

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

**Date:** Monday 17 May 2021

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

**Place:** Teams Videoconference

	<b>OPEN SESSION</b>	<b>Action</b>
3:30	<p><b><u>Consent Agenda</u></b>  <b>Motion:</b> To approve or receive for information by consent items 1-6 below.</p> <ol style="list-style-type: none"> <li>1. Minutes of the 19 April 2021 Meeting</li> <li>2. Reports from Committees and Councils               <ol style="list-style-type: none"> <li>a. Graduate &amp; Research Council*</li> <li>b. Undergraduate Council</li> </ol> </li> <li>3. Report of the President               <ol style="list-style-type: none"> <li>a. Recognition and Commendation</li> </ol> </li> <li>4. Report of the Vice-President, Academic &amp; Provost               <ol style="list-style-type: none"> <li>a. University Research Chairs</li> </ol> </li> <li>5. Reports from the Faculties</li> <li>6. Committee Appointments*</li> </ol> <p><b><u>Regular Agenda</u></b></p>	<p>Decision</p> <p>Information Decision/Information</p> <p>Information</p> <p>Information</p> <p>Information</p> <p>Decision</p>
3:35	7. Business Arising from the Minutes	
3:40	8. Reports from Committees and Councils	Decision
3:50	<ol style="list-style-type: none"> <li>a. Graduate &amp; Research Council*</li> <li>b. Undergraduate Council</li> </ol>	Decision
4:00	9. Report of the President	Information
4:10	10. Q&A Period with the President	Information
4:20	11. Report of the Vice-President, Academic & Provost <ol style="list-style-type: none"> <li>a. Roster of Graduands</li> </ol>	Decision
4:25	12. Report of the Vice-President, Research & International	Information
4:30	13. Other Business	
	<b>CONFIDENTIAL SESSION</b>	
4:40	14. Minutes of the 19 April 2021 Meeting	Decision
4:45	15. Business Arising from the Minutes	
4:50	16. Report of the President	Information
5:00	17. Other Business	

10 May 2021

KJJ/ees

\*to be distributed

Karen Jack  
University Secretary  
Secretary to Senate

**University of Waterloo**  
**SENATE**  
**Minutes of the Monday 19 April 2021 Meeting**

**Present:** Sheila Ager, Sandra Banks, Lisa Bauer-Leahy, Kankar Bhattacharya, David Billedeau, Anne Bordeleau, Dan Brown, Carmen Bruni, Kofi Campbell, Jeff Casello, Robyn Clarke, David Clausi, Joan Coutu, Neil Craik, Eric Croiset, Lori Curtis, Peter Deadman, Charmaine Dean, David DeVidi, Catherine Dong, Fraser Easton, Aiman Fatima, Paul Fieguth, Wendy Fletcher, Cindy Forbes, George Freeman, Martha George, Mark Giesbrecht, Robert Gorbet, Julia Goyal, Kelly Grindrod, David Ha, John Haddock, Feridun Hamdullahpur (chair), Dennis Huber, Natalie Hutchings, Martin Karsten, Achim Kempf, Sabrina Khandakar, Veronica Kitchen, Karen Jack (secretary), Brendan Larson (for Jean Andrey), Christiane Lemieux, Robert Lemieux, Lili Liu, Kesen Ma, Blake Madill, Peter Meehan, Ian Milligan, Zoran Miskovic, Barb Moffatt, Graham Murphy, Richard Myers, Beth Namachchivaya, Cathy Newell Kelly, Erin O'Connell, Daniel O'Connor, Troy Osborne, David Perrin, William Power, Neil Randall, Samuel Rubin, James Rush, Max Salman, Emma Schuster, Marcus Shantz, Joanne Shoveller, Abbie Simpson, Sivabal Sivaloganathan, Siva Sivoththaman, Richard Staines, Bruno Tremblay, Sharon Tucker, Twesh Upadhyaya, Cristina Vanin, Johanna Wandel, Paul Ward, Mary Wells, Stan Woo, Nancy Worth, Clarence Woudsma, En-Hui Yang, Samer Zu'Mot

**Guests:** Agata Antkiewicz, Veronica Austen, Jean Becker, Kathy Becker, Bruce Campbell, Aldo Caputo, Benjamin Easton, Donna Ellis, Barbara Forrest, Andrea Kelman, Meagan Lai, Nick Manning, Norah McRae, Graham Murphy, Mohammed Nasser, Alice Raynard, Chris Read, Ian Rowlands, Emily Schroeder, Gerry Schneider, Daniela Sesar-Hencic, Allan Starr, Kerry Stryker, Brandon Sweet, Sean Thomas, Marilyn Thompson, Chris Wilson-Smith, Kate Windsor, Kathy Winter

**Absent:** Jean Andrey\*, Mike Ashmore, Dominic Barton, Michael Beauchemin\*, Jennifer Kieffer, Ellen MacEachen, Sara Marsh\*, Teferi Mergo\*, Samantha Meyer\*

\*regrets

**OPEN SESSION**

**CHAIR'S REMARKS**

The chair thanked departing members for their service: Kankar Bhattacharya, Kofi Campbell, David Clausi, Eric Croiset, Peter Deadman, Fraser Easton, Aiman Fatima, Rob Gorbet, Julia Goyal, John Haddock, Sabrina Khandakar, Kesen Ma, Sara Marsh, Teferi Mergo, Barb Moffatt, David Perrin, Sam Rubin, Abbie Simpson, and Richard Staines. A round of applause followed.

With regard to the agenda, the chair reminded senators of new item 18 in confidential session, Report of the Nominating Committee for Honorary Degrees, and the report that was emailed to senators earlier in the day.

**Consent Agenda**

Senate heard a motion to approve or receive for information the items on the consent agenda.

George and Milligan.

**1. MINUTES OF THE 22 MARCH 2021 MEETING**

Senate approved the minutes of the meeting.

**2. REPORTS FROM COMMITTEES AND COUNCILS**

**Graduate & Research Council.** Senate received the report for information.

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3. **REPORT OF THE PRESIDENT**

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

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

**University Professor Designation.** Senate received the report for information.

5. **REPORTS FROM THE FACULTIES**

Senate received the reports for information.

The question was called and the motion carried unanimously.

**Regular Agenda**

6. **BUSINESS ARISING FROM THE MINUTES**

There was no business arising from the minutes.

7. **WATERLOO UNDERGRADUATE STUDENT ASSOCIATION EXCELLENCE IN UNDERGRADUATE TEACHING AWARD**

At the chair's invitation, Abbie Simpson, WUSA president, acknowledged the winners of the WUSA Excellence in Undergraduate Teaching Awards, and a round of applause followed:

- Veronica Austen, 2019 Teaching Year (English Language and Literature/ St. Jerome's University)
- Zack Cramer, 2020 Teaching Year (Mathematics Undergraduate Office)
- Mark Dolson, 2020 Teaching Year (School of Public Health Sciences/Anthropology)
- Mohammed Nasser, 2019 Teaching Year (Electrical and Computer Engineering)

8. **PRESENTATIONS**

**David Billedeau, Graduate Student Association President.** Billedeau provided senators with an update on the Graduate Student Association. He spoke to his presentation, highlighting: key accomplishments over 2020-21, key issues having an impact on the graduate student experience, observations about what lies ahead.

**Abbie Simpson, WUSA President.** Simpson highlighted: WUSA's role, key initiatives like the universal bus pass, entertainment through clubs and events, advocacy activities (particularly over the last year), key concerns for students in the coming months and years. Simpson closed with announcing WUSA's Leadership Award winners and offered thanks to critical WUSA staff.

Following their remarks, the president expressed thanks from Senate for their efforts on behalf of students and for their adept management of key responsibilities over the past challenging year. A round of applause followed.

9. **REPORTS FROM COMMITTEES AND COUNCILS**

**Executive Committee.** Senate heard that the deans, the chair of the heads of the affiliated and federated institutions of Waterloo, and the presidents of the Waterloo Undergraduate Student Association and Graduate Student Association have recommended names of nominees as provided on the list of nominees.

Senate heard a motion to acclaim the membership of Senate committees and councils and the Board of Governors as provided on the list of nominees.

The chair asked for further nominations from the floor. No nominations were received.

The chair notified senators that there would be an electronic election subsequent to the meeting for positions with more recommendations than required: graduate student representatives on the Board of Governors, and faculty representatives on the Board of Governors.

Casello and Staines. Carried unanimously.

Senate heard a motion to delegate approval to the Executive Committee any vacancies which exist.

O'Connor and Casello. Carried unanimously.

**Graduate & Research Council.** Senate heard the following motions:

**New Program, Faculty of Engineering**

Senate heard a motion to approve a new GDip in Data Analytics (Direct Entry) in Management Sciences, effective 1 September 2021, as presented at Attachment 1.

Casello and Freeman. Carried unanimously.

**Program Changes, Faculty of Environment**

Senate heard a motion to approve additions to the Master of Arts (MA) and Master of Environmental Studies (MES) in planning, effective 1 May 2021, as presented at Attachment 2.

Casello and Larson. Carried unanimously.

**University Appointments Review Committee.** Senate received the report for information.

Gerry Schneider, chair of the committee, spoke to his presentation, highlighting data about the proposals reviewed by the committee in 2019-20; he then responded to some questions about trends.

**10. REPORT OF THE PRESIDENT**

The president provided an overview of recent activities, issues, and priorities, including: an update on ongoing safety measures; recent provincial announcements, and how we are complying with regulations; the federal budget. With respect to the last matter, the president invited Kate Windsor, director of the Safety Office to provide an update on the pandemic response. In discussion: there were no changes to research activity with the recent provincial lock-down due to robust safety plans already in place; rules are in place and are being followed very well to ensure critical activities continue to operate; work continues in the Faculties with respect to spring and fall term offerings; ensuring good communication is top of mind.

In further discussion: expressions both of concern and optimism about the potential conditions in the fall; agreement that safety is paramount; advice that the University consults with experts and follows public health guidance; that facilitation of as much in-person teaching and research activity as is safe is being worked on; the ways in-person activities will occur as we transition out of the pandemic will not be homogeneous; key details are being worked on by the Faculties.

The president invited Kelly Grindrod, associate professor in the School of Pharmacy and Ontario College of Pharmacists Professor in Pharmacy Innovation to provide an update on the School of Pharmacy vaccination clinic. In discussion: details about the clinic's operation; some observations about vaccines and their rollout; some considerations for the fall and beyond. Senators heard that a Town Hall regarding the Fall Term will be held in May.

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

The provost acknowledged the 2021 University Chair recipients as mentioned in his consent report:

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Jennifer Clapp (School of Environment, Resources and Sustainability) and Weihua Zhang (electrical and computer engineering).

**12. REPORT OF THE VICE-PRESIDENT, RESEARCH & INTERNATIONAL**

Senate received the report for information and Dean provided senators with a brief update on the President's Anti-Racism Taskforce (PART).

**13. OTHER BUSINESS**

There was no other business.

Senate convened in confidential session.

29 April 2021

Karen Jack  
University Secretary

**CONFIDENTIAL SESSION**

The confidential minutes have been removed.

**University of Waterloo**  
**SENATE UNDERGRADUATE COUNCIL**  
**Report to Senate**  
**17 May 2021**

Senate Undergraduate Council met on 13 April 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 APPROVAL**

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**REGULATION CHANGES**

**Faculty of Arts**  
**Mutually Exclusive Plans**

1. **Motion:** That Senate approve the following proposed revision to regulations governing the combination of Liberal Studies with other majors, effective 1 September 2022.

**Background and Rationale:** The purpose of the proposed change is to clarify that Liberal Studies cannot be combined with any other Arts major, which would mean that it can be combined with majors in other faculties. When Honours Liberal Studies was first approved by SUC in April 2018, the rationale specified that it could not be combined as a Double Major within Arts. When the Restrictions on Multiple-Plan Combinations list was updated at the October 2018 SUC meeting, the word “Arts” was omitted from the plan list and from the rationale in error, on the assumption that “any stand-alone major” referred to Arts majors, as previously understood. However this intent is not clear in the Undergraduate Calendar, and the current wording prohibits Honours Liberal Studies from being combined with any major in any other faculty. In order to address this issue, we are adding “Arts” to clarify the original intent for Liberal Studies not to be combined with any other Arts major. Current calendar text: <https://ugradcalendar.uwaterloo.ca/page/ARTS-Restrictions-on-Multiple-Plan-Combinations>

Proposed change: In the table of invalid multiple-plan combinations, add “Arts” in the following row of the table as indicated in bolded, highlighted text.

Liberal Studies	Any other stand-alone Arts major
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**Faculty of Arts**  
**Categorization of Liberal Studies as a Major**

2. **Motion:** That Senate approve the following proposed categorization of Liberal Studies for the purposes of academic rules and regulations in the undergraduate calendar, effective 1 September 2022.

**Background and Rationale:** The Faculty of Arts proposes that Liberal Studies be referred to as a ‘major’ for functional purposes. The result of this reclassification is that all references to “majors” in the Undergraduate Calendar would include Liberal Studies wherever the same academic rules and regulations apply to both disciplinary majors and students in Liberal Studies

plans.

Although Liberal Studies is not considered a ‘major’ meaning within a particular discipline or area of study, it does function as a major in several ways. Similar to a major, it is the main academic plan noted on a student’s transcript (Plan10), and has a plan average and plan requirements.

The current undergraduate calendar language is convoluted for students because in every rule that refers to majors, a similar provision or exception for Liberal Studies must also be noted.

This issue would be largely resolved by referring to Liberal Studies as a ‘major’ for functional purposes, and simply noting exceptions (e.g. that Arts students can pursue Double Majors in other instances, but cannot combine an Arts major with Liberal Studies.)

There are no anticipated resource challenges associated with calling Liberal Studies a major. Honours Liberal Studies has been offered since Fall 2019, and thus far there has been no significant impact on students’ desire to pursue other disciplinary majors.

### Faculty of Arts Updates to the Transdisciplinary Studies List

3. **Motion:** That Senate approve the following updates to the transdisciplinary studies list, effective 1 September 2022.

#### Background and Rationale:

INDENT (Indigenous Entrepreneurship) and SFM (Sustainability and Financial Management) subject codes have been created for corresponding new sets of courses, and are fitting additions to the Transdisciplinary Studies section of the BA Breadth Requirements.

Current calendar text: <https://ugradcalendar.uwaterloo.ca/page/ARTS-BA-Breadth-Requirements>

Proposed calendar text: (bold = new; strikethrough = deleted)

#### Bachelor of Arts Breadth Requirements

All Bachelor of Arts (BA) students must meet the BA Breadth Requirements:

Requirement	Units	Subject Codes
Fine, Performing, and Communication Arts	0.5 unit	DAC, FINE, MUSIC, SPCOM, THPERF, VCULT
Humanities	1.0 unit	CLAS, ENGL, HIST, MEDVL, PHIL, RS
Languages and Cultures	1.0 unit	ARABIC, ASL, CHINA, CI, CROAT, DUTCH, EASIA, FR, GER, GRK, ITAL, ITALST, JAPAN, JS, KOREA, LAT, MOHAWK, PORT, REES, RUSS, SI, SPAN. See Note 4 below.
Social Sciences	2.0 units	ANTH, ECON, PSCI, PSYCH, SDS, SOC. See Note 2 below.



Transdisciplinary Studies	0.5 unit	AFM, APPLS, ARBUS, ARTS, BUS, CDNST, CMW, GBDA, GSJ, HRM, HRTS, HUMSC, INDG, <b>INDENT</b> , INTST, LS, MENN, MGMT, PACS, <b>SFM</b> , SMF, SOCWK. Also any course taken in another University of Waterloo faculty. See Notes 1 and 5 below.
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#### Notes

1. The Arts Undergraduate Communication Requirement courses (ARTS 130 and ARTS 140) do not fulfil any of the breadth requirements.
2. No more than one academic course unit (two courses) in the same discipline may count towards the Social Sciences requirement.
3. Cross-listed courses may be designated to fulfil any **one** requirement. For example, a student registered in PACS 203/HIST 232 may receive credit for **either** the Transdisciplinary Studies requirement **or** the Humanities requirement, but not for both.
4. Language courses accepted as transfer credits (e.g., LANG) may be counted towards the Languages and Cultures requirement.
5. Because Professional Development (PD) and Work-Term Report (WKRPT) courses are not regular academic courses, they do not fulfil any of the breadth requirements.
6. For students enrolled in an Arts degree program prior to September 2008, refer to the [Group A and B requirements](#). Those students who wish instead to adhere to the new Breadth Requirements (effective September 2008) may do so by petition to the Examinations and Standings Committee.

#### Faculty of Arts Co-op Sequence

4. **Motion:** That Senate approve the following changes to the co-op sequence for honours economics and honours mathematical economics, effective 1 September 2022.

#### Background and Rationale:

The proposed change would move Economics and Honours Mathematical Economics students to the same co-op sequence as Arts and Business, instead of the Honours Arts Co-op sequence.

