

**UNIVERSITY OF WATERLOO
SENATE GRADUATE & RESEARCH COUNCIL
NOTICE OF MEETING**

DATE: Monday 12 September 2022
TIME: 10:30 a.m. – 12:00 noon
PLACE: NH 3318/3308

Chair – J. Casello

AGENDA

<u>Item</u>	<u>Action</u>
Declarations of Conflict of Interest	
a. Excerpt from Bylaw 1, section 8*	Information
 CONSENT AGENDA	
Motion: To approve or receive for information by consent, items 1-3 below.	
1. Minutes of 13 June 2022*	Decision (SGRC)
2. Research Ethics* (Joza)	
a. Clinical Research Ethics Board – membership updates	Decision (SGRC)
b. Human Research Ethics Board – membership updates	Decision (SGRC)
3. Graduate Awards* (Simm)	
a. Women in Mathematics Directed Reading Program Mentorship Award - operating	Decision (SGRC)
b. John Parish Memorial Graduate Scholarship - trust	Decision (SGRC)
c. MSS Architects Graduate Scholarship for Locally Focused Architecture – trust	Information
d. Graduate Student Instructor Award in Philosophy – trust	Information
e. Graduate Student Teaching Assistant Award in Philosophy - trust	Information
f. Statistics and Actuarial Science Chair’s Graduate Award – operating	Information

REGULAR AGENDA

4. Business Arising from the Minutes	Information
5. Co-chairs’ Remarks	Information
6. Graduate Studies and Postdoctoral Affairs–Academic Calendar Changes* (Simm)	SEN-Regular
7. Research Centres and Institutes (Duncker)	
a. Guidelines for the Establishment of Centres and Institutes	Information
b. New: Centre for Sustainability and Business* (Olaf Weber, Elizabeth Demers)	SEN-Regular
8. Consultation Plan – Senate Governance Review: Future of SGRC*	Input/Discussion
9. Curricular Submissions	
a. Environment* (Peter Deadman)	Decision (SGRC)
10. Other Business	Information
11. Future Business	Information
a. Create Grants (success rate, ways to improve)	
b. Graduate Studies and Postdoctoral Affairs Vision Document	
12. Next Meeting: 3 October 2022 from 10:30 a.m. - 12 noon; Microsoft Teams	Information

*material attached

** to be distributed separately

“SGRC” to be approved on behalf of Senate

“SEN” to be recommended to Senate for approval

1 September 2022

Kathy Winter, PhD, CPsych
Assistant University Secretary

Excerpt from Senate Bylaw 1

8. Declarations of conflict of interest

8.01	At the beginning of each meeting of Senate or any of Senate’s committees or councils, the chair will call for members to declare any conflicts of interest with regard to any agenda item. For agenda items to be discussed in closed session, the chair will call for declarations of conflict of interest at the beginning of the closed portion of the meeting. Members may nonetheless declare conflicts at any time during a meeting.
8.02	A member shall be considered to have an actual, perceived or potential conflict of interest, when the opportunity exists for the member to use confidential information gained as a member of Senate, or any of Senate’s committees or councils, for the personal profit or advantage of any person, or use the authority, knowledge or influence of the Senate, or a committee or council thereof, to further her/his personal, familial or corporate interests or the interests of an employee of the university with whom the member has a marital, familial or sexual relationship.
8.03	Members who declare conflicts of interest shall not enter into debate nor vote upon the specified item upon which they have declared a conflict of interest. The chair will determine whether it is appropriate for said member to remove themselves from the meeting for the duration of debate on the specified item(s).
8.04	Where Senate or a committee or council of Senate is of the opinion that a conflict of interest exists that has not been declared, the body may declare by a resolution carried by two-thirds of its members present at the meeting that a conflict of interest exists and a member thus found to be in conflict shall not enter into debate on the specified item upon which they have declared a conflict of interest. The chair will determine whether it is appropriate for said member to remove themselves from the meeting for the duration of debate on the specified item(s).

University of Waterloo
SENATE GRADUATE & RESEARCH COUNCIL
Minutes of the 13 June 2022 Meeting
[in agenda order]
Microsoft Teams Meeting Videoconference

Present: Jeff Casello, Amelia Clarke, Peter Deadman, Charmaine Dean, Maureen Drysdale, Anna Esselment, Ana Ferrer, Bertrand Guenin, Alison Hitchens, Aiden Huffman, Julie Joza, Bessma Momani, Liz Nilsen, Jennifer Reid, Marianne Simm, Kankar Bhattacharya (on behalf of Siva Sivoththaman), Richard Staines, Julian Surdi, Mike Szarka, John Thompson, Kathy Winter (secretary).

Resources: Angela Christelis, Trevor Clews, Carrie MacKinnon-Molson, Amanda McKenzie.

Guests: Sara Anderson, Michael Drescher, Vijay Ganesh, Harold Godwin, Mark Knight, Christiane Lemieux, Jimmy Lin.

Regrets: David Clausi, Brian Laird, Anita Layton, Bruce Muirhead, Ian Milligan*, Martin Ross*, Siva Sivoththaman*

Organization of Meeting: Jeff Casello and Charmaine Dean, co-chairs of the council, took the chair, and Kathy Winter acted as secretary. The secretary advised that due notice of the meeting had been given, a quorum was present, and the meeting was properly constituted.

DECLARATIONS OF CONFLICT OF INTEREST

No conflicts of interest were declared.

CONSENT AGENDA

Council heard a motion to approve or receive for information the items of the consent agenda. Ferrer and Momani. Carried.

1. MINUTES OF 9 MAY 2022

Council approved the minutes of the meeting as distributed.

