrently (but not addressed here), Graduate Studies is working with the Faculties to develop and implement novel, interdisciplinary collaborative graduate programs as well as new type 2<sup>3</sup> graduate diplomas that will create additional pathways for our students to be impactful in addressing society's most challenging problems, while creating communities of scholars who share common interests.

#### Novel Interdisciplinary Grad Student Designed and Led Courses Addressing “Wicked Problems”

Graduate students are engaged in scholarship and conducting research at the University of Waterloo that is advancing the understanding of and developing solutions to some of society's most challenging problems. This initiative creates opportunities to bring together those emerging scholars from across the campus who share a common interest, but who address the problem from interdisciplinary perspectives.

#### The Proposal

Under this proposal, a team (or teams) of senior PhD students from across the Faculties will propose and develop a course addressing a “wicked problem,” i.e., a problem that is not merely difficult to solve but difficult to even formulate precisely because of the variety of

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<sup>3</sup> Type 2 diplomas are complementary graduate credentials that are earned by students concurrent with their primary academic degree.

interdependent factors involved. The course(s) will be offered to senior undergraduate students from all Faculties. Thus, both the instructors and the learners will bring interdisciplinary perspectives to the course.

## Program Goals, Administration, and Impact

The goals of this program include the following:

- To facilitate the development of new course offerings for our undergraduate students delivered by leading and emerging scholars from our graduate student community;
- To create opportunities for our senior PhD students to receive training and mentorship in curriculum development (and professional development more generally) from within their academic units and from central resources;
- To foster the development of communities of scholars and learners from across the campus who share a common interest in an applied theme, but approach the problem from diverse disciplinary perspectives; and
- To generate new funding opportunities for our graduate students that directly contribute to the University's strategic goals and overall mission.

To ensure the quality and impact of these course offerings, there will be substantive, collaborative oversight over course conceptualization, selection, design, and delivery, made possible in part through the Teaching Innovation Incubator (TII).

It is envisioned that stakeholders from within the Faculties and centrally will regularly convene, generate, and update a list of potential course themes that resonate with the academic community. From this list, regular calls for proposals will be made for cross-faculty teams of PhD students whose collaborations will be coordinated with leadership from the Associate Deans and the Associate Vice-President, GSPA.

Proposals received from student teams will also be vetted by the program's administrative leads. Courses chosen to be advanced will have great depth in disciplinary expertise, with a well-articulated vision for connecting these perspectives to create interdisciplinary learning outcomes. Moreover, preference will be given to proposals that include pathways to advance meaningful community building among the instructors and potentially the learners.

Once a proposal is selected to be developed, course instructors will receive support from relevant ASUs coordinated through the TII. The Centre for Teaching Excellence, the Centre for Extended Learning, the Library, and the Writing and Communication Centre are all expected to play important roles in supporting and mentoring PhD student instructors in the appropriate delivery mechanisms considering desired learning outcomes and student engagement. Perhaps, most importantly, TII groups, instructors, and the faculty mentors will coordinate to ensure the appropriate integration of disciplinary modules and evaluative exercises such that common student learning outcomes are achieved in these interdisciplinary offerings.

The collaborative oversight of the program continues beyond the delivery of the course. Importantly, the graduate student instructors will receive feedback on course content, delivery,

and administration. The supportive teams in place will also help interpret learners' perceptions of the instructors and the course such that meaningful reflection can take place. Finally, course content can be collectively inventoried and maintained such that it may be used for subsequent academic opportunities.

Administratively, there needs to be an academic "home" for these courses. Where these courses will be mounted and matters of course naming and listing will be deliberated through the TII where this project will be incubated.

### The Timing of the Implementation

The timelines for this proposal are being finalized. We are preparing for a pilot implementation that accelerates the process by pre-selecting the course topic – climate change – and replaces the request for proposals with an active recruitment of student instructors and their mentors. We anticipate a first course offering in Fall 2022, with the more formal process in place for 2023. In steady state, the expectation is to have one or two courses offered each term.