Current calendar text: <https://ugradcalendar.uwaterloo.ca/page/ARTS-BA-Co-op-Requirements>

Proposed calendar text: (bold=new; strikethrough=deleted)  
Study/ Work Sequence Information Chart

Plan	F	W	S	F	W	S	F	W	S	F	W	S	F	W
Arts and Business	1A	1B	off	2A	WT	2B	WT	3A	WT	3B	WT	WT	4A	4B
Honours Arts co-op plans (excluding majors in <b>Economics</b> , <b>Mathematical Economics</b> , English, Fine Arts)	1A	1B	off	2A	2B	WT	3A	WT	3B	WT	4A	WT	WT	4B
Honours Arts co-op plans, majors in <b>Economics</b> , <b>Mathematical Economics</b> , English, Fine Arts	1A	1B	off	2A	WT	2B	WT	3A	WT	3B	WT	WT	4A	4B

Starting in the 2021-22 academic year, second year students majoring in economics, but not Arts & Business (ARBUS), will have to transfer to the Honours Arts Co-op (HAC) sequence. Our students are currently following the ARBUS sequence.

Table 1 shows the proportion of students economics shares with ARBUS, as well as how many are co-op vs regular by major (economics vs math econ). The numbers for the Fall 2019 term are for context: due to the option of changing grades to CR/NCR at the end of the Winter 2020 term, we have more students who qualified to declare an economics major and/or co-op and/or who remained in ARBUS & ECON. The effect isn't as striking for mathematical economics, likely because it is an honours-only program by default and therefore, less affected by the events of the Winter 2020 term.

The effect of our students following the HAC sequence is shown in Table 2. Changing sequences means that students who are either in mathematical economics or completing the intensive specialization will have to forego their fifth work term (WT5 in the table on the last page), despite having paid the full co-op program cost (over six academic terms), in order to take ECON 491. ECON 491 and 496 are required for the intensive specialization and for the mathematical economics major. As these two courses are amongst the harder 4<sup>th</sup> year elective courses we offer, it is in the students' best interests to offer them in different terms; i.e., offering them both in the Winter (4B) term would not be ideal. Given the ongoing budget constraints, and that we typically do not fill all 50 seats in these courses when they are offered, it makes little sense to multiply offerings. If economics and mathematical economics students were able to remain on the ARBUS sequence, it would resolve the issue: as demonstrated in Table 2, Mathematical economics, honours economics and students in both programs without coop would all be scheduled to take ECON 491 and ECON 496 in the same terms.

Advising-wise, it would make more sense to have all students on the ARBUS sequence rather than only the math econ majors and the intensive specialization students. Moreover, students do not have to declare the intensive specialization to take ECON 491 and/or ECON 496; they can choose to take one (or both) without taking the rest of the requirements of the intensive specialization to prepare themselves for graduate studies. Many students only declare the intensive specialization in their 4A or 4B term.

The motion that was presented and unanimously adopted at the September Economics Departmental meeting was: "All students majoring in Economics or in Mathematical Economics, who are in co-op, will follow the ARBUS co-op sequence."

**Table 1:** Number of students affected by major

	W20	S20	F20	F19
Honours ARBUS ECON co-op	194	165	283	208
Honours ARBUS Econ no co-op	29	21	27	30
Math ECON co-op	27	25	33	27
Math ECON no co-op	37	25	35	38
Honours Econ co-op (no ARBUS)	99	91	105	86
Honours ECON no co-op	97	73	93	86
4 year general	75	65	64	79
Intensive spec (some may be co-op &/or ARBUS)	2	3	5	3

joint ECON & other major	5	5	5	2
old 3 yr gen	3	0	2	3
old 4 yr gen	4	1	2	4
Total	572	474	654	566
% co-op total	72.9	74.7	78.6	71.9
% ARBUS amongst ECON co-op	60.6	58.7	67.2	64.8

N.B.: Numbers were collected mid-September 2020

**Table 2:** Co-op Sequence by major of a student starting their program in the fall of year 0 (for a co-op student) and in the fall of year 1 (no co-op)

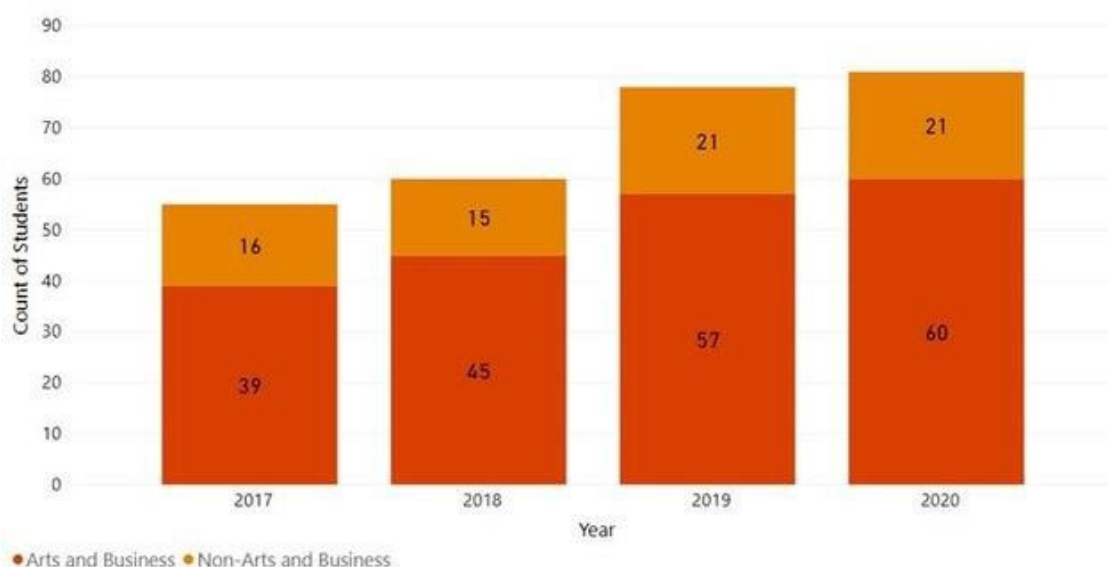
Year and term	ARBUS	HAC	Math Econ no co-op	Honours ECON no co-op	Math ECON co-op on HAC	Math ECON co-op on ARBUS	Honours ECON Co-op (HAC)	Honours ECON Co-op (ARBUS)
F00	1A	1A			MATH 127, ECON 101 (1A)	MATH 127, ECON 101 (1A)	ECON 101 (1A)	ECON 101 (1A)
W01	1B	1B			MATH 128, ECON 102 (1B)	MATH 128, ECON 102 (1B)	ECON 102 (1B)	ECON 102 (1B)
S01	Off	Off			Off	Off	Off	Off
F01	2A	2A	MATH 127, ECON 101 (1A)	ECON 101 (1A)	STAT 220 (2A)	STAT 220 (2A)	ECON 211, ECON 221 (2A)	ECON 211, ECON 221 (2A)
W02	WT1	2B	MATH 128, ECON 102 (1B)	ECON 102 (1B)	ECON 290 (2B)	WT1	ECON 290, ECON 322 (2B)	WT1
S02	2B	WT1	Off	Off	WT1	ECON 290 (2B)	WT1	ECON 290, ECON 322 (2B)
F02	WT2	3A	STAT 220 (2A)	ECON 211, ECON 221 (2A)	ECON 391 (3A)		ECON 391 (3A)	WT2
W03	3A	WT2	ECON 290 (2B)	ECON 290, ECON 322		ECON 391		ECON 391 (3A)

				(2B)		(3A)		
S03	WT3	3B	Off	off	ECON 393, ECON 306 (3B)	WT3	ECON 393, ECON 306 (3B)	WT3
F03	3B	WT3	ECON 391 (3A)	ECON 391, ECON 323 (3A)	WT3	ECON 393, ECON 306 (3B)	WT3	ECON 393, ECON 306 (3B)
W04	WT4	4A	ECON 393, ECON 306 (3B)	ECON 393, ECON 306 (3B)	<b>ECON 491 (4A), electives</b>	WT4	<b>ECON 40X (4A), electives</b>	WT4
S04	WT5	WT4	Off	off	WT4	WT5	WT4	WT5
F04	4A	WT5	<b>ECON 491 (4A)</b>	<b>ECON 40X (4A), electives</b>	WT5	<b>ECON 491 (4A)</b>	WT5	<b>ECON 40X (4A), electives</b>
W05	4B	4B	<b>ECON 496 (4B)</b>	<b>electives (4B)</b>	<b>ECON 496 (4B)</b>	<b>ECON 496 (4B)</b>	<b>electives (4B)</b>	<b>electives (4B)</b>

### First work term historical data - Economics

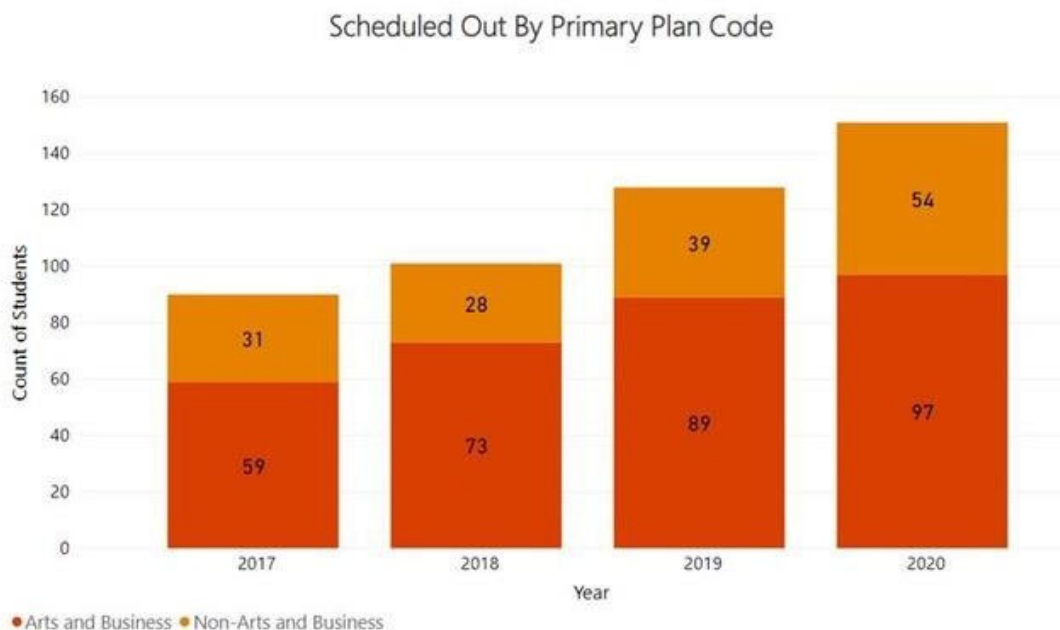
*This graph shows that there are relatively few ECON only students (Economics students who are not in Arts & Business: these could be Honours Economics or Honours Mathematical Economics) looking for a first work placement. In all four years, there were 21 students or fewer who would have been on the HAC sequence, who would now be on the ARBUS sequence and looking for employment in the Winter term rather than the Spring term for their first work term. Comparatively, there were between 39 and 60 students in ARBUS/ECON in those for years.*

Scheduled Out By Primary Plan Code



### All work terms historical data – Economics

*This graph shows that when looking at all cohorts together, we have comparatively more coop students who opt out of ARBUS (or fail out) and become ECON only students when comparing these numbers to first work term data. That being said, the*



### Registrar's Office Awards of Excellence

5. **Motion:** That Senate approve the following revisions to the term distinction awards of excellence, retroactive to 1 September 2020.

**Background and rationale:** The original Term Distinction awards of excellence were approved by Senate in January 2020 for September 1, 2020. During the first implementation of the new rules for the fall 2020 term, it was discovered that an additional positive academic standing – Eligible – is used by the Faculty of Health and was overlooked during the original motion. Students receiving this academic standing should also be awarded the Term Distinction award. This motion will rectify this oversight.

Current Calendar Text: <https://ugradcalendar.uwaterloo.ca/page/Acad-Regs-Awards-of-Excellence>

Proposed Calendar Text (bold=new; strikethrough = deleted)

#### Term Distinction

A student is eligible to receive “Term Distinction” based on their average in all courses taken during a term while in a degree-granting program. In order to receive “Term Distinction”, the following must be true:

- The term must have at least one alpha/numeric grade in the average.
- A minimum term average of 80.0% must be achieved.
- An academic standing for the term of Promoted, **Eligible**, Satisfactory, Good, or Excellent.

- The term cannot have an INC, IP, MM, or UR. When these grades are resolved to alpha/numeric grades, the term's average will be reviewed for eligibility.

Notes

1. Students may be deemed ineligible at the discretion of the associate dean, undergraduate studies.
2. Students in Optometry and Pharmacy who are taking less than a full course load due to failure will be ineligible for "Term Distinction" in reduced-load terms.

**FOR INFORMATION**

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**ACADEMIC PROGRAM REVIEWS**

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

**Final Assessment Report – Sexuality, Marriage & Family.** 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 faculties of arts (accounting and financial management, French studies); engineering (architectural engineering, chemical engineering, mechanical engineering, mechatronics engineering, life sciences option, biomechanics option, mechatronics option); and science (chemistry minor, doctor of pharmacy).
- new courses for the faculties of arts (Canadian studies, dean of arts, political science, sustainability and financial management); engineering (architectural engineering, mechanical engineering, mechatronics engineering); and environment (geography & environmental management).
- course changes for the faculties of arts (accounting and financial management, applied language studies, Canadian studies, communication arts, East Asian studies, English language and literature, cultural identities/Spanish and Latin American Studies, gender and social justice, history, Italian studies, political science, religious studies, social work, social development studies, sociology and legal studies, Spanish and Latin American studies, studies in Islam); engineering (civil engineering, mechanical engineering, systems design engineering); environment (dean of environment, School of Environment, Enterprise & Development); and science (biology).
- course inactivations for the faculties of arts (political science, religious studies); engineering (mechanical engineering); and environment (School of Environment, Resources & Sustainability).

/rmw

David DeVidi  
Associate Vice-President, Academic



# Final Assessment Report

## Liberal Studies (BA)

### February 2020

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#### Executive Summary

External reviewers found that the Liberal Studies (BA) delivered by the Faculty of Arts is in good standing:

Liberal Studies at the University of Waterloo is an unconventional program insofar as its primary purpose is to facilitate internal transfers from one program to another or the completion of a degree begun elsewhere. It also allows students who have taken various unrelated courses online and/or on campus to complete a degree outside the parameters of a disciplinary major. As such, the program has two main strengths: a) its great flexibility, which lets students with eclectic interests (the so-called "renaissance" students) create their own custom-made program; b) and its administrative function as a "place holder", giving students with a low GPA or temporary academic challenges the opportunity to remain registered in a major (or, as of September 2019, an honours) program while seeking to increase their grades and "shadowing" a conventional program of their choice in which they hope to (re)gain good standing.

A total of five recommendations, all of which are aimed at fostering community in the program, were provided by reviewers. In response, the program created a plan outlining specific actions 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 (All Years)<sup>1</sup>

	Three-Year General	Four-Year General	Honours	Co-op (through Arts and Business)
Fall 2019	188	381	75	42
Fall 2018	198	431	<i>Honours Liberal Studies became effective Fall 2019, which gave students access to co-op through Arts and Business.</i>	
Fall 2017	220	471		

<sup>1</sup>based on Active Students Extract accessed from Quest December 19, 2019



## 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 Liberal Studies (BA) program. A self-study (Volume I, II, III) was submitted to the Associate Vice-President, Academic on August 31, 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).

From Volume III, two arm's-length external reviewers were selected by the Associate Vice-President, Academic: Dr. John-Justin McMurtry, Professor and Vice-Dean of Liberal Arts and Professional Studies, York University, and Dr. André Loiselle, Professor and Dean of Humanities, St. Thomas University.

Reviewers appraised the self-study documentation and conducted a site visit to the University on March 28-29, 2019. An internal reviewer from the University of Waterloo, Dr. Maren Oelbermann, Professor of Environment, Resources and Sustainability, was selected to accompany the external reviewers. The visit included interviews with the Associate Vice-President, Academic; Dean of the Faculty of Arts; Associate Deans of Arts; as well as meetings with faculty members, staff and current students. The Review Team also had an opportunity to tour the facilities and meet with representatives from the Library and Student Success Office.

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 program response and implementation plan were endorsed by the Dean of Arts on December 10, 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

The Liberal Studies BA provides a framework within which students take courses and receive support for their wide-ranging educational goals and aspirations in the Faculty of Arts at the University of Waterloo. Those goals include successfully transitioning from one program to another, completing a degree begun elsewhere, pursuing a degree online or part-time, and receiving an education that has the diversity and richness of a traditional liberal arts degree. At the time of review, Liberal Studies was available as a [Three-Year General Degree](#), and a [Four-Year General Degree](#). In September 2019, the [Honours Liberal Studies](#) program was introduced.





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

### Strengths

- Flexibility, as exemplified by the range of students and the diversity of their ambitions;
- The range of disciplinary options, especially since minors are now allowed;
- The functionality of the plans, in that they allow for transition from one academic home to another, for recovery for students who have struggled, and for online and part-time study.