2. RESEARCH ETHICS

Council approved one new member and one member renewal (as well as one member change, for information) to the Human Research Ethics Board, as presented. Council received, for information, an update on Canadian Council on Animal Care Assessment, as presented.

3. GRADUATE AWARDS

Council approved items (a) through (c), as presented.

4. RENEWAL EXTENSION

On behalf of Senate, Council approved a 20-month extension of the mandate for the Centre for Bioengineering and Biotechnology. The revised centre renewal date is 31 December 2023, as presented.

REGULAR AGENDA

5. BUSINESS ARISING FROM THE MINUTES

There was no business arising.

6. CO-CHAIRS' REMARKS

Casello updated council regarding: (a) nearly completed Interdisciplinary Postdoctoral Program proposal which will bring in as many as 15 individuals; and (b) commitment by Associate Deans Research (ADR) and Associate Deans Graduate (ADG) to convene earlier and collectively in reviewing and delivering feedback to applicants and supervisors regarding Banting proposals. Dean reminded council of the [Waterloo at 100](#) initiative, where President and Vice-Chancellor, Dr. Vivek Goel, has extended the invitation to campus to examine and discuss what the

institution aspires to become by its 100th anniversary in 2057. Members can respond directly through the website, or provide comments directly to SGRC co-chairs or secretary.

7. RESEARCH CENTRES AND INSTITUTES

a. Dissolution: Centre for Advanced Trenchless Technologies (CATT). Council heard a motion to recommend to Senate the dissolution of CATT, as presented. Over the past 28 years, the Canadian underground infrastructure has changed. To adapt to this change and to better represent the Canadian industry, the Canadian Underground Infrastructure Innovation Centre (CUIIC) at the University of Alberta has been established and CATT's mandate will be transferred there so that it can continue and evolve. So, there is only one voice in Canada and to fully support CUIIC, CATT is winding down at the University of Waterloo on 30 April 2022 as approved by CATT's Board of Directors and its membership. Momani and Thompson. Carried.

b. Dissolution: Institute for Computer Research (ICR). Council heard a motion to recommend to Senate the dissolution of ICR, as presented. When ICR was formed in 1982, computing was revolutionizing many fields. ICR was created as a federation of research groups and individuals involved in computer-related research at the University of Waterloo, providing shared expertise and resources that enabled collaboration and innovation. Now computing is ubiquitous and part of all research that is conducted, and as a result the initial motivation for this institute no longer exists. ICR is no longer active with the retirement of its Executive Director in 2018 and its manager in 2019; there is no staff or space associated to it, and there are no funds remaining. Huffman and Guenin. Carried.

c. Renewal: Heritage Resource Centre (HRC). On behalf of Senate, council approved the renewal, for a 5-year term, of the Heritage Resource Centre (HRC), as presented. Drescher spoke to: (1) HRC's commitment to attracting graduate students from across faculties, EDII, and diversification; (2) HRC grass roots focus at the local and provincial level. Momani and Clarke. Carried.

d. Renewal: Waterloo Artificial Intelligence Institute (Waterloo.AI). On behalf of Senate, council approved the renewal, for a 5-year term, of the Waterloo Artificial Intelligence Institute (Waterloo.AI), as presented. Ganesh, Lin, and Godwin were invited by Casello to connect with GSPA in the acceleration of this collaborative program. Momani and Ferrer. Carried.

8. DISCUSSION REGARDING SGRC

Dean and Casello summarized council's discussion regarding structure and functioning of SGRC from [9 May 2022](#) and invited further commentary—in particular seeking council's views on [Senate Bylaw 2 \(section 4\)](#), as well as the intersection amongst SGRC membership roles (e.g., are there synergies among the roles of SGRC members that warrant continued, regular interactions? Or, are the roles independent such that joint meetings are not likely productive?). While council voiced support for the development and implementation of revised SGRC processes for agenda-setting and more productive strategic discussions, members also voiced being unable to add further to the conversation at present due to: (a) agenda time constraints, (b) uncertainty as to the type of feedback being sought (e.g., SGRC separation or reformation), and (c) the need to first clarify the mandates of other bodies (e.g., Research Leaders Council, Research Operations Council). In light of above, substantive time at 12 September 2022 SGRC will be allocated for continued discussion. In the interim, council was invited to send any comments thereon to committee secretary, Winter.

9. CURRICULAR SUBMISSIONS

Faculty of Engineering. On behalf of Senate, council heard a motion to approve item 1) as presented. Nilsen and Momani. Carried. On behalf of Senate, council heard a motion to approve item 2) as presented. Guenin and Ferrer. Carried.

Faculty of Arts. Council heard a motion to recommend to Senate to approve the deletion of the graduate research fields from the Master of Arts (MA) in History program, effective 1 September 2022, as presented. Esselment and Hitchens. Carried. On behalf of Senate, council heard a motion to approve items a) and c) as presented. Esselment and Hitchens. Carried. On behalf of Senate, council heard a motion to approve items b) and d) as presented. Esselment and Ferrer. Carried.

10. INSTITUTIONAL RESEARCH DATA MANAGEMENT STRATEGY UPDATE

Hitchens spoke to the presentation as distributed. In discussion: concern regarding amount of additional work being required of researchers, including graduate students, in fulfillment of any new security requirements and data management plans; the need for centralized university support and streamlined processes, including clarity regarding shared responsibilities for RDM thereby ensuring supervisors' obligations are not shifted to graduate students. Council was reminded of the institutional RDM implementation deadline of 2023 and was invited to reach out to Hitchens and Milligan for any suggestions regarding this initiative, including the prioritization of EDII (e.g., Indigenous data and data sovereignty).