## 4. GradWIL – Graduate Student Work-Integrated Learning

Directly addressing Goal **T2** | Indirectly addresses Goals **T1** and **T3**

The institution's strategic commitment towards developing talent for a complex future includes expanding Work-Integrated Learning (WIL) opportunities at the graduate level, which significantly supports the broader goal of enhancing graduate studies at the University of Waterloo.

### Background on Work-Integrated Learning at the Graduate Level

Experiential education, and more specifically Work-Integrated Learning (WIL), has been a core component of teaching and learning at Waterloo since its inception. At the graduate level, WIL aspects exist in some programs (e.g., through co-op, external placements [internship/practicum], capstone projects, courses, research, and entrepreneurial activities), however, these experiences are limited and lack consistency with structure and management.

There is substantial interest in growing GradWIL:

- **Programs** see value in offering more GradWIL experiences, particularly in research, but perceive barriers including administrative burden, finding external partners, mapping of student training/skills to the activity, and incorporating WIL without lengthening program time.
- **Students** are interested in experiences with external partners (NFP, Business, Government) with this interest exceeding what they are currently offered.

Though there is interest in growing GradWIL, there are operational challenges to implementation:

- lack of tracking WIL experiences within graduate programs/research activities
- lack of standardization in student status during experiences (implications for funding models/fees)
- discrepancy in student funding for external placements
- no clear path for how external partners connect with graduate programs
- lack of “templates” that define types of GradWIL or support programs in building WIL into curricula

While WIL operates as an important differentiator for UW, currently, this strength is not well articulated for the graduate community. It is difficult for programs to independently incorporate WIL experiences without the challenges being addressed in a collaborative and comprehensive fashion. Moreover, not all programs have interest or capacity in building WIL elements, thus, ‘add-on’ WIL activities that are managed centrally are needed.

### The vision for GradWIL

- All UW graduate students can participate in WIL (some with remuneration), within their programs or as an ‘add on’ activity.
- The complementary value proposition to external partners for engaging graduate students (in addition to undergraduates through co-op) is clearly articulated.
- Graduate students are well-prepared for WIL experiences via professional development activities.
- Programs have a clear understanding of models for building WIL into curricula.
- Industry/community partners have a clear pathway for connecting with programs.
- Methods are developed and implemented to quantify where and how quality graduate WIL experiences are taking place (i.e., clear, standardized metrics, learning outcomes, etc.).
- Graduate research continues to be informed by, and create solutions for, real-world problems.
- There is a growth in research funding through increased collaboration with external partners.
- UW’s strength in training through WIL activities has become part of the graduate brand, with immediate co-benefits for strategic recruitment and enrolment.

### The Proposal

The evolution of the proposal for GradWIL has been a collaborative effort between GSPA/CEE with input from Faculty leadership (i.e., Associate Deans-Grads). To overcome the challenges and achieve the vision, we propose the establishment of a multi-unit team, primarily reflecting a partnership between CEE and the GSPA. This team will develop, implement, and track GradWIL, with the **overarching goal of creating the structure that supports and catalyzes individual programs in developing their GradWIL offerings.**



## Outcomes

- **Graduate students** are provided with crucial professional development, networking, funding, and opportunities to build skills for transition to the workforce.
- **Graduate programs** can differentiate themselves from competitor programs and enhance their competitiveness in recruiting top students. GradWIL by its nature facilitates collaborations with external partners, thereby opening expanded opportunities for research.
- **The University** may achieve enhanced alignment with the province's performance outcomes-based model and stronger connections with alumni.
- **Industry/community partners** can benefit through the development of talent and meet their internal research and development objectives.

Relying on metrics such as curricular offering, student funding/outputs, research grants, enrollment data, and surveys to programs, students, applicants, and external partners, the team's focus will be in determining whether these benefits along with the articulated vision are being achieved.