### Challenges

- The diversity of ambitions of Liberal Studies students, which means that there is little sense of community within the plans for those students;
- The ambiguous nature of the program, in which a poor retention rate is a positive attribute;
- The relationship of the program to the identity of the University of Waterloo, which is known for demanding academic programming, experiential learning, and entrepreneurship.

### Weaknesses

- The limited opportunities for experiential learning, although the EDGE Certificate, Honours Liberal Studies, and Honours Arts Co-op will improve student access to experiential education;
- The lack of an Honours plan, which has been rectified by the introduction of Honours Liberal Studies in 2019;
- The lack of community support for career-planning, cohort-building, and networking for students who spend more than two terms and/or graduate in Liberal Studies.

## Summary of Key Findings from the External Reviewers

Reviewers indicated that Liberal Studies is an atypical degree program which primarily caters to internal transfer students. Its strengths are the flexibility it affords to students by allowing them to engage in a variety of academic interests; and it provides a means for students to retain their enrolment while working on their grades and determining their academic path.

On the other hand, reviewers saw the following weaknesses: “1) most importantly, the lack of defined learning outcomes, as students in Liberal Studies can take a wide range of disparate courses that do not necessarily coalesce into a coherent set of competencies; 2) the absence of a sense of cohort among students as they each pursue their own path and often remain in the program only for two or three terms before transitioning into a disciplinary major or honours; 3)



and incomplete data on the specific trajectory of individuals who meander in and out of the program or, more importantly, those who graduate with this degree. As a degree is designed for those who graduate from it to present a set of competencies it is surprising that there is not any robust data on these students or their academic trajectories.”

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

1. Develop a Handbook for Liberal Studies which highlights the pathways in and out of Liberal Studies, the supports available to students while in the Program (library, advisors, etc.), and the pathways to graduation. The handbook should be positive and share success stories so that the students can see themselves moving forward rather than feeling « dumped » in Liberal Studies.

#### **Response**

The program will develop a digital handbook for Liberal Studies which includes information about supports and pathways to graduation. That handbook can contain information about how students move in to and out of Liberal Studies, what they can accomplish in Liberal Studies, and what their pathways to graduation are. The program agrees that this handbook would help provide both practical advice and a sense of belonging to something with others. The basis for this handbook already exists in the Liberal Studies section of the Arts Advisor Handbook.

Leadership and support: The Arts Undergraduate Office (AUO) Advisor who serves Liberal Studies students will oversee the development of the handbook, in consultation with AUO advisors who advise first-year students, Arts and Business students, Honours Arts Co-op students, and internal and external transfers, all of whom counsel students moving in to Liberal Studies. Students in co-op programs also have Co-operative Education advisors, and they can contribute to the appropriate sections. In addition, the handbook could be reviewed by the internal transfer advisors in other faculties, and with the Registrar’s Office staff who help facilitate external transfers in to Arts at UWaterloo. No additional resources are needed for this project.

Timeline: One year (August 2020)

2. Develop Learning Outcomes which offer some indication of the knowledge, skills and values that students acquire through the Liberal Studies program when they graduate from it.

#### **Response**

The program will work with staff in the Centre for Teaching Excellence to develop program level learning outcomes.



Leadership and support: Associate Dean, Undergraduate Programs; Centre for Teaching Excellence

Timeline: Two years (August 2021)

3. Gather more robust data on the Liberal Studies student body such as: which programs they come from, which programs they go into out of Liberal Studies, which students graduate in Liberal Studies (and from what programs), how many students are voluntarily "renaissance scholars" and which are in the program involuntarily, where students work after graduation, and how many go on to graduate school.

#### **Response**

The program would like to collect more data on Liberal Studies students, and can commit to regularly and consistently collecting data on Liberal Studies students regard to their point of entry to the plan (internal transfer; inadequate academic standing in major (or failure to declare a major); readmission; external transfer), the amount of time they spend in the plan, what majors they come from and go to (for those who do so), how many leave UWaterloo because of persistent failure, and how many graduate. It is beyond current data-collection capacity to locate and survey graduates as to their career placements or graduate school enrollments.

Leadership and support: The Arts Undergraduate Office Advisor for Liberal Studies; AUO Advisors for internal transfers, external transfers, and readmits, and the Arts Academic Officer, who can provide data for students who fail to secure standing in a major or fail to declare a major.

Timeline: One year (August 2020), and continuing.

4. Create an "excellence award" for the best graduating student from Liberal Arts to encourage a sense of belonging, excellence and value for students who are going to graduate from the Program.

#### **Response**

The Faculty of Arts confers a convocation award to the top graduate in each Honours program (minimum overall average 80%) and will add Honours Liberal Studies to the list of convocation awards.

Leadership and support: Student Awards and Financial Assistance prepares the information for convocation awards, which are approved by the Associate Dean, Undergraduate



Programs. The program will ensure SAFA is aware that Honours Liberal Studies will now be included in the convocation awards program.

Timeline: Immediate.

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

5. Create a core capstone course with clear learning outcomes (such as Skills Identification, Reflexive journaling, Written and oral communication exercises, Professional development, Strategies on how to transition to the workforce or grad school) for those who wish/are required to graduate from Liberal Studies.

### **Response**

The program is not convinced of the need or the administrative feasibility of devising a capstone course.

With regard to the need, the program notes the following:

- a. All students in Liberal Studies have satisfied (or will satisfy) their Arts Communication Requirement;
- b. Internal transfer students in Liberal Studies have often come from co-op programs and therefore have taken professional development courses and participated in job searches;
- c. Students who arrive from co-op programs will normally have had work terms, and are likely to have completed work term reports, which require reflection on the work experience;
- d. UWaterloo has an extensive infrastructure of employment readiness support that is open to all students;
- e. With the introduction of Honours Liberal Studies (2019), students can also enroll or stay enrolled in the Arts and Business program (Regular or Co-op), and therefore complete ARBUS 400, the capstone course for that plan; further, Management Studies is a popular minor for Liberal Studies students, and they also complete ARBUS 400.
- f. With the introduction of Honours Arts Co-op (2020), students in Liberal Studies will be able to do co-op, and will be required to complete at least four work terms, four work reports, and four Professional Development courses;
- g. Students in Liberal Studies can (and do) complete the EDGE Certificate (offered by Co-operative Education), which provides experiential learning, skills identification, and reflection on the relationships between work and academic experiences.



With regard to the administration of such a requirement, the program has the following concerns:

- a. Many students in Liberal Studies believe that they will not graduate from Liberal Studies; most are correct in this respect. Students would have to be assertively advised to enroll in a capstone course in time to graduate. Even with assertive advising, many students in Liberal Studies are likely to fail to enroll because of their confidence in regaining standing in another disciplinary major. Therefore, while the capstone course may well support their academic achievement and career success, its requirement may also have the effect of preventing timely graduation.
- b. Because a capstone has to be small, but the enrollment in Liberal Studies, particularly in the final year, is impossible to predict with the appropriate accuracy, staffing and course scheduling would be challenging.
- c. Liberal Studies has three-year and four-year General degree plans in addition to an Honours plan and devising a capstone for all three would be difficult.
- d. The Faculty of Arts is not in a financial position to invest in this option with regard to either staffing or administering.
- e. The Undergraduate Affairs Group (UGAG), the body which considers and approves curricular innovations and changes in the Faculty, has shown no interest in such a course, and the last time a program review suggested the idea it was rejected by UGAG.

For these reasons, there are no plans to introduce a capstone course for Liberal Studies students.



### Implementation Plan

	Recommendations	Proposed Actions	Responsibility for Leading and Resourcing (if applicable) the Actions	Timeline for addressing Recommendations
1.	Handbook for Liberal Studies	Handbook for Liberal Studies will be prepared	AUO Advisor for Liberal Studies; no resources	One year (August 2020)
2.	Develop learning outcomes	Learning outcomes will be developed	AD Undergraduate Studies with CTE; no resources	Two years (August 2021)
3.	Gather more robust data on Liberal Studies students	Establish regular and consistent data collection on all of the facets referred to by the reviewers except graduate career or grad school outcomes	AUO Advisor for Liberal Studies; no resources	One year (August 2020) and thereafter termly
4.	Create an excellence award	Add Honours Liberal Studies to convocation awards	AD Undergraduate Studies; no resources	Immediate

The Associate Dean, Undergraduate Programs, in consultation with the Dean of the Faculty shall be responsible for the Implementation Plan.



Date of next program review

2025-2026

Date

**Signatures of Approval**

A handwritten signature in black ink, appearing to be "Katherine Acheson".

Katherine Acheson

February 24, 2020

Chair/Director

Date

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

Date

A handwritten signature in black ink, appearing to be "Sheila Ager".

Sheila Ager

February 26, 2020

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.

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

Date

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

Date



# Final Assessment Report

## Sexuality, Marriage, and Family Studies

### (BA, Minor)

### November 2019

#### Executive Summary

External reviewers found that the programs (BA, Minor) delivered by the Department of Sexuality, Marriage, and Family Studies at St. Jerome's University (SJU), which is federated with the University of Waterloo, were in good standing.

*"The Department of Sexuality, Marriage, and Family is the only of its kind in Canada. As reviewers we were truly impressed by the uniqueness of the program, and what we mean by this is that this program stands alone in relation to other similar programs."*

A total of 7 recommendations were provided by the reviewers. 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 2024-2025.

#### Student Complement (All Years)\*

	General	Honours	Co-op	Minor	Diploma
Fall 2019	6	49	8	28	3
Fall 2018	11	41	7	29	1
Fall 2017	11	32	3	30	0

\*based on Active Students Extract (Quest) accessed December 16, 2019

#### 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 Sexuality, Marriage, and Family Studies programs (BA, Minor). A self-study (Volume I, II, III) was submitted to the Associate Vice-President, Academic on December 20, 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 programs 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. Jonathan Allan, Professor of Gender and Women's Studies, Brandon University, and Dr. Andrea O'Reilly, Professor of Gender, Sexuality and Women's Studies, York University.

Reviewers appraised the self-study documentation and conducted a site visit to the University on March 18-19, 2019. An internal reviewer from the University of Waterloo, Dr. Barbara Moffatt, Professor of Biology, was selected to accompany the external reviewers. The visit included interviews with the Associate Vice-President, Academic; President and Vice Chancellor of SJU, Dean of the Faculty of Arts; Dean of SJU; Chair of SMF; as well as faculty members, staff and current students. The Review Team also had an opportunity to tour the SJU campus, and meet with representatives from the Library and Co-operative Education.

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**

Sexuality, Marriage, and Family Studies (SMF) offers a BA, Minor and Diploma. The goal of SMF is to promote interdisciplinary scholarship and research in topics such as gender, sexualities, relationships, and families. In the course offerings, special attention is devoted to developing an ethical perspective and considering issues of social justice in order to develop autonomy and professional capacity for responsible citizenship. Instructors strive to create learning environments that respect academic freedom, encourage higher order learning and skills development, and promote inclusivity and anti-oppressive practices. Students are encouraged to think critically and self-reflectively about material and apply it to the social world.

### **Summary of strengths, challenges and weaknesses based on self-study**

#### **Strengths**

- The Department is a small one, but is vibrant and close-knit, with students that match its faculty's enthusiasm, positivity, and dedication to social justice.
- The interdisciplinary nature of the faculty allows topics and issues to be addressed critically from a number of intersecting perspectives, and motivates students to think critically about the world around them.
- SMF plans are incredibly unique when compared with programs at other schools, as SMF is the only program in the country that combines studies of sexualities, relationships, and families.
- The SMF Department also prides itself on its ability to foster and support student research. The SMF Research Symposium is a unique opportunity for undergraduate students, in particular, to both attend/experience, and actively participate in an academic research conference.



### Challenges

- In terms of faculty, the Department has experienced both gains and losses since the last review, and at the time of this self-assessment is still fraught with resource deficiencies. This has had an impact on SMF's ability to sustain and grow the program.
- The SMF Department has continued to broaden its reach and visibility on campus and in the community, and continued to offer special events/lectures/workshops to support students. That said, sustainability is a concern at this time. The faculty are understandably feeling depleted and tired, which will certainly have impacts on the quality and range of services or experiences the Department is able to offer moving forward.
- The Department has had difficulty retaining faculty whose primary discipline is in the Humanities. While interdisciplinarity does not require integration across the social sciences and humanities, having both areas represented in SMF faculty may be a worthy goal. Existing faculty are clearly social science researchers and instructors, many of whom are also interdisciplinary in their approach to social science more generally.

### Summary of key findings from the external reviewers

The reviewers were impressed by the uniqueness of the program. While many Canadian Universities, as noted in the program review, have programs in Gender Studies, Women's Studies, Sexuality Studies, or some combination of those, this program focuses on sexuality, marriage (or relationships), and family. This is achieved by pulling from some of the methods and theories of Women's and Gender Studies, while drawing on a range of other methods and theories from other disciplines, for instance, family studies and psychology.

The reviewers voiced that they see huge potential for growth, particularly with a graduate program, and introducing additional content in the field of Motherhood Studies. However, this potential has not and cannot yet be realized due to severe shortage in faculty.

### Program response to external reviewers' recommendations

#### Recommendations

1. We recommend that Sexuality, Marriage, and Family Studies undertake a review of its name, a concern that was brought up by nearly everyone. But we are not recommending a wholesale change, as most people mentioned a discomfort only with the use of "marriage," but not "sexuality" or "family." As such, our recommendation would be to pluralize sexuality and family, and find an additional word to better reflect the vastness of the relationships studied and considered in the courses.



### Response

SMF fully supports this recommendation. In fact, the program has been engaged in informal (and formal) discussions about a name change since the previous review. They had engaged in a Visioning/Strategic Planning exercise where a name-change was discussed, however, progress on this stalled due to the faculty losses that followed a few months later.

The program is in favour of pluralizing both the “Sexuality” and “Family” parts of the name. In fact, these pluralized forms are often used in an effort to be inclusive and to better represent what they study in SMF. Similarly, the word “Marriage” is rarely used to describe SMF; it is often replaced with the word “Relationships”. Faculty members also discussed their fondness for, and familiarity with, the SMF acronym, which is also very much a part of the identity of alumni (i.e., SMFers). As such, SMF believes a name-change will be a significant alteration. It will also require the creation of a new logo and associated swag items. Therefore, a name-change will need to be well-planned so as to include a communication strategy with particular attention to the impact on former graduates who identify with “SMF” as part of their educational experience and identities. The development of a new logo and new swag items may require collaboration with an external organization to actualize a professional and appropriate logo; as such, the process may have financial implications.

2. We recommend that [...]’s position be formalized so as to ensure the long-term stability of the program. This formal role should be at the Lecturer level or at the Assistant Professor level, in the latter case, where professional and clinical experience is recognized as being similar to the PhD qualification.

### Response

SMF is in full support of formalizing the position currently held by a Definite Term Appointment (DTA) (as of May, 2019). Prior to holding the DTA, this member was a regular Contract Academic Staff (sessional) in the Department (for approximately 15 years) who taught 4-5 core courses annually and held the Practicum Coordinator position for the last several years. During this time, the member contributed regularly to departmental service, often beyond the expectations of their contract. They are considered a full member of the SMF Department and this recommendation serves to formalize what is already in place.

With the number of losses that SMF has experienced over the years, the member has been a consistent, committed, and stabilizing force for SMF and its students. This is an integral position in the Department given the administrative weight associated with chairing SMF. As the reviewers note, the administrative weight on the current Department Chair is not sustainable. The program feels that formalizing this member’s position would enable greater delegation of departmental service, which would relieve some of the administrative and leadership responsibilities of the Department Chair. The program emphasizes that every



effort should be made to prevent the instability and disruption that the loss of this member would cause.

SMF understands that the formalization of this member's position needs to align with the SJU Academic Staff Association (ASA) Collective Agreement (CA), and they look forward to working with the SJU Vice President Academic and Dean (VPAD) and the SJU-ASA to realize this goal.

3. We recommend that at least two new hires – 100% SMF – be added to the faculty complement (one could presumably organize this as 4 at 50% SMF). Over the past years, we note that many faculty members have left SMF, some for administration, [...], others for different positions, [...], others have renegotiated their contracts after hire, [...], and another has been on extended medical leave. In total, we estimate these losses at at least 200%, which is how we have arrived at a figure of two full-time hires.
  - a. We are also recommending that these hires complement the existing faculty, rather than fill in perceived gaps in the program. While a targeted hire in the humanities would be nice, it may not be the best approach given the direction and vision of the program. We would recommend a more holistic approach that hires in a "theme," for instance, "gender and aging," or "gender, multiculturalism, and transnationalism."

### Response

SMF is in full support of the reviewers' recommendation to focus on stability in departmental resources (i.e., faculty) by adding the equivalent of two new hires to the SMF faculty complement. The Department welcomes the flexibility the reviewers suggest in terms of how this 200% is organized (e.g., across 2-4 faculty members). Replenishing lost faculty resources would enable a focus on stabilizing the Department while increasing diversity within the faculty complement (which is very homogeneous in terms of gender and age -Generation X). SMF welcomes attracting and retaining younger scholars, including those who identify as men, and people of colour (among other social locations that are different from those of existing members).