11. OTHER BUSINESS

Under other business, Casello raised the topic of how council would address any SGRC business requiring attention prior to the commencement of the fall SGRC meeting cycle, 12 September 2022. Council agreed to proceed by e-vote with provisions:

- Committee Secretary to circulate the motion and associated materials to members (via email) for consideration.
- Designate a window (e.g., 5 business days) for seeking clarification, posing questions, providing feedback—during which time either a meeting will be scheduled or communications made by email in order to provide responses thereon.
- Open e-voting window (e.g., 5 business days) where members respond as either “nay”, “yay” or “abstain”—following which time outcome will be communicated to members by email.

12. NEXT MEETING

The next meeting will be held Monday 12 September 2022 from 10:30 a.m. to 12 noon; Location TBD.

28 June 2022

Kathy Winter, PhD, CPsych,
Assistant University Secretary

Memorandum

To: Members
Senate Graduate and Research Council (SGRC)

From: Julie Joza
Director, Research Ethics

Date: August 29, 2022

Subject: Membership on the Clinical and Human Research Ethics Boards

This memo outlines membership updates that will be taking place on the Clinical Research Ethics Board (CREB) and the Human Research Ethics Board (HREB). This update is for consideration and approval by the Senate Graduate and Research Council.

Clinical Research Ethics Board

New Member

[Dr. Michael Wallace](#), PhD, Associate Professor, Statistics and Actuarial Science, will begin a three-year term starting September 13, 2022, and continuing through to August 31, 2025. Michael is replacing Dr. Lucy Gao. Dr. Gao ended her term early to accept a position at the University of British Columbia. Michael will be filling the role of the member with expertise in statistical methodologies.

Dr. Wallace secured his PhD in Statistics at the London School of Hygiene and Tropical Medicine and completed post-doctoral training at McGill University. Michael's research interests include dynamic treatment regimens and personalized medicine. Dr. Wallace has experience serving on a research ethics board as he had previously been appointed to the Animal Care Committee for a term.

Renewing Members

[Dr. Kelly Grindrod](#), PharmD, Associate Professor, School of Pharmacy, will renew for a 3-year term, beginning October 1, 2022, and continuing through to September 30, 2025. Dr. Grindrod is the current CREB chair.

[Dr. Daphne McCulloch](#), OD, PhD, Professor, School of Optometry and Vision Science, will extend her current term through to December 31, 2022, after which Daphne will begin a sabbatical. Dr. McCulloch serves as the faculty member with expertise in vision science. A search to replace the expertise that Dr. McCulloch holds on CREB is underway.

[Dr. Tejal Patel](#), PharmD, Associate Professor, School of Pharmacy, will begin a second term on CREB starting October 1, 2022, and continuing through to September 30, 2025. Dr. Patel will continue in her role as the faculty member with expertise in Pharmacology.

Human Research Ethics Board

Renewing Member

[Dr. Jonathan Oakman](#), PhD, Associate Professor, Department of Psychology, will begin a second term on HREB starting on November 1, 2022, and continuing through to October 31, 2025. Dr. Oakman provides expertise in clinical psychology and will continue to serve as a member of the Delegated Ethics Review Committee (DERC) in the Department of Psychology.

Reminder: SGRC members who wish to learn more about the qualifications or academic background and interests of the individuals being nominated to the REB are encouraged to contact Julie Joza, Director, Research Ethics at jajoza@uwaterloo.ca. Julie will be pleased to discuss with SGRC members in advance of the meeting the information they may need to help support their decision to recommend the nomination of the individual in becoming a member of the REB. On behalf of the SGRC, the research ethics office retains a copy of each member's CV and expression of interest in being a REB member.



August 29, 2022

TO: Kathy Winter, Assistant University Secretary and Privacy Officer, Senate Graduate and Research Council

FROM: Heidi Mussar, Associate Director, Graduate Financial Aid & Awards

RE: Agenda items for Senate Graduate & Research Council – September 2022

Items for Approval

- a) **Women in Mathematics Directed Reading Program Mentorship Award - operating**
Women in Mathematics Directed Reading Program Mentorship (WiM DRP) awards, valued at \$400, are provided to graduate students registered in the Faculty of Mathematics who lead an interesting reading project on a topic relevant in mathematics. Students must demonstrate sustained commitment to mentoring, and inspiring undergraduate students who participate in WiM DRP. The award recognizes the valuable time and work that mentors invest in helping the mentees throughout the term to develop insight and skills in mathematics. Selection will be made at the end of each term by representatives on the WiM committee based on a review of weekly reports and end-of-term presentations by the undergraduate mentees as a way of demonstrating that the graduate mentors fulfilled their requirements.
- b) **John Parish Memorial Graduate Scholarship – trust**
One scholarship valued at \$5,000 will be awarded annually to a full-time graduate student whose research is in the fields of fluvial geomorphology, river and stream processes, or river and aquatic habitat protection and restoration. Selection will be based on the student’s anticipated research contribution and academic excellence. Preference will be given to applicants who are conducting research within Ontario. The Water Institute will administer an annual scholarship application and selection process during the fall term. This award was established by friends and family in memory of John Parish.

The period of this defined term award will be from 2022/23 to 2027/28.

Items for Information

- c) **MSS Architects Graduate Scholarship for Locally Focused Architecture – trust**
In 2022, MartinSimmons Architects Inc. rebranded, and is now known as MSS Architects Inc. The award, originally established in 2020, will now be known as the MSS Architects Graduate Scholarship for Locally Focused Architecture. Additionally, the application process and selection timing are being updated.