## 5. WatSPEED - Becoming a Premier Provider of Learning-Integrated Work Programs

Directly addressing Goal **T4** | Indirectly addresses Goal **T1**

### OUR MISSION

Building on Waterloo strengths, we empower professionals and executives with the lifelong learning required to thrive in a complex and evolving world amidst rapid technological, environmental, economic, and social disruption, thereby future-proofing careers and creating sustainable, prosperous communities for Canadians and the world.

### OVERVIEW AND CORE PRINCIPLES

These terms of reference are intended to provide an overview of the WatSPEED intake and delivery process for non-credit offerings. The Core Principles outlined below were presented to WatSPEED by the Faculty deans. WatSPEED's operating model addresses each of these principles.

- **Opportunities should first be discussed with deans**, or their designate, at an early stage for general buy-in and identification of faculty who can be involved to develop and deliver courses.
- **Commitment to transparency, openness, and consistency** across the University related to the financial and royalty models being used to develop, staff, and deliver these courses, and to how instructors will be approached.



- Courses and activities being developed and deployed will **enhance and not diminish our reputation** and be associated with a clear value proposition for the University.
- **Academic oversight** will reside within the appropriate faculties and academic units.
- **The University's goals and objectives** — as outlined in the strategic plan and embodied in its academic mission of teaching, research, and public service — will underpin the process and intended outcomes.

WatSPEED's go-to-market strategy will focus on delivering two types of non-credit offerings:

- **B2B (Business-to-Business):** Offerings will be developed in partnership with corporations, professional associations, or government agencies with an identified target market, shared marketing, and shared risk. These custom offerings will require more work to develop but will allow Waterloo to work directly with leading organizations from various industries with little risk, as demand is validated and costs are shared.
- **B2C (Business-to-Consumer):** B2C (or open learning) offerings are created to support the learning, reskilling, and upskilling of professionals, including Waterloo alumni. These offerings are scalable, present opportunities for global reach, and allow for broader knowledge mobilization.

## WatSPEED'S OPERATING MODEL

Throughout 2020, a series of consultations were held to identify needs, concerns, and questions from a wide-ranging group of internal stakeholders. WatSPEED's operating model was developed based on the insight and feedback gathered through those consultations and will ensure that appropriate governance, oversight, and reviews exist at optimal points in the lifecycle of an opportunity.

When an opportunity for a non-credit offering comes forward, WatSPEED will follow these steps to assess the opportunity:

- WatSPEED will validate the market, business case, and alignment with University strategy.
- WatSPEED will confirm there is alignment with the Core Principles listed above and that there are no areas of conflict.
- If there is an obvious academic receptor, WatSPEED will first approach the appropriate designate within the Faculty. The opportunity will be discussed for general buy-in and to identify the appropriate faculty member(s) to be involved to develop and deliver the course.

After the assessment, WatSPEED will engage one of three business models:

### **BUSINESS MODEL 1\***

Waterloo faculty member(s) act as course authors; their efforts are considered over-load activity. WatSPEED will contract directly with the faculty members who are acting as the course authors, paying one-time fixed payments for both course development and instruction. The net income will be split evenly between the academic unit and the University. The 50% allocated to the academic unit will be distributed at the discretion of the faculty dean(s).

## **BUSINESS MODEL 2**

Waterloo faculty member(s) act as course authors; their efforts are considered load activity. In this situation, most elements described in Business Model 1 will still apply, with the following exceptions: the academic unit is responsible for costs and coordination of content, delivery, and sustainability, and WatSPEED will not provide payment for course development and instruction.

## **BUSINESS MODEL 3**

When there is no obvious academic receptor, WatSPEED, supported by the appropriate Associate Dean(s), will administer a call for interest. If an interested faculty member does not come forward, WatSPEED will seek third-party interest, including Waterloo alumni. In this situation, WatSPEED covers all costs incurred with course content development and delivery. Faculty members involved in third-party vetting or governance are compensated for their time, and 100% of the net income goes to the University. WatSPEED will engage a process for academic control and oversight from within the University community.