SMF also appreciates the reviewers' additional recommendation under 3(a) and agrees that targeted hires may not serve SMF well. Instead, SMF has a desire to attract people who are a good fit, complement the program (and its faculty), and can see themselves in the program. SMF needs to focus on attracting and retaining faculty. The program appreciates the reviewers' assessment of SMF as a strong and vibrant program, "...the only of its kind in Canada...we were truly impressed by the uniqueness of the program...that this program stands alone in relation to other similar programs." While reviewers noted SMF's "huge potential for growth," they also cautioned that, "the program is in a state of precarity, not because of a lack of students, but because of a lack of consistent resources and faculty



complement.” SMF is in full agreement with the reviewers’ assessment that stability must be their short-term goal. Current SMF members are depleted and drained, and expanding resources is one way to promote wellness among the existing faculty complement. Moreover, in order to sustain this one-of-a-kind program, continuity in resources is required.

SMF agrees that the first step should be to strengthen and stabilize the current departmental structure and roots by adding to the existing faculty complement (so that they may focus on what is already working and build on existing capacities within the Department). Once new faculty are hired and the foundation is more secure, the SMF Department can engage in a visioning process to establish future directions, specializations, graduate programs, and so forth. Working collaboratively and involving new faculty in this process will foster a sense of belonging and commitment.

4. We recommend that the University in conjunction with the Department undertake discussions about certification and certificate programs. We note in the review, for instance, that the department is short of one course to fulfill a certification requirement. This should be resolved and addressed. Students and post-degree students desire more formal certification recognition and this could contribute to the growth of the program.

### Response

Since the self-study was completed, the program has added two new courses that fulfil the Certified Family Life Educator (CFLE) certification with the National Council on Family Relations (NCFR). These courses have received institutional approval and will be in the 2019-2020 Undergraduate Calendar. The program has yet to go through the process of review and accreditation by NCFR, but will do so in the near future.

The Department has several ideas for additional “certificates” that would be sought-after by SMF graduates, graduates from related programs, and community partners in the human services field. SMF welcomes the opportunity to work with the SJU administration to create and launch such certificate courses or programs. However, realization of these new opportunities will only be possible once a critical mass of SMF faculty has been established. As reviewers noted, the short-term goal must be to maintain SMF’s current responsibilities to existing students while they work to expand their resources, re-structure, and vision for the future.

5. We recommend that SMF and the University establish an “Ambassador’s Program.” We were thoroughly impressed by all of the students we met, and they are, in many ways, the best advocates for SMF because they are choosing to be there, they are excited about their work and studies. These students would go to High Schools or Recruitment events.



### Response

SMF was delighted to hear how impressed the reviewers were with the students. They are truly a joy to work with and, as noted, are the strongest advocates for SMF both within the University and beyond. However, SMF struggles with making this recommendation (i.e., an “Ambassador’s Program”) something that is student-driven rather than faculty-driven.

In the past, students have attempted to form a formal SMF Student Society at the University of Waterloo, but were not able to see it through, in part due to the senior students driving the process graduating before it was completed. Since then, a few students have tried to take it up, but nothing formal resulted from their interest until this past year (2019-2020) – see below.

Recruitment initiatives are highly regulated at the University. While SMF students can volunteer to participate in campus Open Houses (e.g., March Break Open House) as they currently do, recruiting at the high-school level is organized and controlled by UWaterloo and SJU recruitment departments. Students’ enthusiasm and support for SMF could be channeled by including them in the future Visioning/Strategic Planning exercise. This would only be feasible once a critical mass of faculty resources is secured, as none of the current faculty members could spearhead this. Therefore, SMF sees this as a longer-term goal.

In Winter 2020, after the absence of a student-run society was discussed in the capstone course, one student took the initiative and established the SMF Student Society (as one of the University of Waterloo designated student societies). We have been working closely with the Society President on a number of initiatives and will continue this collaborative relationship moving forward.

6. We recommend that the University in conjunction with the Department begin to undertake discussions about a graduate program; however, this is, we stress, a long-term goal once the faculty complement has been established. In our discussions with students, a meeting at which we ran out of chairs and had 20 students, 100% of them in our straw poll desired a graduate program in SMF and if afforded the opportunity would stay at St Jerome’s for the graduate program. Moreover, we understand from discussions that a similar program at Guelph receives some 400 applications, and yet only 8 students are admitted. It seems to us that there is a potential here to develop a Master of Arts in the long term, before the next review, and even thinking in the long long-term, perhaps a PhD program could be established, especially given how many people are turned down by Guelph. We do not see this as St. Jerome’s University becoming a “second choice,” but rather as offering something unique that fills a gap and a need.



### **Response**

SMF is very interested in pursuing one or more graduate programs in the future. This was also mentioned in the previous program review, but given the instability in departmental resources, has not come to fruition.

SMF feels that this should be a long-term goal once the faculty complement has been established. A clinical graduate program (such as the one students discussed with the reviewers) would be of interest to a specific sub-group of SMF students – those who are interested in clinical training and certification. The clinically-oriented students tend to apply to graduate programs in Social Work, Counselling, and Couple and Family Therapy. Other SMF graduates have pursued research-intensive graduate programs in areas such as sexuality/sexology, public health, family studies, and social justice. SMF would like to remain open to both research- and clinical-focused graduate programs in order to appeal to a diverse student body. Discussions of future directions in terms of graduate programs will be part of the Visioning exercise.

7. We would also recommend, with the development of a graduate program, that SMF may look outward and consider appointing “adjunct faculty,” who are able to contribute to the teaching of the program and undertake some ‘supervisory’ roles in thesis courses.

### **Response**

Connected to Recommendation #3, SMF is eager to build partnerships across Departments (and Faculties) at the University of Waterloo and beyond. This will be explored when graduate programs become a real possibility. In the meantime, the flexibility captured in Recommendation #3 offers the opportunity to explore formal partnerships with other Departments – from the Faculty of Arts to other faculties, such as the School of Public Health and Health Systems – whose existing faculty may have teaching and research interests that fit with SMF. Such formal partnerships may require the creative reading and employment of the SJU Collective Agreement, but SMF is confident that the Administrators at both St. Jerome’s and the University of Waterloo can find ways to make such creative partnerships a reality.





## Implementation Plan

	Recommendations	Proposed Actions	Responsibility for Leading and Resourcing (if applicable) Follow-up	Timeline for addressing Recommendation
	<b>Short Term Recommendations</b>			
1.	We recommend that Sexuality, Marriage, and Family Studies undertake a review of its name, a concern that was brought up by nearly everyone. But we are not recommending a wholesale change, as most people mentioned a discomfort only with the use of “marriage,” but not “sexuality” or “family.” As such, our recommendation would be to pluralize sexuality and family, and find an additional word to better reflect the vastness of the relationships studied and considered in the courses.	<p>The Department fully supports this recommendation. In fact, the Department has been engaged in informal (and formal) discussions about a name change since the previous review.</p> <p>Once the department members who are currently on sabbatical and medical leave return*, SMF can resume concentrated discussions about how to move forward with a name-change.</p> <p>*One member has been on an extended leave and is not expected to return. One member returned from medical leave in Winter 2020; their pre-tenure sabbatical runs from January 2021 to June 2021.</p> <p>Another member who had been cross-appointed to SMF (40%) chose not to renew their cross-appointment when it expired in spring of 2020.</p>	<ul style="list-style-type: none"> <li>• SMF Department Chair</li> <li>• Support from the SJU VPAD (Vice President Academic and Dean), including financial support for an external consultant, if needed.</li> </ul>	<p>Completion: Two to three years, once additional hires have been completed and a Visioning/Strategic Planning exercise has been undertaken.</p> <p>An update will be provided at the 2-year Progress Review.</p>





		Another member (DTA) is on a leave of absence (from September 2020 to present; expected return is fall 2022).		
2.	<p><i>(Note: The name has been removed from this recommendation. No other changes to the reviewers' wording have been made).</i></p> <p>We recommend that [...]’s position be formalized so as to ensure the long-term stability of the program. This formal role should be at the Lecturer level or at the Assistant Professor level, in the latter case, where professional and clinical experience is recognized as being similar to the PhD qualification.</p>	<p>The Department strongly supports this recommendation and looks forward to working with the VPAD to realize this goal.</p> <p>The formalization of this position needs to align with the SJU Academic Staff Association (ASA) Collective Agreement (CA).</p>	<ul style="list-style-type: none"> <li>• SJU VPAD</li> <li>• SMF Department Chair</li> <li>• SJU President (final approval)</li> </ul>	<p>The process should begin immediately so that, if possible, it can be in place before the end of the DTA's contract.</p>
3.	<p><i>(Note: Names have been removed from this recommendation. No other changes to the reviewers' wording have been made).</i></p> <p>We recommend that at least two new hires – 100% SMF – be added to the faculty complement (one could presumably organize this as 4 at 50% SMF). Over the past years, we note that many faculty members have left SMF, some for administration, ... others for different positions, ... others have renegotiated their contracts after hire, ... and another has</p>	<p>This recommendation is understood to be in addition to the one above (#2), as they are presented separately in the report.</p> <p>The Department is in full support of the recommendation to focus on stability in departmental resources by adding the equivalent of two new hires to the SMF faculty complement. SMF welcomes the flexibility the reviewers suggest in terms of how this 200% is organized (e.g., across 2-4 faculty members).</p>	<ul style="list-style-type: none"> <li>• SMF Department Chair</li> <li>• SJU VPAD</li> <li>• SJU President</li> <li>• SJU HR</li> </ul>	<p>Formal request for hires is to be submitted by the Department Chair to the VPAD and St. Jerome’s President.</p> <p><i>The ideal timeline is to have the equivalent of two fulltime positions filled by the end of two years. SMF is open to creative solutions to meeting this goal.</i></p>



	<p>been on extended medical leave. In total, we estimate these losses at at least 200%, which is how we have arrived at a figure of two full-time hires.</p> <p>a. We are also recommending that these hires <i>complement</i> the existing faculty, rather than fill in perceived gaps in the program. While a targeted hire in the humanities would be nice, it may not be the best approach given the direction and vision of the program. We would recommend a more holistic approach that hires in a “theme,” for instance, “gender and aging,” or “gender, multiculturalism, and transnationalism.”</p>	<p>The Department agrees that targeted hires may not serve SMF well at this time. Instead, SMF will focus on attracting and retaining faculty who are a good fit, complement the SMF program (and its faculty), and can see themselves in the program.</p> <p>In the short-term, SMF looks forward to working with the SJU administration (VPAD and President) to increase the faculty complement.</p>		
4.	<p>We recommend that the University in conjunction with the Department undertake discussions about certification and certificate programs. We note in the review, for instance, that the department is short of one course to fulfill a certification requirement. This should be resolved and addressed. Students and post-degree students desire more formal certification recognition and this could contribute to the growth of the program.</p>	<p>The courses required for accreditation with the <i>National Council on Family Relations (NCFR)</i> for the <b>Certified Family Life Educator (CFLE)</b> certification have been approved institutionally (SJU and UWaterloo). SMF plans to initiate the review and accreditation process with that organization by the 2-year progress review.</p>	<ul style="list-style-type: none"> <li>• SMF Department Chair (in consultation with Department members)</li> <li>• SMF Administrative Staff (for support)</li> <li>• SJU VPAD (approval, financial)</li> </ul>	<p>Over the next 2-3 years, contingent upon increase in faculty complement.</p>



		The Department also has several ideas for additional “certificates” that they believe would be of interest to SMF graduates, graduates from related programs, and community partners in the human services field. SMF will submit a proposal to the SJU administration for certificate courses/continuing education.		
5.	We recommend that SMF and the University establish an “Ambassador’s Program.” We were thoroughly impressed by all of the students we met, and they are, in many ways, the best advocates for SMF because they are choosing to be there, they are excited about their work and studies. These students would go to High Schools or Recruitment events.	<p>The Department agrees that the SMF students are an exceptional group and, as noted, the strongest advocates for SMF both within the University and beyond. What is difficult is how to make this recommendation (i.e., an “Ambassador’s Program”) something that is student-driven rather than faculty-driven.</p> <p>Because recruitment initiatives are highly regulated at the University of Waterloo and reside within specific offices of the University, SMF students are limited to volunteering to participate in campus Open Houses (e.g., March Break Open House).</p> <p>In the winter of 2020, students initiated the formation of a formal SMF Student</p>	<ul style="list-style-type: none"> <li>• An SMF Department member could take the lead on coordinating with the Director of Student Affairs (SJU) and the SJU Admissions and Recruitment Specialist</li> <li>• Involve senior SMF students</li> </ul>	<p>Short-term: Continue to reach out to SMF students to volunteer at recruitment events.</p> <p>Long-term: Consider a more formal “Ambassador’s Program” as part of Visioning exercise once faculty complement has been increased.</p>



		Society (through UWaterloo). We will continue to work closely with the Student Society regarding involvement in recruitment initiatives, departmental events, and some form of “Ambassador Program”. SMF will also continue to explore other ways to channel students’ enthusiasm and support for SMF as part of the future Visioning/Strategic Planning exercise.		
	<b>Long Term Recommendations</b>			
6.	We recommend that the University in conjunction with the Department begin to undertake discussions about a graduate program; however, this is, we stress, a <i>long term</i> goal once the faculty complement has been established. In our discussions with students, a meeting at which we ran out of chairs and had 20 students, 100% of them in our straw poll desired a graduate program in SMF and if afforded the opportunity would stay at St Jerome’s for the graduate program. Moreover, we understand from discussions that a similar program at Guelph receives some 400 applications, and yet only 8 students are admitted. It seems to us that there is a	<p>The SMF Department is very interested in pursuing one or more graduate programs in the future and agrees that this should be a long-term goal once the faculty complement has been established.</p> <p>Discussions of future directions in terms of graduate programs can be part of the Visioning/Strategic Planning exercise.</p>	<ul style="list-style-type: none"> <li>• SMF Department members (led by Department Chair)</li> <li>• SJU Administration (VPAD, President)</li> <li>• University of Waterloo Graduate Studies</li> </ul>	Planning may begin in three to five years, once departmental stability is achieved.



	potential here to develop a Master of Arts in the long term, before the next review, and even thinking in the long long-term, perhaps a PhD program could be established, especially given how many people are turned down by Guelph. We do not see this as St. Jerome's University becoming a "second choice," but rather as offering something unique that fills a gap and a need.			
7.	We would also recommend, with the development of a graduate program, that SMF may look outward and consider appointing "adjunct faculty," who are able to contribute to the teaching of the program and undertake some 'supervisory' roles in thesis courses.	<p>Connected to the Short-term Recommendation #3, the Department is eager to build and/or deepen partnerships across Departments (and Faculties) at the University of Waterloo and beyond. This is an important area to explore when graduate programs in SMF are a real possibility.</p> <p>SMF looks forward to working with the VPAD to explore such possibilities in the future.</p>	<ul style="list-style-type: none"> <li>• SMF Chair</li> <li>• SJU Administration (VPAD and President)</li> <li>• University of Waterloo Faculty Deans</li> <li>• University of Waterloo Graduate Studies</li> </ul>	Planning for adjunct or cross-appointments may begin within the next year or two; planning for graduate programs may begin in three to five years, once departmental stability is achieved.

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



Date of next program review

2024-2025

Date

**Signatures of Approval**

A handwritten signature in black ink, appearing to read "Henry Rappin".

January 4, 2021

Chair/Director

Date

A handwritten signature in black ink, appearing to read "Christian D. Venier".

January 18, 2021

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

Date

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.

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

Date

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

Date

## Checklist for SUC/SGRC Reviewer Feedback Quality Assurance Office

**Final Assessment Report: Sexuality, Marriage, and Family Studies**

**Name of Reviewer: Chris Vigna**

**Date: 2/10/2021**

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### Does the Final Assessment Report:

1. Include a credible implementation plan that not only addresses the substantive issues identified from the program review process, but also clearly identifies:
  - The actions that will follow from specific recommendations? ☒ Yes ☐ No
  - Those who will be responsible for acting on those recommendations? ☒ Yes ☐ No
  - Those who will be responsible for providing resources? ☒ Yes ☐ No
  - Priorities for implementation and realistic timelines for initiating and monitoring actions? ☒ Yes ☐ No
2. Provide rationales for any recommendations that have not been pursued? ☒ Yes ☐ No

### General Comments

The Final Assessment Report for Sexuality, Marriage, and Family Studies (BA, Minor) was clear and concise. The Department proposed clear and attainable actions to address the reviewer's recommendations. The individuals responsible for those action items were clearly identified, and the corresponding timeline for completing the action items were reasonable.

## Checklist for SUC/SGRC Reviewer Feedback Quality Assurance Office

**Final Assessment Report: Sexuality, Marriage, and Family Studies**

**Name of Reviewer: Megan Town**

**Date: 2/17/2021**

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### Does the Final Assessment Report:

1. Include a credible implementation plan that not only addresses the substantive issues identified from the program review process, but also clearly identifies:
  - The actions that will follow from specific recommendations? ☒ Yes ☐ No
  - Those who will be responsible for acting on those recommendations? ☒ Yes ☐ No
  - Those who will be responsible for providing resources? ☒ Yes ☐ No
  - Priorities for implementation and realistic timelines for initiating and monitoring actions? ☒ Yes ☐ No
2. Provide rationales for any recommendations that have not been pursued? ☒ Yes ☐ No

### General Comments

As noted by external reviewers in the report, SMF is a strong department and program. The most pressing challenge identified appears to be lack of faculty which the department is enthusiastically seeking to remedy. From an undergraduate perspective, the creation and success of the SMF Student Society is an excellent initiative. I encourage the department to continue supporting their Student Society and partnering with students in the future.