Originally, selection would be based on a review of a student’s 500-word research abstract and applications were required by October 31.

The amended terms allow for an 800-word research abstract and the deadline will be November 30.

d) Graduate Student Instructor Award in Philosophy - trust

Originally approved by SGRC in June 2012, the department of Philosophy would like to amend the terms by being able to give an increased prize amount when funds are available. The eligibility and selection criteria remain the same.

The updated award description will read as follows:

One award valued at a minimum of \$200 will be given annually to a Philosophy graduate student to acknowledge excellence as a Graduate Student Instructor in the Department of Philosophy. Students who were student instructors in any of the three terms in the previous year are eligible to be considered for this award. Selection will be made by the Faculty annually in May and will be based on teaching evaluation scores, student comments, and track record of competent and successful administration of courses.

e) Graduate Student Teaching Assistant Award in Philosophy - trust

Originally approved by SGRC in June 2012, the department of Philosophy would like to amend the terms by being able to give an increased prize amount when funds are available. The eligibility and selection criteria remain the same.

The updated award description will read as follows:

One award valued at a minimum of \$200 will be given annually to a Philosophy graduate student to acknowledge excellence as a Teaching Assistant in the Department of Philosophy. Students who were Teaching Assistants (TAs) in any of the three terms in the previous year are eligible to be considered for this award. Selection will be made by the Faculty annually in May and will be based on evidence of good teaching as determined by faculty members who have worked with the TAs.

f) Statistics and Actuarial Science Chair's Graduate Award – operating

Recognizing that formal terms of reference did not exist for this award, a set of terms was created in order to advertise on the graduate awards database.

Awards, valued at a minimum of \$1,000 will be awarded to research-based master's students and doctoral students who show successful academic progress each term. Recipients will be selected based on academic excellence as determined by a minimum cumulative average of 80% (or equivalent); in addition, PhD students beyond their first year will also be evaluated based on their term progress report. Recipients will be selected automatically by the Associate Chair, Graduate Studies and the Statistics and Actuarial Science Graduate Awards Committee.

**OFFICE OF THE REGISTRAR REPORT TO
SENATE GRADUATE & RESEARCH COUNCIL**
September 2022

1. REGULATIONS

1.1. Academic Calendar Dates for 2022-2023 (REVISED)

1. REGULATIONS

1.1. Academic Calendar Dates for 2022-2023

The 2022-23 dates were initially approved at the September 2021 SGRC meeting, with revisions approved at the November 2021 SGRC meeting. Since that time, we have reviewed the need to designate In-Person Exam Days for Online Courses. We are adjusting accordingly and the additional/revised dates are below.

	Fall 2022	Winter 2023	Spring 2023
Co-operative Work Term Begins	Sept. 6 (T)	Jan. 9 (M)	May 8 (M)
Classes Begin	Sept. 7 (W)	Jan 9. (M)	May 8 (M)
Holidays	Oct. 10 (M)	Feb. 20 (M) Apr. 7 (F)	May 22 (M) July 3 (M) Aug. 7 (M)
Reading Week	Oct. 8-16 (S-U)	Feb. 18-26 (S-U)	N/A
Convocation	Oct. 21, 22 (F,S)	N/A	June 13-17 (T-S)
Classes End	Dec. 6 (T)	Apr. 10 (M)	Aug. 1 (T)
Make-up Day(s) for in-term holidays	N/A	Apr. 10 (M) for Apr. 7 (F schedule)	May 23 (T) for May 22 (M schedule) July 31 (M) for July 3 (M) Aug. 1 (T) for May 23 (T)
Pre-Examination Study Day(s)	Dec. 7, 8 (W, R)	Apr. 11,12 (T,W)	Aug. 2,3 (W,R)
Examinations Begin	Dec. 9 (F)	Apr. 13 (R)	Aug. 4 (F)
In-Person Exam Days for Online/ Remote Courses	Dec. 9, 10 (F,S) Dec. 14, 17 (W,S)	Apr. 14, 15 (F,S) Apr. 19, 22 (W,S)	Aug. 11, 12 (F,S) Aug. 16, 18 (W,F)
Examinations on Sunday	Dec. 11 (U)	N/A	N/A
Examinations End (including Emergency Day)	Dec. 23 (F)	Apr. 28 (F)	Aug. 19 (S)
Co-operative Work Term Ends	Dec. 23 (F)	Apr. 28 (F)	Aug. 25 (F)
Teaching days	60	60	60
Pre-examination Study Day(s)	2	2	2
Examination days	13 (+1 Emergency Day)	13 (+1 Emergency Day)	11 (+1 Emergency Day)

Symbols and abbreviations:

(M) Monday, (T) Tuesday, (W) Wednesday, (R) Thursday, (F) Friday, (S) Saturday, (U) Sunday,
N/A – Not Applicable

Guidelines for Determining Academic Calendar of Dates

The following are principles and guidelines either formally agreed upon by Senate or adopted as common practice in determining the dates for the academic year.