\*It is expected that the majority of WatSPEED programs will fall into Business Model 1.

In any scenario, the Alternative Credentials Academic Committee (ACAC) will provide an early review of opportunities. Later, the committee will review the developed course to ensure it meets the academic standards of the University.

Furthermore, in each case, WatSPEED will provide the following services:

- Market research (validate/maximize the success of the offering)
- Business development (industry partner interface, needs assessment, contracting, client management, continuous improvement)
- Systems and platforms (registration, payment, marketing systems, learning)
- Course advertising and marketing (maximize the success of the offering)
- Program/project management to create and manage the workback schedule
- Course delivery and production, including online learning consultant, instructional designer, and multi-media production (videos, professional voice-overs)

## **THE WatSPEED JOURNEY THUS FAR**

In June 2021, the Vice President, Academic and Provost announced to the internal University community the merger between Professional Development and WatSPEED. WatSPEED was officially launched externally in July 2021.

Since then, the WatSPEED team has worked closely with all six faculties to discuss and develop learning-integrated work opportunities. We received significant interest from industry, and lead Waterloo's involvement in the Palette Skills initiative to address the challenge of a pan-Canadian talent gap.

We secured engagements with three industry partners and are continuing to nurture and develop strong partnerships:

- WatSPEED's inaugural course, Predictive Analytics for CPAs, was developed in partnership with Waterloo's School of Accounting and Finance and CPA Ontario and launched in October 2021.
- We also launched a custom-designed data science program for employees of the Canadian Institute for Health Information, with the first workshop on December 6, 2021. This represents a collaboration among several academic units: Centre for Bioengineering and Biotechnology, Cheriton School of Computer Science, School of Public Health Sciences, Systems Design Engineering, and the Waterloo Artificial Intelligence Institute.
- Our next effort, in partnership with Management Sciences, is for the Ontario Society of Professional Engineers, addressing digital transformation in engineering.
- We are building on the success and learnings from these initial programs while working on several pilot programs, engaging academic partners from all faculties.

As we develop our programming, we are focusing on delivering a high-quality learner experience that lives up to the University's standards and reputation for excellence. We're continuing our market research and exploring other opportunities that would align well with our unique value proposition.

## **BENEFITS AND EXPECTED OUTCOMES FOR WATERLOO**

Our efforts to achieve the WatSPEED mission will result in many positive outcomes for the University. We are striving to enhance Waterloo's reputation for having real-world impact as we strengthen existing and attract new corporate partnerships. We will extend value to our alumni throughout their careers and develop new alumni in the process. This strengthens the Waterloo brand and reputation, delivering value beyond the new income stream that it creates.

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**To:** Senate  
**From:** Vivek Goel, President and Vice-Chancellor  
**Date:** 6 January 2022  
**RE:** Senate Governance Review Committee Terms of Reference

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At its meeting of 4 January 2022, the Senate Executive Committee considered and endorsed the attached terms of reference for the Senate Governance Review which will be undertaken by the Senate Executive Committee this year.

I look forward to discussing this activity with you at our meeting on 17 January 2022.

## **Senate Executive Committee Senate Governance Review 2022**

### **Terms of Reference**

The Senate Executive Committee will undertake a review of the governance activities of the University of Waterloo Senate and its committees and councils, and will make short- and long-term recommendations to Senate for consideration and approval. To inform its work, the committee will review academic governance and best practices at peer institutions.