**University of Waterloo  
SENATE  
Report of the President  
17 May 2021**

**FOR INFORMATION**

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**Recognition and Commendation**

**Professor Mei Nagappan** has received a **2020 Outstanding Early Career Researcher Award** from **CS-Can/Info-Can**, the nation's professional society dedicated to representing computer science and the interests of the discipline to Canadians. He is the ninth faculty member at the Cheriton School of Computer Science to receive this prestigious award. Conferred annually since 2009, the Outstanding Early Career Researcher Award recognizes excellence in computer science research and is given to top faculty members in Canadian computer science departments, schools and faculties who are within the first decade of their career after completing their PhD. Nagappan is the current **Ross & Muriel Cheriton Faculty Fellow** and an associate professor, and has been a member of the faculty since September 2016. Previously, he was an assistant professor in the Department of Software Engineering at the Rochester Institute of Technology, and earlier still a postdoctoral researcher at the Software Analysis and Intelligence Lab in the School of Computing at Queen's University. He completed his PhD in the Department of Computer Science at North Carolina State University.

(adapted from the *Daily Bulletin*, 31 March 2021)

**Brigitte Shim** and **A. Howard Sutcliffe**, architects who met at Waterloo and graduated together from the School of Architecture in 1983, were named the winners of the **2021 Gold Medal by the Royal Architecture Institute of Canada (RAIC)**. Awarded annually by the RAIC, a not-for-profit group that has represented architects and architecture for more than 100 years, the medal is its highest honour, recognizing a significant and lasting contribution to Canadian architecture. A couple as well as the founding partners of Shim-Sutcliffe Architects in Toronto, they both earned degrees at Waterloo in environmental studies in 1981 before going on to study architecture. They have been professional collaborators ever since. Shim and Sutcliffe have won 15 Governor General's Medals for Architecture, made the Order of Canada together in 2013 and received the Team Alumni Achievement Medal from Waterloo Engineering in 2011. Celebrated projects by the duo include their own residence, the Laneway House, and the Robertson Davies Library in Toronto. They are currently working on projects in North America, Russia and Hong Kong. In addition to other qualities, their work is distinguished by meticulous attention to detail. "By their relentless pursuit of excellence, Brigitte Shim and Howard Sutcliffe have produced a significant body of exceptional design works covering architecture, landscape, interior, furniture and hardware—all developed to an incredibly high standard, with craft, rigour, sense of place, and mastery of proportions," commented one of the award judges.

(adapted from the *Daily Bulletin*, 7 April 2021)

On March 5, 2021, for the second year in a row, students from the **University of Waterloo Student Venture Fund (SVF)** captured the **2021 Undergraduate Canada Regional Finals Championship** for the **Venture Capital Investment Competition (VCIC)**. The University of Waterloo claimed the title over the University of Alberta (2nd) and Acadia University (3rd) and has advanced to the International Finals being held on April 10. The University of Waterloo's VCIC team will be competing in the Global Finals on April 9 and 10 against eight prominent US universities: Berkeley, Brigham Young, Cornell,

University of Chicago, Georgetown, Miami of Ohio, Oregon, and Pomona College. VCIC is the world's largest venture capital competition with over 120 university and graduate school teams competing. This year, undergraduate student venture teams from 48 universities across the US and Canada competed in eight regional competitions. The six team members of the undergraduate team are all veterans of the University of Waterloo's SVF: **Yigga Zhang**, 4A AFM; **Tony Shi**, 4B CFM; **Sean Mark**, 4A AFM; **Noah Simao**, 4A AFM; **Roberto Babaran**, 3A AFM; and **Megan Boyd**, 3A AFM. As members of the SVF, the team already had experience in evaluating management, completing market research, valuing companies, conducting due diligence, and recommending investments in early stage companies. In VCIC, the team reviewed live pitches from early-stage technology companies to select and prepare an investment proposal and defend their investment proposal to a panel of VC judges. Although the VCIC undergraduate team is made up of brilliant students, the students couldn't have done it on their own. As with all SAF competition teams, the students benefited from the guidance and support of faculty mentors **Ranjini Jha**, **Frank Hayes**, and **Mark Arnason**.

In addition, Waterloo's **Graduate division VCIC team** finished a close second to the Rotman MBA team from the University of Toronto against a competitive field of MBA schools. "I'm so proud of the students on both our teams and am excited to see our undergrad team compete against the best in the world," said Mark Arnason, lecturer, strategy and international business.

(adapted from the *Daily Bulletin*, 7 April 2021)

All six teams that earned \$10,000 each at Engineering's pitch contest developed creative solutions to challenges ranging from making rock climbing safer to providing spinal cord injury patients with increased mobility. The winning teams of senior-year Engineering students were narrowed down from 10 who took three minutes each to explain their projects to a panel of judges in the **Norman Esch Entrepreneurship Awards for Capstone Design** contest held remotely on April 8. For the past eight months, students have been mainly working on their Capstone Design projects remotely rather than together on campus due to the pandemic.

One of those projects, a device to allow people with spinal cord injuries (SCI) to be more mobile, earned \$10,000 in the pitch competition along with \$3,000 as the winner of the Sedra People's Choice Award. Members of **Bless Your Sole** – mechanical engineering students **Anna Xiang**, **Debrish Sarma**, **Milos Zivkovic**, **Taha Malik**, **Trevor Zhu** and **Vatsalya Saini** – developed the Lock Step, an ankle exoskeleton powered by an onboard linear actuator system allowing for freedom of mobility. Team members noted that the cost of their device is estimated to be \$2,600, 20 times less expensive than their closest competitor. "Our product aims to be more of a consumer-oriented exoskeleton whereas the current exoskeletons in this market are more research-oriented so they are more one-off designs," said Malik. "We aim to take our technology and put it in the hands of as many people as we can."

The other winning teams are:

- **Canadian Ibex** (**Daniel Bell**, **Christopher Friedel**, **Peter Morrow** and **Justin Swinoga** — mechanical engineering)
- **EyeMove Technologies** (**Oswaldo Ferro**, **Saejith Nair**, **Arjun Narayan** and **Ali Toyserkani** – mechatronics engineering)
- **UWTensil** (**Gavin Lee**, **Nishita Saha**, **Minh Trinh** and **Andy Yang** – chemical engineering)
- **Sterilus** (**Pei Liang Guo**, **Joe Mattekatt** and **Udeshaya Wadhwa** - mechatronics engineering)
- **Yada** (**Aravind Segu**, **Carl Shen**, **Shehan Suresh** and **Akshay Pall** - software engineering)

(adapted from the *Daily Bulletin*, 12 April 2021)

**University of Waterloo**  
**SENATE**  
**Report of the Vice-President Academic & Provost**  
**May 17, 2021**

**UNIVERSITY RESEARCH CHAIRS**

Waterloo has granted University Research Chair awards since 2004. Current chair holders are:

**Kankar Bhattacharya** (electrical and computer engineering), **Sue Ann Campbell** (applied math), **Sherry Dupuis** (recreation and leisure studies), **Eric Helleiner** (political science), **Hamid Jahed** (mechanical and mechatronics engineering), **Bin Ma** (computer science), **Daniel Scott** (geography and environmental management) in 2021; **Hany Aziz** (electrical and computer engineering), **Shai Ben-David** (computer science), **Andrew Cooper** (political science), **Andrew Doxey** (biology), **Susan Elliott** (geography and environmental management), **Penny Haxell** (combinatorics and optimization), **Zoya Leonenko** (physics & astronomy), **William Melek** (mechanical & mechatronics engineering), **Alexander Schied** (statistics and actuarial science), **Winfried Siemerling** (english language & literature) in 2020; **Nandita Basu** (civil and environmental engineering), **Carl Haas\*** (civil and environmental engineering), **Matt Kennedy** (pure mathematics), **Kate Larson** (computer science), **Sri Namachchivaya** (applied mathematics), **Josh Neufeld** (biology), **Maria Anna Polak** (civil & environmental engineering), **Carol Ptacek** (earth & environmental sciences), **John T.W. Yeow** (systems design engineering) in 2019; **James Blight** (history), **Raouf Boutaba** (computer science), **Roy Brouwer** (economics), **Thomas Homer-Dixon** (faculty of environment), **Sue Horton** (school of public health and health systems & economics), **Fakhreddine Karray** (electrical & computer engineering), **Barbara Schmenk** (german and slavic studies), **Imre Szeman** (drama and speech communication), **Michael Tam** (chemical engineering), **Ruodo Wang** (statistics and actuarial science), **Olaf Weber** (environment, enterprise and development), **David Welch** (political science), **Michael Worswick\*** (mechanical and mechatronics engineering) in 2018; **Guang Gong** (electrical and computer engineering), **Alice Kuzniar** (germanic and slavic studies), **Juewen Liu** (chemistry), **Colleen Maxwell** (pharmacy), **Marcel O’Gorman** (english language and literature), **Graham Taylor** (systems design engineering), **Zhou Wang** (electrical and computer engineering) in 2017; **Jeff Chen** (physics & astronomy), **Duane Cronin** (mechanical & mechatronics engineering), **Xianshe Feng** (chemical engineering) in 2016; **Pu Chen** (chemical engineering), **Claude Duguay** (geography & environmental management), **Lila Kari** (computer science), **Debbie Leung** (combinatorics & optimization), **John Long** (electrical and computer engineering), **Brian McNamara** (physics & astronomy), **Heidi Swanson** (biology) in 2015; **James Geelen** (combinatorics & optimization), **Achim Kempf** (applied mathematics), **Xianguo Li** (mechanical & mechatronics engineering), **Qing-Bin Lu** (physics & astronomy), **Mark Matsen** (chemical engineering), **Daniel Scott** (geography & environmental management) in 2014; **Chris Bauch** (applied mathematics), **Jason Bell** (pure mathematics), **Ravi Mazumdar** (electrical & computer engineering) in 2013; **Ian Goldberg** (computer science), **Elizabeth Irving** (optometry & vision science), **Shesha Jayaram** (electrical & computer engineering), **Lyndon Jones** (optometry & vision science), **Michele Mosca** (combinatorics & optimization) in 2012; **Fakhreddine Karray** (electrical & computer engineering), **Bill McIlroy** (kinesiology), **Sivabal Sivaloganathan** (applied mathematics), **Michael Tam** (chemical engineering), **Grace Yi** (statistics & actuarial science) in 2011.

University of Waterloo owes much of its reputation and stature to the quality of its professors and their scholarly accomplishments. University of Waterloo recognizes exceptional achievement and pre-eminence in a particular field of knowledge through the designation 'University Research Chair'.

In addition, a faculty member at the conclusion of the second term as a Tier I Canada Research Chair may also be considered for a University Research Chair.\*

More information can be found on the URC website:  
<https://uwaterloo.ca/provost/university-research-chairs>

James W.E. Rush  
Vice-President Academic & Provost

**UNIVERSITY OF WATERLOO**  
**REPORT OF THE DEAN OF THE FACULTY OF ARTS TO SENATE**  
**May 17, 2021**

**FOR INFORMATION**

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**A. APPOINTMENTS**

**Post-Doctoral Appointment**

**ROGERS, Katja**, Stratford School of Design, April 15, 2021 to April 14, 2023.

**Cross Appointment**

**MORENZO-CRUZ, Juan**, Associate Professor, School of Environment Enterprise and Development to Department of Economics, May 1, 2021 to April 30, 2026.

**Adjunct Appointments – Graduate Supervision**

**HAYDEN, Andres**, Department of Political Science, April 1, 2021 to December 31, 2024.

**Adjunct Reappointments – Graduate Supervision**

**GOSSE, Leanne**, Department of Psychology, April 1, 2021 to March 31, 2023.

**B. ADMINISTRATIVE APPOINTMENTS**

**GORMAN, Dan**, Department of History, Chair, July 1, 2021 to June 30, 2025.

**LEONI, Monica**, Department of Fine Arts, Chair, July 1, 2021 to June 30, 2025.

**LIU, Jennifer**, Department of Anthropology, Chair, July 1, 2021 to June 30, 2024.

**Administrative Reappointment**

**FUGELSANG, Jonathan**, Department of Psychology, Associate Chair, Graduate Studies, July 1, 2021-June 30, 2023.

**C. SABBATICAL LEAVES**

**For approval by the Board of Governors:**

**Approved by the Board of Governors:**

**DANISCH, Robert**, Associate Professor, Department of Communications, January 1, 2022-June 30, 2022, six months at full salary.

**DAWSON, Lorne**, Professor, Department of Religious Studies, September 1, 2021 to August 31, 2022, 12 months at full salary.

**ELLARD, Colin, Professor**, Department of Psychology, September 1, 2021 to August 31, 2022, twelve months at full salary.

**HEBBINCKUYS, Nicolas**, Assistant Professor, Department of French Studies, July 1, 2021 to December 31, 2021, six months at full salary.

**LANOSZKA, Alexander**, Assistant Professor, Department of Political Studies, July 1, 2021 to December 31, 2021, six months at full salary.

**LU, Haihao**, Assistant Professor, Assistant Professor, School of Accounting & Finance, July 1, 2021 to December 31, 2021, six months at full salary.

**MACDONALD, Michael**, Associate Professor, Department of English Language & Literature, September 1, 2021 to August 31, 2022, 12 months at 85% salary.

**MARINO, Patricia**, Professor, Department of Philosophy, July 1, 2021 to December 31, 2021, six months at 85% salary.

**PARK, Robert**, Professor, Department of Anthropology, January 1, 2022 to June 30, 2022, 6 months at full salary.

**SABBATICAL LEAVE – Cancelled**

**VOORHEES, Gerald**, Associate Professor, Department of Communication Arts

**D. ADMINISTRATIVE LEAVES**

**For Approval by the Board of Governors:**

**Approved by the Board of Governors:**

**DANISCH, Robert**, Associate Professor, Department of Communications, October 1, 2021 to December 31, 2021, three months at full salary.

**MARINO, Patricia**, Professor, Department of Philosophy, January 1, 2022 to March 31, 2022, three months at full salary.

**PARK, Robert**, Professor, Department of Anthropology, August 1 2021 to December 31, 2021, 5 months at full salary.



Sheila Ager  
Dean, Faculty of Arts

**UNIVERSITY OF WATERLOO**  
**REPORT OF THE DEAN OF ENGINEERING TO SENATE**  
**May 17, 2021**

**FOR INFORMATION**

**A. *APPOINTMENTS***

**Visiting Appointments**

**ZHANG, Ruizeng**, Scholar, Department of Mechanical and Mechatronics Engineering, May 1, 2021 – April 30, 2023.

**Adjunct Appointments**

Graduate Supervision and Research

**XI, PengCheng**, Assistant Professor, Department of Systems Design Engineering, October 1, 2020 – September 30, 2023.

**Adjunct Reappointments**

Graduate Supervision and Research

**VARAMINI, Sina**, Assistant Professor, Department of Civil and Environmental Engineering, June 1, 2021 – May 31, 2023.

**Changes in Appointments**

**WANG, Junhua**, Researcher, Department of Civil and Environmental Engineering, August 15, 2021 – August 14, 2022. This is an appointment date change from the original dates of July 1, 2021 – June 30, 2022.

**Cross Appointments**

**SCHNEIDER, Oliver**, Assistant Professor, Department of Management Sciences Engineering to Department of System Design Engineering, January 1, 2021 – December 31, 2023.

**B. *ADMINISTRATIVE APPOINTMENTS***

**ROBINSON, Mary**, Associate Dean, Outreach, Equity and Diversity, Engineering Outreach, May 1, 2021 – April 30, 2024.

***ADMINISTRATIVE REAPPOINTMENTS***

**ABDEL-RAHMAN, Eihab**, Associate Chair, Graduate Studies, Department of Systems Design Engineering, May 1, 2021 – April 30, 2024.

Mary Wells

Mary A. Wells, Dean  
Faculty of Engineering

**University of Waterloo**  
**REPORT OF THE DEAN OF ENVIRONMENT TO SENATE**  
**May 17, 2021**

**FOR INFORMATION**

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**A. APPOINTMENTS**

**Adjunct Appointments**

*Graduate Supervision and Research*

**STEVENSON, Robert**, Assistant Professor, School of Environment, Resources and Sustainability, January 1, 2021 to December 31, 2023.

*Graduate Supervision*

**BOLAND, Alana**, Associate Professor, School of Planning, February 1, 2021 to January 31, 2023.

**HANNA, Alan**, Assistant Professor, School of Environment, Resources and Sustainability, April 1, 2021 to March 31, 2023.

**IANNANTUONO, Adele**, Assistant Professor, Department of Geography and Environmental Management, September 1, 2021 to August 31, 2024.