1. That the practice of setting dates for each academic year continues to be an annual exercise.
2. That there be no fewer than **60 teaching days** (12 weeks) in a term. A clear rationale for fewer than 60 teaching days must be communicated to Senate at the time calendar dates are approved. In calculating teaching days in a term, Saturdays, Sundays, and public or University holidays are excluded.
3. That attention be given to **balancing the number of meets** in courses. Where an imbalance may occur because of public holidays, the class schedule for a day different than the calendar day can be used to balance the number of course meets.
4. That **fall convocation** be the Friday and Saturday that fall in the third full week (beginning Sunday) of October.
5. That **spring convocation** be the Tuesday to Saturday in the second full week (beginning Sunday) in June.
6. That the **reading weeks** occur in all faculties in the fall and winter terms. They must begin on the Saturday before the public holidays of Thanksgiving Day and Family Day and will end on the following Sunday.
7. That **fall term** classes begin on the Wednesday following the public holiday of Labour Day. **Exception:** The fall term begins on Tuesday, September 8 when Labour Day is September 7.
8. That the start date for **winter term** be set as follows:
 - If January 1 is a Sunday, then start of classes is Wednesday, January 4.
 - If January 1 is a Monday, then start of classes is Wednesday, January 3.
 - If January 1 is a Tuesday, then start of classes is Monday, January 7.
 - If January 1 is a Wednesday, then start of classes is Monday, January 6.
 - If January 1 is a Thursday, then start of classes is Monday, January 5.
 - If January 1 is a Friday, then start of classes is Tuesday, January 5.
 - If January 1 is a Saturday, then start of classes is Wednesday, January 5.
9. The start date for **spring term** be set as follows:
 - If May 1 is a Sunday, then start of classes is Monday, May 2.
 - If May 1 is a Monday, then start of classes is Monday, May 1.
 - If May 1 is a Tuesday, then start of classes is Tuesday, May 1.
 - If May 1 is a Wednesday, then start of classes is Wednesday, May 1.
 - If May 1 is a Thursday, then start of classes is Monday, May 5.
 - If May 1 is a Friday, then start of classes is Monday, May 4.
 - If May 1 is a Saturday, then start of classes is Monday, May 3.
10. That there be no fewer than one **pre-examination study day** and when possible, two pre-examination study days (excluding Saturday, Sunday, and public holidays) between the end of classes and the beginning of examinations. A clear rationale for using fewer than two days or

Saturday, Sunday, and holidays as pre-examination study days, must be communicated to Senate at the time calendar dates are approved.

11. That there be no fewer than 13 **examination days** in the fall and winter terms, and 11 examination days in the spring term. In addition, one Emergency Day with no scheduled examinations is added to the end of the examination period.
12. In calculating **examination days**, Saturdays which fall within the period are included, whereas Sundays and public or University holidays are excluded.

Exceptions:

- Examinations will not be scheduled on the Saturday following Good Friday when that day falls within the examination schedule or the Saturday of the Civic Day weekend.
 - The first Sunday within the examination period may be used when required to accommodate the prescribed number of examination days in the fall term.
13. That for the **fall term's examination period**, no examinations be scheduled beyond December 22. The Emergency Day cannot be scheduled beyond December 23.
 14. That **online course examination days** in each term be the first consecutive Friday and Saturday in the examination period.
 15. **Grades due dates** for on campus courses are normally scheduled seven days from the date of the final examination. Grades for online (Centre for Extended Learning) courses that have a scheduled final examination are due on the last day of the grades submission period. Grades for all courses without a scheduled final examination are normally due 14 days after the start of examinations.
 16. **Co-op work terms** are expected to be 16 week in duration. Actual start and end dates may vary depending on employer or student requirements in consultation with Co-operative Education.

Prepared by:

C. Newell Kelly, Registrar

June 2021

October 2021

Revised June 2022

Rules that Require Exceptions with Rationale:

Rule 8

*That the start date for **winter term** be set as follows:*

- *If January 1 is a Sunday, then start of classes is Wednesday, January 4.*
- *If January 1 is a Monday, then start of classes is Wednesday, January 3.*
- *If January 1 is a Tuesday, then start of classes is Monday, January 7.*
- *If January 1 is a Wednesday, then start of classes is Monday, January 6.*
- *If January 1 is a Thursday, then start of classes is Monday, January 5.*
- *If January 1 is a Friday, then start of classes is Tuesday, January 5.*
- *If January 1 is a Saturday, then start of classes is Wednesday, January 5.*

A survey of Ontario universities showed that of those respondents, all are beginning the 2023 winter term on Monday, January 9, 2023.

Rule 9

*The start date for **spring term** be set as follows:*

- *If May 1 is a Sunday, then start of classes is Monday, May 2.*
- *If May 1 is a Monday, then start of classes is Monday, May 1.*
- *If May 1 is a Tuesday, then start of classes is Tuesday, May 1.*
- *If May 1 is a Wednesday, then start of classes is Wednesday, May 1.*
- *If May 1 is a Thursday, then start of classes is Monday, May 5.*
- *If May 1 is a Friday, then start of classes is Monday, May 4.*
- *If May 1 is a Saturday, then start of classes is Monday, May 3.*

Due to the delayed start to the 2023 winter term, the 2023 spring term will be delayed.

Rule 12

... The first Sunday within the examination period may be used when required to accommodate the prescribed number of examination days in the fall term.

With fall term classes beginning September 7, 2022, and the scheduling of two study days prior to the fall final exam period, the first Sunday within the exam period was required for scheduling exams to accommodate the prescribed number of examination days.

... Examinations will not be scheduled on the Saturday following Good Friday when that day falls within the examination schedule or the Saturday of the Civic Day weekend.

Saturday, August 5, 2023 will not be used for schedule of examinations during the 2023 spring term final exam period, as it is the Saturday of the Civic Day weekend.

Rule 14

That online course examination days in each term be the first consecutive Friday and Saturday in the examination period.