### **Mandate**

The Senate Executive Committee will consider matters related to the academic governance of the University of Waterloo undertaken by Senate and its committees and councils. In particular, it will:

1. Review the practices of the Senate and its committees and councils, including without limitation: structures, terms of reference and mandates, frequency of meetings, and, will make recommendations to Senate for development and/or change where appropriate with a view to improving efficiency while maintaining transparency and accountability. The review will examine the format of meetings, including the role of virtual or hybrid meetings, as well as the use of portals or other technology to support dissemination of materials and activities such as voting.
2. Review and make recommendations regarding the content of Senate agenda materials to ensure items for discussion or decision are informed by appropriate supporting documentation.
3. Consider ways to facilitate discussion and engagement about academic issues of strategic importance at Senate, and, ways to better align Senate's annual cycle with that of the University's Board of Governors to ensure both bodies are mutually informed. With respect to the latter, consider, in consultation with the Board Governance Review Committee, and make recommendations for potential joint sessions of the Senate and Board of Governors and/or respective committees.
4. Consider and make recommendations for orientation/onboarding and ongoing support for Senators, including clarifying Senators' responsibilities.
5. Consider and make recommendations for improving communications about the role and work of Senate to the broader University community.
6. The committee will consult with Senators, Governors, and other interested stakeholders in the UW community.
7. Regularly update Senate about its activities, via reports from the President, and at the completion of its work, produce a report with recommendations for Senate's consideration and approval.

### **Term**

The committee will execute its mandate beginning January 2022 with a view to completing a final report for Senate's consideration in Spring 2022. Some recommendations may be suggested for implementation in Fall 2022, and some may be proposed for further consideration and/or implementation in the future.

### **Meetings**

The committee will add time to its regular monthly meetings to undertake the work. It may establish smaller working groups, and/or direct the secretary to investigate particular matters and suggest improvements.

# **Vice-President, Research & International Report to Senate January 2022**

## **Introduction**

This report to Senate highlights successful research outputs and outcomes for the period October - December 2021 by the thematic areas as outlined in Waterloo's Strategic Plan 2020-25.

## **ADVANCING RESEARCH FOR GLOBAL IMPACT**

### **R1 - Research strengths to solve real-world problems**

#### **Awards and Distinctions**

1. **Geoff Fong** (Psychology) – Officer of the Order of Canada – Governor General's Office.
  - Fong was named an Officer of the Order of Canada for his work examining the effectiveness of tobacco control policies of the first-ever WHO treaty, the Framework Convention on Tobacco Control, which calls upon Canada and 180 other countries to implement measures such as large graphic warnings, smoke-free laws, higher tobacco taxes, anti-smoking campaigns, and limits on advertising and packaging. Fong is being recognized for his research into improved risk messaging on tobacco products and for his role in reducing the global tobacco epidemic.
2. **Rick Haldenby** (School of Architecture) – Member of the Order of Canada – Governor General's Office.
  - Serving as Director of the School of Architecture from 1988 to 2013, Haldenby is the founder of Waterloo's highly successful Rome program. Haldenby is being recognized for his contributions to the advancement of architectural education in Canada, and for his efforts to preserve industrial and mid-century buildings.
3. **Jonathan Li** (Geography and Environmental Management/Systems Design Engineering) – 2021 winner of the Geomatica Award (Canadian Institute of Geomatics (CIG))
  - The Geomatica Award is presented by CIG to someone who has contributed to the advancement of geomatics in Canada in an exceptional manner. Li's extensive research and contributions in urban remote sensing and geospatial data science, especially in intelligent extraction of geometric and semantic information from earth observation images and LiDAR point clouds using artificial intelligence algorithms have significantly impacted the geomatics industry in Canada.