**B. ADMINISTRATIVE APPOINTMENTS**

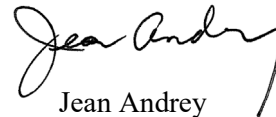
**WOOD, Michael**, Associate Director, Undergraduate Studies, School of Environment, Enterprise and Development, July 1, 2021 to June 30, 2022.

**WOOD, Michael**, Co-Director, Bachelor of Sustainability and Financial Management, School of Environment, Enterprise and Development, July 1, 2021 to June 30, 2024.

**C. SABBATICAL LEAVES**

*For approval by the Board of Governors*

**SWATUK, Larry**, Professor, School of Environment, Enterprise and Development, January 1, 2022 to December 31, 2022 at 87.8% salary.

  
Jean Andrey  
Dean

**University of Waterloo**  
**REPORT OF THE DEAN OF FACULTY OF HEALTH TO SENATE**  
**May 17, 2021**

**FOR INFORMATION**

**A. APPOINTMENTS**

**Adjunct Appointment**

*Graduate Supervision*

**FORTUNE, Darla**, Associate Professor, Department of Recreation and Leisure Studies, April 1, 2021 – June 30, 2024.

**GREPIN, Karen**, Associate Professor, School of Public Health and Health Systems, July 1, 2021 – April 30, 2023.

**OSTERTAG, Sonja**, April 1, 2021 – June 30, 2021, School of Public Health and Health Systems, April 1, 2021 – August 31, 2022.

*Graduate Supervision and Research*

**VRKLJAN, Brenda**, Professor, Department of Kinesiology, April 1, 2021 – March 31, 2023.

*Research and course instruction*

**ZAZA, Christine**, Lecturer, Faculty of Health, April 1, 2021 – March 31, 2024.

**Special Lecturer Appointments**

**GIOSA, Justine**, Lecturer, School of Public Health and Health Systems, September 1, 2021 – December 31, 2021.

*For Approval by the Board of Governors*

**B. SABBATICAL**

**PARRY, Diana**, Professor, Department of Recreation and Leisure Studies, September 1, 2021 – August 31, 2022.

**C. ADMINISTRATIVE LEAVE**

**PARRY, Diana**, Professor, Department of Recreation and Leisure Studies, September 1, 2022 – October 31, 2022.

**D. ADMINISTRATIVE REAPPOINTMENT**

**FERRIES, Leeann**, Associate Dean, Undergraduate Studies and Cooperative Education, Faculty of Health, July 1, 2021 – June 30, 2026.

**E. RETIREMENTS**

**McCARVILLE, Ronald**, Professor, Department of Recreation and Leisure Studies, August 31, 2021.

**McKILLOP, Ian**, Associate Professor, School of Public Health and Health Systems, January 1, 2024.

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**Lili Liu, Dean, Faculty of Health**



**University of Waterloo**  
**REPORT OF THE DEAN OF MATHEMATICS TO SENATE**  
**May 17, 2021**

**FOR INFORMATION**

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**A. APPOINTMENTS (for approval by the Board of Governors)**

**Tenured**

**BRANNAN, Michael** (BSc Eng, 2006, Queen's University; MMath, 2008, University of Waterloo; PhD, 2012, Queen's University), Associate Professor, Dept. of Pure Mathematics, July 1, 2021. Dr. Brannan is currently an Associate Professor in the Department of Mathematics at the Texas A&M University. Previously, he was an NSERC Postdoctoral Fellow, a J.L. Doob Research Assistant Professor and an NSERC Banting Fellowship Awardee. His research interests are quite broad, and include aspects of representation theory, quantum algebra, quantum group theory, operator algebras, non-commutative probability and mathematical physics. Dr. Brannan is particularly interested in problems where tools from non-commutative algebra, analysis and quantum information theory interact in fruitful ways. Dr. Brannan's research reinforces existing strengths within Pure Math's world famous group in analysis, and forges ties with colleagues in other units in the Faculty, the University and around the world.

**Probationary-Term Appointments**

**BARRADAS, Diogo** (BSc, 2014; MSc, 2016, PhD 2021, all from the Universidade de Lisboa), Assistant Professor, David R. Cheriton School of Computer Science, January 1, 2022 – June 30, 2025. Mr. Barradas is currently completing his PhD at the Universidade de Lisboa. His research is in the area of censorship-resistant communication. Mr. Barradas has pioneered the use of personal video communication, such as Skype, as a carrier for covert communication. Furthermore, he has developed scalable systems at a very low level in the network stack that enable the wide deployment of these methods on the Internet. Mr. Barradas research meshes very well with others at Waterloo underpinning his excellent fit for the position. He will strengthen computer security and privacy enhancing technologies within the School.

**DEL REY FERNÁNDEZ, David** (BA, 2003; BSc, 2008; MSc, 2009, all from the University of Western Ontario; PhD, 2015, University of Toronto), Assistant Professor, Dept. of Applied Mathematics, July 1, 2021 – June 30, 2024. Dr. Del Rey Fernández is currently a Research Scientist at the NASA Langley Research Center/National Institute of Aerospace. His area of research is broadly focused on the numerical solution of time-dependent partial differential equations (PDEs). The long-term outcome of his research is the development of mathematically rigorous and predictive novel numerical methods, that are deployable on HPC systems, for the discretization of a broad class of time-dependent PDEs. Dr. Del Rey Fernández's research will fit in well with not only researchers in the department but also with other departments at the University of Waterloo.

**STRINGER, Alex** (BSc, 2014, University of Guelph; MSc, 2015; PhD, exp 2021, both from the University of Toronto), Assistant Professor, Dept. of Statistics and Actuarial Science, July 1, 2021 – June 30, 2024. Mr. Stringer is currently completing his PhD in Statistical Sciences at the University of Toronto. His research focuses on the theory and models for describing complex data with Bayesian inference and his research program has impressive breadth and depth. He will nicely complement our department's growing strength in Bayesian methods and applications.

**Probationary-Term Reappointments**

**STEBILA, Douglas**, Associate Professor, Dept. of Combinatorics and Optimization, July 1, 2021 – June 30, 2025.

**Continuing Appointment**

**TRELFORD, Ryan**, Lecturer, Office of the Dean effective July 1, 2021.

**Adjunct Appointments**

**Research**

**HARE, Kathryn**, Professor Emeritus, Dept. of Pure Mathematics, July 1, 2021 – June 30, 2024.

**MALACRIA, Sylvain** (Inria Lille), Assistant Professor, David R. Cheriton School of Computer Science, February 1, 2021 – June 30, 2024.

**Adjunct Reappointments**

**Instructor**

**ALI, Javid**, Lecturer, Dept. of Statistics and Actuarial Science, May 1, 2021 – August 31, 2021.

**KAMAL, Zille Huma**, Lecturer, David R. Cheriton School of Computer Science, May 1, 2021 – August 31, 2021.

**LENNOX, Michelle**, Lecturer Dept. of Statistics and Actuarial Science, May 1, 2021 – August 31, 2021.

**LI, Chuning**, Lecturer, Dept. of Statistics and Actuarial Science, May 1, 2021 – August 31, 2021.

**LI, Raymond**, Lecturer, Dept. of Statistics and Actuarial Science, May 1, 2021 – August 31, 2021.

**Cross Reappointments**

**MOSCA, Michele** (Professor, Dept. of Combinatorics & Optimization), in the Dept. of Applied Mathematics, July 1, 2021 – June 30, 2024.

**Graduate Students reappointed as Part-time Lecturers**

**DONG, Gracia**, Dept. of Statistics and Actuarial Science, May 1, 2021 – August 31, 2021.

**SCHULDINER, Pavel**, Dept. of Statistics and Actuarial Science, May 1, 2021 – August 31, 2021.

**Postdoctoral Fellows appointed as Part-time Lecturers**

**KIM, Mihyun**, Dept. of Statistics and Actuarial Science, September 1, 2021 – August 31, 2022.

**B. ADMINISTRATIVE APPOINTMENTS**

**CLARKE, Charlie**, Associate Dean, Innovation and Entrepreneurship, Office of the Dean, April 1, 2021 – June 30, 2024.

**ZHU, Mu**, Director, Data Science Program, Office of the Dean, September 1, 2021 – June 30, 2024.

Change in Appointment

**HOEY, Jesse**, Associate Dean, Innovation and Entrepreneurship, Office of the Dean , (*ref.* Dean's Report to Senate, January 2020)

From: January 1, 2020 – June 30, 2022

To: January 1, 2020 – March 31, 2021

**C. RESIGNATIONS**

**WALLMAN, Joel**, Assistant Professor, Dept. of Applied Mathematics, effective June 1, 2021.

**D. SABBATICALS** (already approved by the Board of Governors)

**BLAIS, Eric**, Associate Professor, David R. Cheriton School of Computer Science, September 1, 2021 – August 31, 2022 with 93.3% salary.

**LAW, Edith**, Associate Professor, David R. Cheriton School of Computer Science, September 1, 2021 – August 31, 2022 at 93.3% salary.

**YANG, Fan**, Assistant Professor, Dept. of Statistics and Actuarial Science, January 1, 2022 – June 30, 2022, with 100% salary.

**E. SPECIAL LEAVE**

**EMERSON, Joseph**, Associate Professor, Dept. of Applied Mathematics, May 1, 2021 – April 30, 2022. This is an unpaid leave.



Mark Giesbrecht  
Dean

**UNIVERSITY OF WATERLOO**  
**REPORT OF THE DEAN OF SCIENCE TO SENATE**  
**May 17, 2021**

**For information:**

**A. *APPOINTMENTS***

**Probationary Term Reappointment**

**MESSIER, Julie**, Assistant Professor, Department of Biology, July 1, 2022 to June 30, 2025 and one year covid-19 extension July 1, 2025 to June 30, 2026. [B.Sc., Université du Québec à Montréal (2006); M.Sc., McGill University (2009); Ph.D. University of Arizona (2015).]

**Definite Term Reappointment – Full-Time**

**STEELMAN, Colby**, Lecturer, Department of Earth and Environmental Sciences, August 31, 2021 to August 29, 2023. [B.Sc., University of Waterloo (2007); Ph.D., University of Waterloo (2012).]

**Adjunct Appointments**

**Other**

**PARKS, Jen**, Assistant Professor, Departments of Earth and Environmental Sciences and Civil and Environmental Engineering, March 1, 2021 February 28, 2024.

**Graduate Supervision and Other**

**KELLY, Erin**, Assistant Professor, Department of Biology, April 1, 2021 to June 30, 2024.

**Graduate Supervision, Graduate Instruction and Research**

**LAEER, Christoph**, Assistant Professor, School of Pharmacy, April 1, 2021 to March 31, 2024.

**Adjunct Reappointments**

**Graduate Supervision**

**LEE, Sung-Sik**, Professor, Department of Physics and Astronomy, May 1, 2021 to April 30, 2024.

**Graduate Supervision and Research**

**BOBIER, William (Bill)**, (Professor Emeritus), School of Optometry and Vision Science, April 1, 2021 to March 31, 2024.

**SORKIN, Rafael**, Professor, Department of Physics and Astronomy, May 1, 2021 to April 30, 2026.

**Cross Appointment**

**NGO, William**, Research Assistant Professor, School of Optometry and Vision Science, cross appointed to Department of Biology, May 1, 2021 to June 30, 2024.

**Changes in Appointment**

**ALSABBAGH, Wasem**, Assistant Professor, School of Pharmacy, second probationary appointment extended one year (Covid-19). New end date June 30, 2023.

**B. *ADMINISTRATIVE REAPPOINTMENT***

**GLERUM, Moira**, Associate Chair, Graduate Studies, Department of Biology, April 1, 2021 to June 30, 2024.



R.P. Lemieux  
Dean

**University of Waterloo**  
**SENATE UNDERGRADUATE COUNCIL**  
**Report to Senate**  
**17 May 2021**

Senate Undergraduate Council met on 13 April 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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### **NEW ACADEMIC PLANS**

#### **Faculty of Arts and Faculty of Environment**

1. **Motion:** That Senate approve the proposed new Bachelor of Sustainability and Financial Management (Co-op), Corporate Sustainability Specialization, and Government Policy and Financial Markets Specialization plans, as described below and in [Volumes I and II](#), effective 1 September 2022.

#### **Rationale and Background:**

The linkages between environmental trends, issues, and objectives, on the one hand, and market demands, corporate financial decision-making, and investment priority-setting on the other, increasingly demand our attention and effective action. The Bachelor of Sustainability and Financial Management will integrate thinking from the diverse fields of expertise and experience suggested by its title, including climate change, ecology, sustainability, biology, economics, data analytics, financial management, financial reporting, psychology, political science, public policy, and resource-based industries. Its graduates will use a diverse palette of tools and perspectives and work effectively to produce results within this complex and dynamic context.

Universities across Canada have made modest efforts to recognize this nascent field and the “conceptual genes” of its DNA. Today’s business schools often include one or two sustainability-related courses as part of their core curriculum, and several Accounting and Financial Management programs have made similar additions. Conversely, most environment programs, of which there are still relatively few in Canada, have introduced ecological economics and business or economic development coursework into their programming. The Bachelor of Sustainability and Financial Management (Co-op) (BSFM) program plan reflects the effective incorporation of the founding areas of the field of study into a single integrated undergraduate academic plan.

Operational matter: It is proposed that the BSFM be offered via a regular stream as a “fall back” position for those students who, for reasons outside their control, are unable to complete the co-op component of their degree. The regular degree would only be awarded in rare and extenuating circumstances, and only by petition. This is to address an operational issue, not an academic one, since the regular program needs to exist as a possibility in order to be granted in the manner stated. The academic requirements are identical to those required in the co-op version. The regular program is not open to direct admission. This provision brings the BSFM in alignment with similar programs that admit exclusively into co-op streams, but have regular degrees that exist only as a “fall back” upon degree completion.

The Faculty of Arts will maintain the calendar text for this plan, which will be copied over to the relevant Faculty of Environment pages. However, the addition of these plans and the plan described under Motion 2 below will require editorial changes to Faculty of Environment calendar pages where all Environment plans are listed. Those editorial changes have been included for information under Motion 2 below.

## **Plan Requirements (new calendar text):**

### **Degree Requirements (New UG Calendar page)**

Eligibility for the degree of Bachelor of Sustainability and Financial Management (Co-op) requires:

1. Successful completion of 20 academic course units with a minimum cumulative overall average of 60%. A minimum cumulative average of 70% is required in all of the courses identified in sections (2) and (3), and all Accounting and Financial Management (AFM), Sustainability and Financial Management (SFM), Environment and Business (ENBUS) and Environmental Studies (ENVS) electives.
2. Successful completion of the following 12.5 academic course units:
  - AFM 112, AFM 113, AFM 121, AFM 182, AFM 191, AFM 244, AFM 273, AFM 274, AFM 291, AFM 373, AFM 391
  - AFM 205, AFM 208
  - SFM 101, SFM 102, SFM 201, SFM 301, SFM 309
  - ENBUS 202
  - ENVS 200, ENVS 201, ENVS 205
  - GEOG 207
  - AFM 433 or ENBUS 302
  - AFM 111, ENVS 131 (see note 1)
3. Successful completion of one of the two 6.0 academic unit Specializations.

### **Notes**

1. Communication skills are essential to academic, professional, and personal success. The Undergraduate Communication Requirement is fulfilled for Bachelor of Sustainability and Financial Management (BSFM) students by the successful completion of both AFM 111 and ENVS 131.
  2. Students are required to complete courses in first and second year in the following sequence: 1A Term: AFM 191, SFM 101, ENVS 205, AFM 111 and AFM 112 1B Term: AFM 182, AFM 121, SFM 102, ENVS 131 and AFM 113 2A TERM: AFM 205, AFM 208, AFM 273, ENBUS 202, ENVS 200 and GEOG 207 2B TERM: AFM 244, AFM 274, AFM 291, ENVS 201 and SFM 201
- Students who are required to repeat a course or who can't follow this sequence due to transfer credits are required to follow a course sequence approved by the academic advisor.

## **Specializations in Sustainability and Financial Management**

### **Corporate Sustainability Specialization**

- AFM 321, AFM 341, AFM 344, AFM 362, AFM 382, AFM 451, AFM 462, AFM 482, AFM 491
- SFM 401, SFM 402, SFM 403

### **Government Policy and Financial Markets Specialization**

- AFM 322, AFM 323, AFM 425, AFM 427, AFM 434
- SFM 310, SFM 311, SFM 411, SFM 412, SFM 413
- ENBUS 408, ENBUS 410

## **Co-op Regulations and Requirements (New UG Calendar page)**

### **General Regulations**

1. Successful completion of four work terms is required.
2. Students who have attempted to secure employment for all four available work terms, but are successful in doing so for only three work terms, may be considered for a Co-op degree, provided they have received credit for all three of their work terms and they have successfully completed all academic graduation requirements. This

decision is at the discretion of the School of Accounting and Finance, Co-operative and Experiential Education (CEE), and the Faculty of Arts Examinations and Standings (E&S) Committee.

3. Students are required to follow only prescribed academic/work-term sequencing options through to graduation. Students may not end their sequence with a work term.