~~At the time of preparation of this document, it is unknown as to when online course examination days will resume, as there has been a hold on in-person exams for online courses due to the COVID-19 pandemic. Considerations will be made at a future date.~~

With the resumption of regular university operations, including that of exam administration, it has been determined that online course examination days are required. It has also been determined that with the

expected volume of online courses with in-person exams, additional days will be required, and therefore dates have been selected for the first consecutive Friday and Saturday, as well as the first Wednesday and second Saturday of each exam period. With the second Saturday of the spring 2023 exam period landing on the emergency day, the second Friday of the exam period will be used.

Proposal to Establish the
Centre for Sustainability and Business (CSB)
as a Faculty-Funded Research Centre of the
Faculties of Environment and Arts

Submitted by: The Deans of Environment and Arts, Jean Andrey and Sheila Ager

Date: December 5, 2021, updated January 10, 2022, February 28, 2022, and August 22, 2022

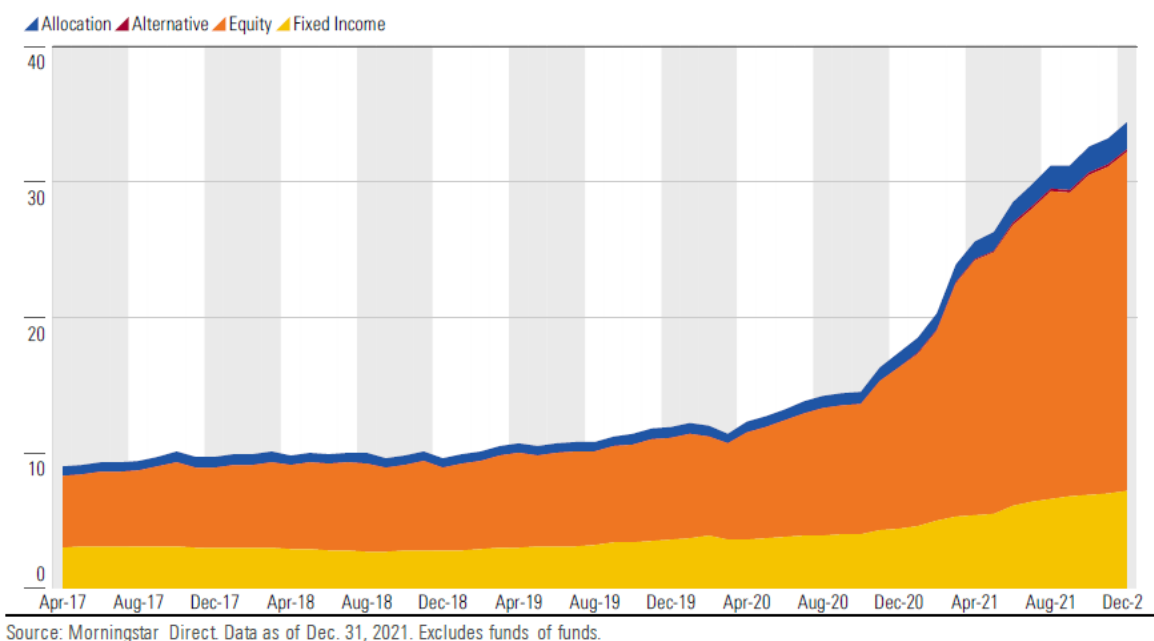
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Overview and Rationale

Canadian investment in sustainable funds has exploded in recent years, as evidenced by the graph below from Morningstar. Over the 2021 calendar year alone, assets invested in sustainable funds and exchange-traded funds in Canada nearly doubled, growing from CAD 17.4 billion to CAD 34.5 billion.¹

Exhibit 1 Canadian Sustainable Fund Assets by Asset Class (Excludes Funds of Funds, CAD, Billions)



This Canadian trend follows years of sustainable investment growth in Europe and a contemporaneous surge in the U.S. and other jurisdictions. In the U.S., for example, 2021 was also a record year, while the amount invested in ESG increased tenfold from 2018 to 2020, and 25-fold from 1995 to 2020.² It is now estimated that one-third of all assets contain sustainable investments.³ The University of Waterloo's own investment portfolios are no exception to this trend, and the two founding faculty members of the proposed CSB were both external advisors to UW's FI Responsible Investment Advisory Group that was charged with evaluating the decarbonization of UW's investment portfolios. Furthermore, it should be noted that these trends are not considered to be a "fad" or a "bubble." Rather, there has been a revolution in thinking about the role of business in society, and the unbridled pursuit of shareholder profits at the expense of society and the environment is generally perceived as no longer acceptable.

In light of changing investor, consumer, employee, and general societal values, companies are increasingly required to incorporate environmental, social, and governance ("ESG") considerations into their corporate strategies and internal investment decisions and performance evaluation-reward systems (Christensen et al., 2021). Doing so necessitates new non-financial information tracking systems, performance measures, auditing/assurance standards, and external reporting systems. Even

¹ <https://www.morningstar.com/en-ca/lp/sustainable-investing-landscape>

² <https://www.fastcompany.com/90706552/esg-investing-continued-to-soar-in-2021-the-government-could-boost-it-even-more>

³ Ibid.

while there is a revolution under way towards an increasingly broader view of the stakeholders of business activities extending well beyond the providers of financial capital, the infrastructure required to support the measurement, tracking, incentivizing, and reporting of non-financial aspects of corporate performance is not yet well developed. A tremendous amount of research across disciplines is currently ongoing to support this new sustainable approach to business. Much remains to be done, however, and the University of Waterloo is well-positioned to lead this charge.

Corporate sustainability strategies are essential to reduce the negative impacts, and to increase the positive impacts, of business in society and on the environment. Furthermore, a sustainable approach to business involves the management of risks that may be triggered by forces beyond the company's own control – such as preparing for the impact of climate change.