4. **Mahesh Pandey** (Civil and Environmental Engineering) – 2021 Harold A. Smith Outstanding Contribution Award (Canadian Nuclear Society and the Canadian Nuclear Association)
  - An internationally recognized researcher in the field of risk management and life cycle methods, Pandey was cited at the Canadian Nuclear Achievement Awards for significant contributions to reliability analysis and probabilistic methodologies for nuclear reactor component behaviour.
5. **Weihua Zhuang** (Electrical and Computer Engineering) - Award of Merit for 2021 by the Chinese Canadian Professionals (Ontario Education Foundation)
  - This award has been given annually by the Education Foundation since 1985 to recognize the outstanding professional achievements of distinguished Chinese Canadians. The Award of Merit is intended for and has traditionally been bestowed upon senior academics who have made significant contributions to their field of scholarly work.
6. **Lola Sheppard** (School of Architecture) - Silver in the Holcim Awards for Sustainable Construction
  - Sheppard is one of four primary authors of the proposal for an Arctic Indigenous Wellness Centre, a building described as providing cultural and health-related services to First Nations, Métis and Inuit peoples who are often forced to travel out of their communities for specialized medical-proposed cultural centre assistance.
7. **David Correa** (School of Architecture) - Small Building of the Year Award (2021) – (Deezen Awards); Top Building of the Year (Arch Daily); and Golden Trezzinni Award for Best Implemented Project of Public Building or Facility (The Plan special projects category)
  - David Correa, a design partner at architecture studio LLLab, worked with the team on a canopy and a group of pod-like pavilions mainly made of woven bamboo.
8. **Keith Hipel** (Systems Design Engineering) - Foreign Member of the Chinese Academy of Sciences
  - Elected through the Chinese Academy of Sciences, Hipel's appointment, called academician in China, is a top honour and title granted only to the nation's top scientists and engineers.
9. **Ladan Tahvildari** (Electrical and Computer Engineering) - 2021 Video of the Year (IBM Canada Advanced Studies)
  - Ladan Tahvildari, along with PhD student, Ryan Liu, and Research Associate, Mingyang Xu, have been recognized for a video outlining how to develop a graduate course on engineering adaptive software systems. Topping more than 40 other entries, the trio from the Software Technologies and Applied Research (STAR) Laboratory worked on the project, which involved the use of open-source runtime technologies, with three collaborators from IBM.



10. **Roger Melko** (Physics and Astronomy) - 2021 CAP/DCMMP Brockhouse Medal
  - Recognized for his work on the theoretical understanding of many-body quantum systems through large-scale computer simulations. The theoretical tools developed by Melko's group provide a new perspective on understanding of quantum condensed matter and have proven highly influential in areas such as quantum information, field theory, cold atomic matter, and artificial intelligence.
11. **Elizabeth English** (School of Architecture) - [Global Best Practices - Bureau International des Expositions](#) (2020 World Expo in Dubai)
  - Expo 2020 Dubai's Global Best Practices Programme highlights the Buoyant Foundation Project as it offers real solutions to communities living in flood-prone areas of Vietnam. The Foundation has developed a system to retrofit existing stilt housing to provide additional protection from higher flood waters in the Mekong River delta.
12. **Donna Strickland** (Physics and Astronomy) - [Fellow of the Hagler Institute for Advanced Study](#) - Texas A&M
  - The Hagler Institute announced its 10th class of Hagler Fellows and Professor Strickland was among the eight honourees. The list of Fellows includes scientists, engineers and scholars who are recognized internationally for their achievements.
13. **Philippe Van Cappellen** (Earth and Atmospheric Sciences) - 2021 Fellow - American Geophysical Union
  - Prof Van Cappellen was selected as an AGU Fellow in recognition of his outstanding contributions to earth and hydrologic sciences. His work embodies AGU's vision of a thriving, sustainable, and equitable future powered by discovery, innovation, and action.
14. **Pearl Sullivan - in memoriam** (Faculty of Engineering) and **Jacqueline Beckford-Henriques** (University of Waterloo Athletics) - Women's Executive Network (WXN) - Canada's Most Powerful Women - Top 100
  - WXN rankings are widely seen as a measure of exceptional impact for leadership in business, research, the arts, public administration and community advocacy. The WXN rankings designate the most powerful women in Canada, taking an unconventional approach to defining power. Whereas other rankings may understand power as a measure of wealth, status or physical strength, WXN sees power as grounded in compassion, humility and the promotion of collective wellbeing.
15. **Craig Janes** (School of Public Health Sciences) - 2021 George Foster Practicing Medical Anthropology Award - Society for Medical Anthropology
  - The career award "*recognizes those who have made significant contributions to applying theory and methods in medical anthropology, particularly in*