4. Students who meet all the academic graduation requirements for this plan, but who do not meet the minimum requirements for a Co-op degree may, in exceptional circumstances and at the discretion of the School of Accounting and Finance and the Faculty of Arts Examinations and Standings (E&S) Committee, be awarded a Regular Honours Sustainability and Financial Management degree.

### Professional Development (PD) Courses

Students must complete four Professional Development (PD) courses. PD 1 must be completed in the term prior to the first work term and PD 12 must be completed during the first work term. A third PD course must be completed during the second work term and a fourth PD course must be completed in the third work term.

### Legend for Study/Work Sequence Information Chart

Key	Description
F, W, S	Terms: F=September-December; W=January-April; S=May-August
1,2,3,4 plus A or B	Denotes academic year and term.
WT	Work term
off	Neither an academic term nor a work term
Sequences	Sequence One is the default sequence assigned to all Sustainability and Financial Management students at admission. Requests to change sequence are considered individually following the 2B and 3B terms respectively.

### Study/Work Sequence Information Chart Sequence

Sequence	F	W	S	F	W	S	F	W	S	F	W	S	F
1	1A	1B	off	2A	WT	2B	WT	3A	3B	WT	4A	WT	4B
2	1A	1B	Off	2A	WT	2B	WT	3A	3B	4A	WT	WT	4B
3	1A	1B	Off	2A	WT	2B	WT	3A	3B	WT	WT	4A	4B
4	1A	1B	Off	2A	WT	2B	3A	WT	3B	WT	4A	WT	4B
5	1A	1B	Off	2A	WT	2B	3A	WT	3B	4A	WT	WT	4B
6	1A	1B	Off	2A	WT	2B	3A	WT	3B	WT	WT	4A	4B

### Faculty of Environment

- Motion:** That Senate approve the proposed new Bachelor of Science (BSc), Honours Climate and Environmental Change (regular and co-op), as described below and in [Volumes I and II](#), effective 1 September 2022.

### Rationale and Background:

Global climate change is unequivocal according to robust scientific evidence from a range of indicators: global temperatures have increased, glaciers and ice sheets are losing mass at unprecedented rates, seasonal snow cover duration is declining, permafrost thawing is accelerating, sea level rise is accelerating, and ocean heat content is increasing. These climate-driven changes, which have intensified the global water cycle, directly and indirectly impact society and economic sectors through increased frequency of flooding events, extended drought, increased forest fire activity, landscape change, and changing biodiversity and ecosystem services. Evidence-based scientific understanding of global climate change is needed to identify effective strategies that provide sustainable solutions to these challenges.



The majority of Canadians believe climate change education is falling short of expectations, so this BSc degree intends to equip students with the scientific understanding of the challenges facing our planet's environment so they can help to discover and deploy technical and management strategies to respond (including sustainable energy solutions). These professionals must understand the impact of climate change on resource availability/scarcity (e.g., water, food), and know how to respond to environmental degradation (e.g., flooding, wildfires, biodiversity loss, ecosystem change), mass human migration, and other climate-change impacts occurring at the interface of natural and human environmental systems. Therefore, this program will provide an in-depth understanding of the science of climate and environmental change and how to effectively develop and communicate ways to place societies on a more sustainable path (e.g., low carbon transition strategies).

The Department of Geography and Environmental Management (GEM) has strong interdisciplinary expertise in the physical science and human dimensions of climate change. This BSc provides a plan that builds on foundational courses in GEM, Biology, Chemistry, Physics, Earth and Environmental Science and Mathematics—as well as geomatics technologies—to provide experiential training to tackle climate change problems.

**Plan requirements (new UG calendar text):**

**Bachelor of Science in Climate and Environmental Change**

**Year One**

- GEOG 101 Human Geographies: People, Space and Change
- GEOG 102 Environmental Systems: Processes and Change
- GEOG 181 Designing Effective Maps
- GEOG 207 Fundamentals of Climate Change
- ENVS 178 Environmental Applications of Data Management and Statistics
- ENVS 278 Applied Statistics for Environmental Research
- EARTH 121 Introductory Earth Sciences
- One of:
  - ENGL 109 Introduction to Academic Writing
  - EMLS 129R Written Academic English
- One of:
  - MATH 104 Introductory Calculus for Arts and Social Science
  - MATH 127 Calculus 1 for the Sciences
- One of:
  - PHYS 111 Physics 1
  - CHEM 120 General Chemistry 1

Total of 5.0 units

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**Year Two**

- GEOG 203 Environment and Development in a Global Perspective
- GEOG 205 Principles of Geomorphology
- GEOG 209 Hydroclimatology
- GEOG 271 Earth from Space using Remote Sensing
- GEOG 294 Approaches to Research in Physical Geography
- GEOG 310 Geodesy and Surveying
- BIOL 150 Organismal and Evolutionary Biology
- ENVS 200 Field Ecology
- Electives totaling 1.0 unit

Total of 5.0 units

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Year Three

- GEOG 281 Introduction to Geographic Information Systems (GIS)
- GEOG 303 Physical Hydrology
- GEOG 305 Fluvial Processes and Landforms
- GEOG 307 Societal Adaptation to Climate Change
- GEOG 320 The Cryosphere
- One of:
  - GEOG 403 Eutrophication: From Process to Water-Quality Management
  - GEOG 404 Soil Ecosystem Dynamics
- One of:
  - GEOG 405 Wetlands (1.0 unit)
  - GEOG 459 Energy and Sustainability (1.0 unit)
- Electives totaling 1.0 unit at the 300-level or above

Recommended electives:

GEOG 314 Climate Services

GEOG 359 Low Carbon Transition

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Year Four

- GEOG 309 Physical Climatology
- GEOG 391 Field Research
- GEOG 417 Climate Change Communication
- 2.5 units from:
  - GEOG 407 Environmental Hydrology
  - GEOG 408 Earth's Future Climates (1.0 unit)
  - GEOG 409 Energy Balance Climatology (1.0 unit)
  - GEOG 420 Ice Sheets and Glaciers
  - GEOG 452 Resource Management Project
  - GEOG 490B Thesis (1.0 unit)
- Electives totaling 1.0 unit at the 300-level or above. Students must take GEOG 490A if intending to take GEOG 490B.

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**Notes:**

1. Minimum Required Units
  - Total: 20.0 units
  - Core requirements: 17.0 units
  - Minimum units at or above 200-level: 14.5 units
2. Average Requirements
  - Minimum cumulative major average of 70% (all ENVS and GEOG courses); and
  - minimum cumulative special average of 60% (all BIOL, CHEM, EARTH, MATH, and PHYS courses); and
  - minimum cumulative overall average of 65% (all courses).
3. Co-op Requirements

For details see the [Environment Overview of Co-op Plan Requirements section](#) of this Calendar. Students are admitted to the co-op academic plan in first year based on secondary school grades. Interested students enrolled in first-year regular Climate and Environmental Change at the University of Waterloo may be considered for admission to the co-op plan (if space is still available in the co-op plan) at the end of their first year based on university academic performance, an interview, and work experience related to

Climate and Environmental Change. The Honours Climate and Environmental Change co-op plan has the same course requirements as the honours regular plan.

4. Per Term Course Load Allowance  
No more than 2.5 units may be taken in a term without the approval of the associate chair undergraduate studies, Climate and Environmental Change. Normally, approval for a sixth 0.5 unit course will be considered only if the cumulative major average is 78% or higher.
5. Order of course completion  
The above suggested order of course completion is based on the Co-op plan. The order of course completion for the Regular plan may differ. Contact the [Climate and Environmental Change plan academic advisor](#) for course selection information.
6. Materials and Costs  
For some courses, extra fees may be required to cover field expenses/travel costs. The levying of these fees will follow rules for field trips (see guidelines). Statement on extra costs, where required, will be found with the course descriptions.
7. General Information Applicable to all Faculty of Environment Plans
  - If a minimum grade of 65% is achieved in [ENGL 109](#) or [EMLS 129R](#), the Undergraduate Communication Requirement (UCR) milestone will be granted. If the minimum grade is not met, review the [Overview of Academic Plan Requirements page](#) and contact the [Climate and Environmental Change academic advisor](#).
  - The [Environment Academic Regulations section](#) of this Calendar contains information, regulations, and requirements pertaining to undergraduate studies within the Faculty. It is students' responsibility to familiarize themselves with the content of this section.
  - A number of Faculty of Environment options, minors, and diplomas are available. A list and requirements are outlined under the [Faculty of Environment Academic Plans section](#) in this Calendar.

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### Specializations for Climate and Environmental Change

Students majoring in Honours Climate and Environmental Change, may choose to graduate with one of the following specializations. Upper-year courses may not be taken without the appropriate prerequisites. It is recommended that students declare the addition of a specialization as early as possible by filing a [Plan Modification Form](#).

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#### Aviation Specialization

##### *Requirements*

- [AVIA 100](#) Introduction to Aviation
- [GEOG 207](#) Climate Change Fundamentals
- [GEOG 281](#) Introduction to Geographic Information Systems (GIS)
- At least 3.0 units, including at least one capstone course:
  - [AVIA 270/GEOG 270](#) Remotely Piloted Aircraft Systems (RPAS) Knowledge Requirements
  - [AVIA 310](#) Human Factors in Aviation
  - [AVIA 374](#) Special Topics in Aviation
  - [AVIA 474](#) Special Topics in Aviation
  - [AVIA 475](#) Independent Studies of Selected Topics
  - [GEOG 202](#) Geography of the Global Economy
  - [GEOG 233](#) Geography of Tourism
  - [GEOG 309](#) Physical Climatology
  - Capstone courses:
    - [GEOG 416/AVIA 416](#) Aviation Sustainability (1.0 unit)
    - [GEOG 490A](#) and [GEOG 490B](#) Honours Thesis (1.5 units)

- At least 1.0 unit from the following:
  - [GEOG 306](#) Human Dimensions of Natural Hazards
  - [GEOG 307](#) Societal Adaptation to Climate Change
  - [GEOG 323](#) Tourism Impacts - International Perspectives
  - [GEOG 325](#) Geographies of Health
  - [GEOG 351](#) Geography of Transportation
  - [GEOG 423](#) Sustainable Tourism
  - One of:
    - [GEOG 316](#) Multivariate Statistics
    - [GEOG 318](#) Spatial Analysis

*Note*

Up to 1.0 unit may be granted towards the 3.0 units requirement (not including the capstone course requirement) based on prior successful completion of [Professional Pilot Program courses](#), or if a student has held a Transport Canada Private Pilot Licence. Proof of Transport Canada Private Pilot Licence must be provided and approved by the [associate chair, undergraduate studies, Geography and Aviation](#) prior to declaring this Specialization.

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Economy and Society Specialization

*Requirements*

- [GEOG 202](#) Geography of the Global Economy
- [GEOG 203](#) Environment and Development in a Global Perspective
- [GEOG 293](#) Approaches to Research in Human Geography
- At least 3.0 units, including at least one capstone course:
  - [GEOG 219](#) How Pandemics Change the World
  - [GEOG 222](#) Geographical Study of Canada
  - [GEOG 225](#) Global Environment and Health
  - [GEOG 233](#) Geography of Tourism
  - [GEOG 302](#) Geographies of Work and Employment
  - [GEOG 311](#) Economic Geography and Society
  - [GEOG 323](#) Tourism Impacts - International Perspectives
  - [GEOG 325](#) Geographies of Health
  - [GEOG 336](#) Space, Power, and Politics: Citizenship in a Changing World
  - [GEOG 349](#) Urban Form and Internal Spatial Structure
  - [GEOG 361](#) Food Systems and Sustainability
  - [GEOG 411](#) The Digital Economy
  - [GEOG 423](#) Sustainable Tourism
  - [GEOG 426](#) Geographies of Development
  - [GEOG 436](#) Feminist Economic Geography: Gender, Identities and Social Change
  - Capstone courses:
    - [GEOG 415](#) Economic Geography Project (1.0 unit)
    - [GEOG 490A](#) and [GEOG 490B](#) Honours Thesis (1.5 units)
- At least 1.0 unit from:
  - [GEOG 306](#) Human Dimensions of Natural Hazards
  - [GEOG 307](#) Societal Adaptation to Climate Change
  - [GEOG 316](#) Multivariate Statistics
  - [GEOG 318](#) Spatial Analysis
  - [GEOG 356](#) Resources Management

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Geomatics Specialization

*Requirements*

- [GEOG 271](#) Earth from Space Using Remote Sensing

- [GEOG 281](#) Introduction to Geographic Information Systems (GIS)
- [GEOG 310](#) Geodesy and Surveying
- At least 3.0 units, including at least one capstone course:
  - [GEOG 371](#) Advanced Remote Sensing Techniques
  - [GEOG 381](#) Advanced Geographic Information Systems
  - [GEOG 387](#) Spatial Databases
  - [GEOG 483](#) Geoweb and Location-Based Services
  - [GEOG 484](#) Machine Learning in Geospatial Science
  - [GEOG 487](#) Management Issues in Geographic Information Systems
  - Capstone courses:
    - [GEOG 471](#) Remote Sensing Project (1.0 unit)
    - [GEOG 481](#) Geographic Information Systems Project (1.0 unit)
    - [GEOG 490A](#) and [GEOG 490B](#) Honours Thesis (1.5 units)
- At least 1.0 unit from:
  - [GEOG 270/AVIA 270](#) Remotely Piloted Aircraft Systems (RPAS) Knowledge Requirements
  - [GEOG 316](#) Multivariate Statistics
  - [GEOG 318](#) Spatial Analysis
  - [GEOG 325](#) Geographies of Health
  - [GEOG 428](#) Spatial Demography

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Note for all Specializations

To count [GEOG 490A](#) and [GEOG 490B](#) toward the specialization, the thesis topic must focus on an area relevant to the specialization.

**Other Faculty of Environment Undergraduate Calendar changes related to the plans under Motions 1 and 2 above: (bold = new; strikethrough = deleted)**

2021/22 calendar: <http://ugradcalendar.uwaterloo.ca/page/ENV-Environment-Overview>

The Faculty of Environment offers the following undergraduate degrees.

Bachelor of Environmental Studies (BES)

Honours Environment and Business (regular and co-op)

Honours Environment, Resources and Sustainability (regular and co-op)

Honours Geography and Aviation (regular)

General Geography and Environmental Management (regular)

Honours Geography and Environmental Management (regular and co-op)

Honours Geomatics (regular and co-op)

Honours International Development with Practice Specialization or Research Specialization (regular)

Honours Planning (co-op)

**Bachelor of Sustainability and Financial Management (BSFM)**

**Honours Sustainability and Financial Management (regular and co-op)**

Bachelor of Knowledge Integration (BKI)

Honours Knowledge Integration (regular)

**Bachelor of Science (BSc)**

**Honours Climate and Environmental Change (regular and co-op)**

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2021/22 calendar: <http://ugradcalendar.uwaterloo.ca/page/ENV-Overview-of-Coop-Plan-Requirements>

**Bachelor of Environmental Studies (BES) and Bachelor of Science (BSc)**

To maintain satisfactory standing in the **Bachelor of Environmental Studies (BES) and Bachelor of Science (BSc) programs** in the Faculty of Environment (see below for **Bachelor of Sustainability and Financial Management [BSFM]**), students must meet the following requirements:

1. A minimum of four satisfactory work terms.
2. A minimum of four [Professional Development \(PD\) courses](#).  
[PD 1](#) and [PD 12](#) are mandatory. [PD 1](#) must be taken prior to the first work term. [PD 12](#) is taken during the first work term.

Students are encouraged to take subsequent Professional Development (PD) courses each work term until the requirement is met.

3. A minimum of four work-term reports.  
[PD 12](#) requires the submission of a written report. Successful completion of [PD 12](#) will be considered one of the four required work-term reports. The remaining three work-term reports are to be completed at the end of the second, third, and fourth work terms.

For the purposes of recording work reports, the course subject code WKRPT (Work-Term Report) will be added to the student's record in the appropriate work term. A successful work-term report will be signified by a numerical grade which is not calculated into either the minimum cumulative overall or the minimum cumulative major averages. The unit weighting for WKRPT courses is not counted towards degree requirements for ~~any Faculty of Environment~~ the **BES and BSc** academic plans.

#### Notes

1. Students missing two (or more) co-op requirements by the end of their 3B term will normally be removed from co-op, unless they have successfully been employed for four work terms. These students will remain in co-op but will not be eligible for a co-op degree.
2. Students not meeting their plan's co-op requirements may be considered for transfer to another Faculty of Environment academic regular plan.
3. See the table below for the sequencing of academic and work terms. Transfer students may be required to follow a different sequencing.
4. Further information on co-operative study is stated in the [Co-operative Education and Career Action](#) section of the Calendar.

#### Legend for Academic/Work Sequence Table

Key	Description
F,W,S	F=fall term; W=winter term; S=spring term
1A to 4B	<a href="#">Academic level</a> .
WT	Work term.
off	Neither a scheduled academic nor work term.