Some of the most important companies and organizations in Canada and elsewhere in the world have made ESG-related issues a top priority in terms of how they conduct their business, make investments, and seek to (re-)train their members and employees. Examples include Blackrock; Ernst & Young (EY); the CFA Institute; PricewaterhouseCoopers (PWC); CPA Ontario and CPA Canada; the Canada Pension Plan Investment Board (CPPIB), Ontario Teachers' Pension Plan (OTPP), and Caisse de Dépôt et placement du Québec (CDPQ); and McKinsey, amongst many others. All these organizations have proclaimed the importance of ESG to their current and future business practices, and they emphasize the need to develop greater expertise in the field.

Sustainability Reporting is Becoming Mandatory

Pursuant to the intense investment, consumer, and societal forces alluded to above, corporate stakeholders are increasingly demanding ESG information related to companies' sustainable business practices.

ESG reporting is increasingly becoming mandatory around the globe. The European Union has been a leader in this space for many years. Regulators there are examining how to make sustainability considerations an integral part of the bloc's financial policy to support the European Green Deal.⁴ This includes an updated version of their Non-Financial Reporting Directive (NFRD), referred to as the Corporate Sustainability Reporting Directive (CSRD), that also requires forward-looking sustainability disclosure.⁵ While the previous directive was only applicable to economically significant companies (mostly those offering securities to the public in the EU), the new directive is expected to impact the reporting of more than 50,000 companies.

With respect to climate risk reporting, in 2015 the Task Force on Climate-related Disclosures (TCFD) was established by the Financial Stability Board (which was chaired at the time by Mark Carney, former Governor of the Bank of Canada and then-Chair of the Bank of England) when it became clear that markets were not adequately pricing in climate-related risks. The TCFD's proposed standards were issued in 2017 and began being voluntarily adopted by companies around the world in 2018. However, in 2021, with concerns about the impact of climate risk intensifying, numerous countries began mandating TCFD-compliant reporting. In Canada, large businesses that applied for COVID-related government loans were required to publish TCFD-compliant Annual Climate Disclosure Reports

⁴ https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance_en

⁵ https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12129-Corporate-Sustainability-Reporting_en

(Degnarain, 2020). Furthermore, following its pledge to cut emissions by 40%-45% by 2030 and its commitment to net zero by 2050, on May 13th, 2021, the Government of Canada established the Sustainable Finance Action Council, indicating that the Council's "early emphasis will be on enhancing climate-related disclosures in Canada's private and public sector, in alignment with the TCFD recommendations."⁶ Finally, after a yearlong study, the Ontario Capital Markets Modernization Taskforce issued its report in January 2021 calling for mandated ESG reporting for market-listed firms.⁷ In summary, the mandating of ESG and climate risk related disclosures is an immediately pending issue in Canada, following similar developments in other jurisdictions around the world.

Perhaps most importantly on the sustainability reporting standards front, the International Financial Reporting Standards (IFRS) Foundation announced in November 2021 that it would establish the International Sustainability Standards Board (ISSB). The ISSB has the backing of many of the most influential investors around the world, as well as of the International Organization of Securities Commissions (IOSCO) and many of its member securities commissions (i.e., securities commissions, such as the OSC in Ontario and the SEC in the U.S., are the regulators of companies issuing debt and equity securities to the public in their respective jurisdictions). As with the International Accounting Standards Board's (IASB) *financial accounting* standards, which are now mandated in 140 jurisdictions around the world (and are permitted by numerous others), it is expected that most countries will also eventually adopt the sustainability standards being developed by the ISSB. Furthermore, the ISSB has expressly committed to addressing climate-related reporting first, and it intends to incorporate much of what has already been established by the TCFD reporting recommendations. Importantly, Canada has managed to secure the second seat of the new ISSB (with the global headquarters being in Europe). Thus, a significant portion of the most important work ever being done in the sustainability standard setting space will soon take place in Canada.

The Research Needs in Sustainable Business

Although there has been unprecedented Canadian and global growth in sustainability-related investments in recent years, there is no generally agreed upon definition as to what constitutes "sustainable investments." Legislators in Europe are grappling with this question, and the U.S. SEC has similarly announced that it will be critically reviewing investment fund claims to being socially responsible. Similar scrutiny will surely follow in Canada as institutions (e.g., pension funds and endowments) and individuals seek responsible investments that will have real impact, not just a "label." Research is needed to address questions such as how to define "responsible" and "socially responsible" investment, as well as to investigate and document the real impact of these investments on social and environmental outcomes.

Furthermore, pundits and academics alike have begun to question how corporate sustainability can be measured and rated. For instance, research is needed to assess whether corporate sustainability leaders are really "doing good" in their business activities or whether they really just engaging in "greenwashing" (Raghunandan & Rajgopal, 2021). researchers have the requisite expertise and experience to examine the impact of reporting standards on corporate behavior and on capital market

⁶ https://www.esgtoday.com/canada-launches-sustainable-finance-action-council-aims-to-enhance-climate-disclosure/?utm_source=rss&utm_medium=rss&utm_campaign=canada-launches-sustainable-finance-action-council-aims-to-enhance-climate-disclosure

⁷ <https://www.ontario.ca/document/capital-markets-modernization-taskforce-final-report-january-2021>

participants, and thus to meaningfully contribute to the sustainable investment conversation and to solutions.