*diverse contexts, to multidisciplinary audiences, and with some impact on policy.”*

16. **En-Hui Yang** (Electrical and Computer Engineering) - [2021 IEEE Eric E. Sumner Award](#)
  - The IEEE Eric E. Sumner Award is an IEEE Technical Field Award and is awarded annually to an individual or team of not more than three people for outstanding contributions to communication technology. Prof. Yang, Founder, President, and CEO of BicDroid Inc., was given this award for his contributions to the theory and practice of source coding.
17. **Susan Elliott** (Geography and Environmental Management) - [Scholarly Distinction - Canadian Association of Geographers](#) (CAG)
  - The purpose of the award is to recognize a member of the CAG for outstanding scholarly work in geography either in the form of sustained contributions over a number of years or as a single major research contribution. Prof Elliott’s focus on science-policy bridging and knowledge mobilization has contributed to the relevance of geography as an avenue of inquiry in decision-making.
18. **Michelle Rutty** (Faculty of Environment) - 2021 CAG Julian Szeicz Award Early Career Geographer - Canadian Association of Geographers
  - This award is presented annually in recognition of research achievement and career potential by a Canadian geographer at an early career stage. Dr. Rutty has an established record of excellence that already has led to international recognitions and invitations, with demonstrated research impact that spans disciplines and engages academic, government, and business communities.
19. **Paul Stolee** (School of Public Health Sciences) - 2021 Canadian Association on Gerontology (CAG) Distinguished Member Award
  - As the CAG’s highest honour, the distinction recognizes members who have contributed significantly to the field of gerontology and the Association itself.
20. **John Yeow** (System Design Engineering) - 2021 IEEE NTC Distinguished Service Award - IEEE Nanotechnology Technical Council
  - The award recognizes Prof Yeow’s contributions to the council, which include serving as an editor-in-chief of IEEE Nanotechnology Magazine, which features articles on the latest nanotechnology research and developments.
21. **Carl Haas** (Civil and Environmental Engineering) - 2021 James B. Porter, Jr. Award for Technology Leadership - Construction Industry Institute (CII)
  - In recognition of his work to advance innovation in the capital projects industry, Prof Haas is described by CII as a dedicated educator and researcher who has *“pursued how technology could improve construction projects, especially in the areas of technology, automation and robotics.”*
23. **Jonathan Li** (Systems Design Engineering) and **Leo Rothenburg** (Civil and Environmental Engineering) - 2022 Engineering Institute of Canada Fellows

- Engineering Institute of Canada (EIC) Fellows are awarded by the EIC to recognize outstanding engineers for their exceptional contributions to engineering in Canada.

### Canada Research Chair

- **Karen Yeates**, Tier 2 NSERC Renewal, Chair in Combinatorics of Quantum Field Theory, Faculty of Math, Combinatorics and Optimization, \$100K/year for 5 years

### Tri-Council and Other Funding

- U.S. National Institutes of Health (NIH) awarded \$12M USD to an international collaboration led by Medical University of South Carolina where over **\$6M USD** was awarded to Waterloo to **Drs. Geoffrey Fong** (Psychology, ARTS), **David Hammond** (Health Sciences, HEALTH), **Changbao Wu** and **Mary Thompson** (Statistics & Actuarial Science, MATH) for *"Predicting and Understanding the Use of Nicotine Products In a Rapidly Evolving Nicotine Marketplace: The International Nicotine Product, Policy, and Market (INPAM) Study"*
- **William Wong** (Science, Pharmacy), CIHR Catalyst Grant: STBBI Research in Canada: Beyond HIV/AIDS and Hepatitis C: *"Estimating chronic hepatitis B prevalence and the undiagnosed proportion in Canada using health administrative data,"* \$100K over 1 year.
- Waterloo received two **CIHR Health Systems Impact Fellowships**, designed for PDFs/doctoral trainees to partner with Health agencies (private/non-profit/public sector, \$108.5K from CIHR; \$46.5K from partner for each three-year award:
  1. **Rachel Acton** (partnered with Health Canada), PDF under **David Hammond** in School of Public Health Sciences: *"Monitoring and evaluation of Canada's Healthy Eating Strategy"*
  2. **Jerrica Little** (partnered with Jack.org), PDF under **John Hirdes** in School of Public Health Sciences: *"Creating evaluation and data gathering strategies to support youth-led mental health peer education and advocacy initiatives at Jack.org"*