#### Academic/Work Sequence

##### Bachelor of Environmental Studies

Plan	F	W	S	F	W	S	F	W	S	F	W	S	F	W
Environment and Business	1A	1B	off	2A	WT	2B	WT	3A	WT	3B	WT	WT	4A	4B
Environment, Resources and Sustainability	1A	1B	off	2A	WT	2B	WT	3A	WT	3B	WT	WT	4A	4B
Geography and Environmental Management	1A	1B	off	2A	WT	2B	WT	3A	WT	3B	WT	4A	WT	4B
Geomatics	1A	1B	off	2A	WT	2B	WT	3A	WT	3B	WT	4A	WT	4B
Planning	1A	1B	off	2A	2B	WT	3A	WT	3B	WT	4A	WT	WT	4B

### Bachelor of Science

Plan	F	W	S	F	W	S	F	W	S	F	W	S	F	W
Climate and Environmental Change	1A	1B	off	2A	WT	2B	WT	3A	WT	3B	4A	WT	WT	4B

### Bachelor in Sustainability and Financial Management

Information on work-term/academic sequencing and co-op requirements for the Bachelor in Sustainability and Financial Management can be found on the academic plan curriculum page, within the Faculty of Environment section of this calendar. This plan is offered jointly by the Faculties of Arts and Environment, but follows the Faculty of Arts' rules and regulations.

2021/22 calendar: <http://ugradcalendar.uwaterloo.ca/page/ENV-Overview-of-Academic-Plan-Requirements>

Degree Requirements Common to all Faculty of Environment Academic Plans

#### Legend

- <sup>1</sup> Cumulative major average requirement for all co-op plans except for Planning
- <sup>2</sup> Cumulative major average requirement for the Planning co-op plan
- <sup>3</sup> Minimum units at or above 200-level for all co-op plans except for Planning
- <sup>4</sup> Minimum units at or above 200-level for the Planning co-op plan

Requirement	Bachelor of Environmental Studies Honours, Regular and Co-op	Bachelor of Environmental Studies General, Three Year Regular	Bachelor of Knowledge Integration Honours, Regular	Bachelor of Science Honours Regular and Co-op	Bachelor of Sustainability and Financial Management Honours, Co-op
Minimum Required Units	20.0	15.0	20.5	20.0	20.0
Minimum Work Terms (Co-op only)	4	0	0	4	4
Minimum Professional Development (PD) Courses (Co-op only)	4	0	0	4	4
Minimum Work-term Reports (Co-op only)	4	0	0	4	4
Minimum Cumulative Overall Average	65%	60%	65%	65%	60%
Minimum Cumulative Major Average	70% <sup>1</sup> 75% <sup>2</sup>	65%	75%	70%	70%
Minimum units	13.5	8.5	13.5	14.5	N/A



at or above 200-level					
Communication Requirement	All bachelor's candidates in Environment must satisfy the Undergraduate Communication Requirement as determined for their program before the end of Year 2. See below for more information.				

For specific requirements, see your Department/School section of this Calendar.

[Determination of level and term of study](#) will follow the progression set by the University.

### Undergraduate Communication Requirement

The Faculty of Environment requires that all students have basic competency in English language communications – oral, written, and other media. First-year required courses have been identified in each program that provide the English language communication skills needed for successful completion of degree requirements. These courses are:

#### Bachelor of Science (BSc)

- **Climate and Environmental Change:** [ENGL 109](#) or [ENGL 129R](#)

#### Bachelor of Environmental Studies (BES)

- Environment and Business: [ENVS 131](#)
- Environment, Resources and Sustainability: [ERS 101](#)
- Geography and Aviation, Geography and Environmental Management, and Geomatics: [ENGL 109](#) or [ENGL 129R](#)
- International Development: [INDEV 101](#)
- Knowledge Integration: [SPCOM 223](#)
- Planning: [PLAN 102](#)

#### Bachelor of Sustainability and Financial Management (BFSM)

- **Information on the Undergraduate Communication Requirement for the Bachelor in Sustainability and Financial Management can be found on the academic plan curriculum page, within the Faculty of Environment section of this calendar. This plan is offered jointly by the Faculties of Arts and Environment, but follows the Faculty of Arts' rules and regulations.**

To demonstrate competency in communications, students must achieve a grade of 65% or higher in the identified course for their academic plan.

Students who do not achieve this grade must fulfil this requirement by the end of their 2B term in one of the following ways:

- Repeating the course and achieving 65% or higher (see [Academic Standing](#) as well as the [Courses, Enrolment, and Grades](#) sections of this Calendar for more information on repeating courses).
- Completing any of the above listed courses and achieving 65% or higher. Students may require the permission of the academic unit offering the course to enrol.

#### Notes for the BES and BSc academic plans:

1. An Undergraduate Communication Requirement (UCR) milestone on a student's academic record will indicate successful completion of this requirement.
2. Students who have not completed the Undergraduate Communication Requirement by the end of second year will have their future registrations cancelled and will be allowed to proceed only after successful completion of this requirement.



3. Specialized sessions are available through the [Writing and Communication Centre](#) and are open to all students. Students are also invited to visit the Writing and Communication Centre during drop-in hours for course work assistance. The Writing and Communication Centre does not charge students for its services.
4. Transfer credits from an external institution cannot be used to satisfy the Undergraduate Communication Requirement.
5. Students transferring into the Faculty of Environment who have completed any of the above courses with the required grade of 65% will be granted the UCR milestone.
6. An UCR milestone obtained while enrolled in another University of Waterloo faculty will satisfy this requirement.

## MAJOR MODIFICATIONS

### Faculty of Arts and Renison University College Social Development Studies

3. **Motion:** That Senate approve the proposed changes to the Three-Year General Social Development Studies Major, Four-Year General Social Development Studies Major, Honours Social Development Studies Major, and Social Development Studies Minor as outlined below, effective 1 September 2022.

#### Background and Rationale:

Currently only transfer credits with direct equivalencies to courses included in the major and minor plans (e.g. PSYCH 213R) can count towards those plans. However over one third of all SDS students are external transfers and many enter the program with unspecific transfer credits (E.g. SDS 2XX) across the four departmental disciplines (SDS, SOCWK, PSYCH, SOC). Consultation with other programs in Arts confirmed acceptance of unspecific transfer credits with varying limitations.

The department wishes to change the “notes” section of each plan to accept unspecific SDS-coded transfer credits at the 2XX level or above, dependent on plan residency requirements. This echoes how similar programs approach their plans, provides additional flexibility for completion among an increasing number of transfer students, and maintains clarity and internal consistency with accepting the core discipline code.

Revised calendar text (bold = new; strikethrough = deleted):

...  
Notes

~~Courses transferred from other institutions without a specific course equivalency to one of the courses in the four disciplines above cannot be counted towards the Social Development Studies plan-level requirements.~~

**1. Transfer credits with direct equivalencies to any specific course listed above and unspecific transfer credits with the SDS subject code at the 2XX level and above may be counted towards this plan; common degree requirements (e.g. residency, 50% rule) must still be met.**

...

/rmw

David DeVidi  
Associate Vice-President, Academic

**University of Waterloo**  
**REPORT OF THE VICE-PRESIDENT, ACACEMIC & PROVOST**  
**Report to Senate**  
**17 May 2021**

**FOR APPROVAL**

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**Roster of Graduands**

Since the roster of graduands will not be available until after the regular meeting of Senate in May and approval is required before the June meeting, the following motion is proposed:

**Motion:** That Senate delegate such approval to its Executive Committee for its 7 June 2021 meeting.

## **Vice-President, Research & International Report to Senate May 2021**

### **Waterloo International**

In March 2021, Waterloo International facilitated the signing of four agreements as follows:

1. Graz University of Technology, Austria, Student Mobility Agreement
  - This agreement signed with TU Graz falls under the overarching student mobility agreement signed in 2015 and allows student and staff exchange both to and from TU Graz to apply to access funding under the Erasmus IIA. It includes students from our Engineering and Math Faculties and those from TU Graz's Electricity and Energy, Mechanics and Metal Trades, Database and Network Design and Administration (Computer Science) Faculties
2. Politecnico di Milano, Italy, Student Mobility Agreement
  - This is a renewal of an established exchange agreement that was originally signed in 2011 which allows students from Waterloo's Faculty of Engineering to go on exchange with their Schools of Engineering and the School of Architecture Urban Planning and Construction Engineering.
3. Malmo University, Sweden, Student Mobility Agreement
  - This agreement is a renewal of an established exchange agreement that was originally signed in 2008 between Malmo and the University of Waterloo. It includes participation from the Faculties of Arts, Environment, Health, Math and Science.
4. University of Leeds, United Kingdom, Student Mobility
  - This agreement is a renewal of an established exchange agreement that was originally signed in 1988 with University of Leeds. It is a University-wide agreement.

### **Awards and Distinctions**

Waterloo received notice of six new Award winners during this period:

- **Haim Falk Award for Distinguished Contribution to Accounting Thought: Ken Klassen** (Arts, School of Accounting and Finance)

This award, sponsored by the Canadian Academic Accounting Association, is intended to stimulate scholarly thinking and research in Canada by giving widespread recognition to excellence in scholarly achievement that clearly contributes to the advancement of accounting thought. *"Ken Klassen is widely perceived to be the most distinguished tax*

*professor in Canada. He has a distinguished reputation among Canadian and US academics, as well as Canadian tax practitioners. His insights on tax issues are highly sought after, and valued, by academics, tax professionals and government regulators.”*

- **Canadian Cancer Society Awards for Excellence in Cancer Research: 2020 O. Harold Warwick Prize: Geoffrey Fong** (Arts, Psychology)  
[Embargoed until May 12]

Since 1993, the Canadian Cancer Society (CCS) has recognized outstanding contributions to Canadian cancer research by awarding CCS Awards for Excellence in Cancer Research. The O. Harold Warwick Prize is named after Dr Warwick, a pioneering researcher in cancer control and treatment, who became the first executive director of both the former National Cancer Institute of Canada and the Canadian Cancer Society. This prize is given annually to an investigator whose contributions have led to significant accomplishments in cancer control research. This award comes with a \$20,000 prize to support the awardee’s research program.

- **2020 Melinda S. Meade Distinguished Scholarship Award in Health and Medical Geography: Susan Elliott** (Environment, Geography and Environmental Management)

This award seeks to recognize individuals who have made outstanding contributions to the advancements of health and/or medical geography research.

- **Canada’s Clean 50 list for Education & Thought Leadership: Sarah Burch**, (Environment, Geography and Environmental Management)

Canada’s Clean50 offers recognition to Canada’s leaders in sustainability for their contributions over the prior two years. The Clean50 was created not only to recognize remarkable and inspiring leaders, but also to attempt to connect those leaders in order to bridge those gaps, and build connections that might not otherwise occur.

- **Fellow of the Association for Psychological Science (APS): Abigail Scholar** (Arts, Psychology)

This honour recognizes Scholar’s “*sustained outstanding contributions to the advancement of psychological science*” and “*...places her in the company of the most prominent scientists in our discipline.*”

- **Donald O. Hebb Distinguished Contribution Award, Canadian Society for Brain, Behaviour, and Cognitive Science (CSBBCS): Derek Besner** (Arts, Psychology) (to be awarded in June):

This award is made to an individual who has made a significant contribution to the study of brain, behaviour, and cognitive science.

## 2021 Faculty of Arts Award Recipients - Excellence in Research

- **Roy Brouwer (Economics)**

In his role as Executive Director of the Water Institute and through his own research, Roy Brouwer embodies the ideals of the University of Waterloo. With a focus on environmental economics, his work and contributions are highly interdisciplinary, international, and addresses real and pressing problems relevant to societies and life on the planet.

- **Stephanie Denison (Psychology)**

Stephanie Denison is an outstanding developmental psychologist who has made major contributions to our understanding of cognitive development. Viewed as a rising star by colleagues near and far, her work has, among other impacts, led psychologists to rethink how social and statistical knowledge, seemingly disparate areas, are connected from early in life.

- **Dan Henstra (Political Science)**

Dan Henstra's research on climate disaster risk and preparedness has had a significant impact on public policy and often attracts major media coverage. Whether one considers publications, success in winning competitive research grants, or impact on public policy, his performance has been extraordinary.

- **Imre Szeman (Communication Arts)**

Imre Szeman's research accomplishments throughout his career have been outstanding. His inspiring interdisciplinary research covers energy humanities, environmental studies, and social and political philosophy, which is actively applied through his work with the Petrocultures Research Group, the International Panel on Behavior Change, and the Canadian International Council, and more. In 2020, he reached the remarkable career achievement as Fellow of the Royal Society of Canada.

## Canada Research Chair

Waterloo secured one Canada Research Chair in April 2021.

- **Ning Jiang**, Tier 2 NSERC New, Chair in Artificial Intelligence for Human-centered Human-machine Interfaces, Engineering, Systems Design Engineering, \$100K/year for 5 years

## CFI John R. Evans Leaders Fund (JELF)

Waterloo was awarded two CFI JELF and one CFI JELF partnership awards in April 2021 that totalled **\$362,000**.

1. **Kelsey Leonard** (Environment): *Chair in Indigenous Waters, Climate and Sustainability\**; CFI-JELF partnership; \$125,000  
\*Infrastructure to support Indigenous-based CRC
2. **Jason Au** (Health, Kin): *Infrastructure for advanced hemodynamics research*; \$100,000

3. **Chul Min Yeum** (ENG, Civil and Environmental Engineering): *Infrastructure for Advancing Vision-Based Structural Assessment Technologies*; \$137,000

### Tri-Council Funding

In April 2021, Waterloo secured an additional **six awards** from non-profit sponsors totalling **\$171,696**.

1. **Centre for Bioengineering and Biotechnology**: Praxis Spinal Cord Institute, support for Indigenous community in innovation activities, \$50,000
  - Increase partnerships with the public and not-for-profit sectors to catalyze important policy development
2. **Rashmee Singh** (Arts, Sociology and Legal Studies): *A Partnership to Evaluate the Impact of COVID-19 on Criminal Justice and Community Responses to Domestic Violence: The Realities of Victim Safety and Offender Accountability*, \$24,912
3. **Heather Hall** (ENV, School of Environment, Enterprise and Development): *Rural Canada and COVID-19: Understanding the impacts, responses, and recovery needs for rural resilience*, \$24,246
4. **Marie-Claire Cordonier-Segger** (ENV, School of Environment, Enterprise and Development): *Partnership for Sustainable COVID-19 Economic Recovery: Canadian Law/Policy/Action Research Engaging across the Commonwealth*, \$23,668
5. **Momani, Bessma** (Arts, Political Science): *Partnering to Improve Immigrant Women Entrepreneurs' Success*, \$24,661
6. **Cameron McCordic** ((ENV, School of Environment, Enterprise and Development): *Catalyzing Local Sustainable Development: Assessing Municipal Readiness for SDG Implementation*, \$24,209

### SSHRC Insight Grants

This year, Waterloo submitted 33 applications and were successful on 18 (55%). Funding amount totalled **\$2,862,110**, which represented an increase of 30% from last year (\$2,194,259), despite the decrease in number of applications from the previous year (n= 40 last year). Waterloo's success rate was 55% compared to the National success rate of 53%.

In 2020/21, Waterloo submitted 19 Partnership Engage grants (up from 14 last year) and had an 83% success rate compared with the National success rate of 66%.

### International Research Partnership Agreements

- **Brainport Development NV, PhotonDelta, HighTechXL, Waterloo Institute for Nanotechnology (WIN)**

This new MOU enables entrepreneurial WIN members and their students to find research and business partners in the Eindhoven region and explore their engagement in EU markets. Proposed collaborative activities beyond nanotechnology is encouraged and can be explored in consultation with other appropriate offices at the University of Waterloo.

- **International Collaboration for Cancer Classification Research (IC3R) Consortium.**

The mission of the IC3R Consortia is to provide standards for research and appraisal of evidence for tumour classification and cancer diagnosis, permitting rapid translation of tumour research into clinical diagnostic practice. This will be accomplished through an international collaboration with partners in France, Belgium, Italy, USA, Australia, Japan, Singapore and including the Laboratory for Knowledge Inference in Medical Image Analysis, (KIMIA Lab) at the University of Waterloo, the only Canadian partner. The KIMIA Lab under the Directorship of **Hamid Tizhoosh** conducts research at the forefront of mass image data in medical archives using machine learning schemes with the ultimate goal of extracting information that cannot only support a more speedy and accurate diagnosis and treatment of many diseases but also, and more significantly, establish new quality assurance based on mining of collective knowledge and wisdom.

### **Bordeaux Research Partnership**

2021 marks the ten-year collaboration between University of Waterloo and University of Bordeaux (UBx). This collaboration covers diverse research fields including artificial intelligence and health; functional materials; nanoscience; health and environment; water; energy and aging. The intent of this collaboration is to facilitate strong research partnerships, advance grand challenge research and leverage significant new funding opportunities.

The joint research grant program, which started in 2015, has funded 34 projects, totaling over \$900,000. These projects have subsequently generated funding for both institutions, including over \$920,000 in new grants awarded to Waterloo researchers, and over €1,000,000 in new grants awarded to UBx researchers. Moreover, this collaboration has resulted in over 30 new innovations and technologies (broadly defined), 135 joint publications (as per InCites data from 2009 to 2020), one spin-off company and one patent filed.

Waterloo is currently in the process of renewing a strategic partnership agreement with the University of Bordeaux.