## R3 - Leveraging partnerships for research impact

### International Research and Partnerships

The Centre for Eye and Vision Research (CEVR) is a joint initiative between the Faculty of Science at the University of Waterloo and Hong Kong Polytechnic University. The Centre is based within the Hong Kong Science and Technology Park and is funded by

the Hong Kong InnoHK initiative with CA\$35 million in direct funding over five years, and access to an additional \$20 million in funding for research personnel.

The mission of CEVR is to prevent vision loss and restore healthy vision. To achieve this mission, CEVR supports twenty-five projects across five core research platforms:

- myopia and eye growth
- ocular drug discovery and delivery
- vision enhancement
- tear film and ocular surface and
- advanced optometric technology.

CEVR currently employs **37 postdoctoral fellows** and **research assistants** in Hong Kong, **six postdoctoral fellows** in Waterloo and involves **42 academics** across the two institutions as principal investigators.

The Centre hosts two state-of-the-art research laboratories, a **medical lab for human clinical trials** and a **wet lab for biomedical research**.

A central KPI for CEVR is to generate applied research that feeds into new start-up companies and commercial partnerships.

## **Waterloo International Agreements**

From September 16 to November 18, 2021, Waterloo International facilitated the signing of four agreements as follows:

1. University of West Indies, Student Mobility agreement
2. Beijing Institute of Technology, China, Joint Academic Agreement
3. University of Sussex, Student Mobility agreement
4. University of Science and Technology Beijing, China, Student Mobility Agreement

On November 15, 2021, Waterloo International participated in the Canadian Bureau of International Education (CBIE) 2021 conference with an e-poster presentations entitled *‘The Quick Scan: a method for efficiently evaluating international partnership and delegation requests.’*

On 29 September Waterloo International, along with Graduate Studies and Post-Doctoral Affairs, shared information with prospective Egyptian students in a session led by the Egyptian Cultural Office in Canada.

On 19 October, Waterloo International along with the Water Institute, and colleagues from Universidade de São Paulo, and Governo do Estado de São Paulo participated in a session on Advancing Water Security Through Innovation at the 2021 Conference of the Americas on International Education.

On 19 October, Waterloo International met virtually with Deputy Vice-Chancellor and colleagues from the University of Peradeniy, Sri Lanka, to discuss experiences around international agreements.

To advance international relations with partner institutions and governments, between 16 September and 18 November 2021, Waterloo International hosted several in person delegations as follows:

- On September 24th, Waterloo International welcomed the Consul General of India, Smt. Apoorva Srivastava. Smt. Apoorva Srivastava met bilaterally with President Goel, toured the Waterloo institute for Nanotechnology and met with Waterloo Faculty members staff and students. See <https://uwaterloo.ca/international/news/consul-general-india-visits-university-waterloo> for more details.
- On 6 October, Waterloo International hosted the British High commissioner HE Susanna Goshko and her team. HE Goshko met with President Goel, WISE, IC3 and toured IQC. She also engaged in meetings with various staff and faculty members. See <https://uwaterloo.ca/international/news/british-high-commissioner-visits-waterloo> for more details.

## **Gateway for Enterprises to discover Innovation (GEDI)**

### **BlackBerry**

The Cybersecurity and Privacy Institute (CPI) has awarded two **\$5000 graduate student scholarships** to **Siddharth Priya and Mahbod Majid** to support these exemplary graduate students and reward the excellence.