Sustainability and business growth is driven by societal risks and opportunities, such as climate change and diversity, by sustainable financial products and services, such as green bonds, and by investor demands, both institutional and retail. Some of these topics have already been addressed by UW researchers. Other research topics and questions that researchers affiliated with the proposed centre could address include the market for “green bonds;” whether tying executive compensation to sustainability goals results in higher ESG scores, higher institutional ownership, fewer corporate scandals, and better “real” (as opposed to perceived) sustainability performance; what are the determinants and capital markets consequences of firms’ decisions to voluntarily disclose particular sustainability information; whether the relationship between diversity and inclusivity in employment practices influences corporate innovation and financial performance; and whether big data techniques can be used to uncover “greenwashing” in corporate sustainability reporting.

Academic interest in sustainability research has never been higher. Recently, high impact journals such as The Review of Financial Studies, Journal of Accounting Research, Review of Accounting Studies, Management Science, Contemporary Accounting Research, and the Review of Finance have all produced special issues on topics related to sustainability and financial management despite having previously expressed little interest in the area. In the Review of Financial Studies Special Issue editorial, the editors even mentioned the unusually high submission rate for papers addressing sustainability in finance and accounting (Hong et al., 2020).

It is generally recognized that real business solutions to the massive environmental and societal problems affecting businesses require a much more interdisciplinary approach. For example, while accountants are experts at measurement (mostly financial), standard setting, and auditing, they are not experts in climate science, in understanding the impact of DEI policies on employee motivation and performance, nor in the rights of indigenous peoples and their link with environmental degradation. Furthermore, many of the advances in trying to capture the impact of corporate ESG initiatives on aspects of firm performance rely on artificial intelligence (AI) or other big data techniques. In short, the really big sustainability challenges being faced by businesses require interdisciplinary expertise in order to be meaningfully addressed. Academics from accounting, finance, environmental science, computer science, engineering, artificial intelligence, sociology, psychology, and health sciences, as well as from the natural sciences, must come together to make the most important advances in sustainability in business. Indeed, perhaps this is why the Canadian Corporate Knights Magazine asked the question as to whether business schools can keep up with the need to develop sustainable business strategies.⁸ This creates an opportunity for the UW, with its strong accounting/finance/environmental base and interdisciplinary approach to research and problem-solving, to have the most significant impact in sustainability and business. As reported by the Hewlett Foundation that recently made significant contributions to sustainability-oriented “reimagining capitalism” projects at several U.S. universities, “Now more than ever, *it is imperative that we prioritize interdisciplinary scholarship* to update our knowledge of complexity to better understand our economy” (emphasis added).⁹

⁸ <https://www.corporateknights.com/education/mba-purpose-over-profit/>

⁹ <https://hewlett.org/newsroom/major-philanthropies-launch-effort-to-establish-multidisciplinary-centers-at-leading-academic-institutions/>

Finally, FinTech for Good is a new field that combines finance and technology to positively impact sustainable development. However, what is missing is more interdisciplinary research that addresses the current state, strengths and weaknesses, and further developments in sustainability and business. These issues are, for instance, auditing standards for corporate sustainability reporting, the validity of ESG indicators, reporting and ratings, and the connection between corporate sustainability performance and financial performance.

Notably, there are already significant interdisciplinary collaborations in sustainability and business research underway at the UW. Joint projects exist between researchers from Environment, Arts, Engineering, and Computer Science. Examples are research on Canadian corporate climate-related reporting practices and sustainable water finance. In the periods leading up to this proposal, meetings were held with numerous faculty members outside of Environment and Arts, many of whom expressed interest in being members of the proposed CSB. The list of these faculty members is available in the Annex, although it should be recognized that faculty were included in these preliminary talks on a somewhat ad hoc basis (i.e., the list was not derived from a systematic survey and should not be considered exhaustive).

National and International Collaborations

As we are seeking to expand our global impact in the sustainability and business area, the UW is already working with several newly-formed national and international associations that are focused on sustainability and business. First, the UW is a founding member of an international academic association related to sustainability and financial management that was established in 2017, the Global Research Alliance for Sustainable Finance and Investment (GRASFI).¹⁰ The 27 founding members of GRASFI include the University of Waterloo, as well as top 10 ranked universities, such as Stanford University, University of Oxford, University of Cambridge, Imperial College, and University College, London. Within Canada, the Institute for Sustainable Finance at Queens University was founded in 2019, providing a platform for research collaboration in sustainable finance. Numerous UW researchers are members of this organization and have made significant contributions the Institute's first three conferences.

The proposed CSB will be different from these institutes by emphasizing interdisciplinary and transdisciplinary approaches to addressing sustainability issues with participation from faculty and students from departments across UW. CSB will integrate financial, accounting, environmental, natural science, social science, and technology research. As such, CSB will unleash the benefits of interdisciplinary research between the social sciences, the natural sciences, and engineering/technology that are the hallmarks of the UW.

The Need for Training in Sustainable Business

With the growing importance of sustainability, financial management and accounting, professional associations come to the UW to ask our researchers for expertise and training in sustainability and financial management (e.g., how to model the influence of carbon pricing on corporate financial performance). Indeed, this market demand for university graduates with training in sustainability and financial management has led to a joint degree programme between the School of Environment, Enterprise and Development (Faculty of Environment) and the School of Accounting and Finance (Faculty of Arts). The Bachelor of Sustainability and Financial Management (BSFM) will officially launch in

¹⁰ www.grasfi.org

Fall of 2022. Instructors from different faculties will teach in this programme to provide an interdisciplinary view on sustainability and business.

The establishment of the CSB would complement the new UW educational degree in several ways. First, by establishing a research hub with strong relations to the business and finance worlds, UW would emerge as the place to look for important developments in sustainability and business. As a supplier of uniquely educated co-op students and graduates in the massively underserved sustainability and financial management labour force, UW will be on the radar screen of all major players in the Canadian sustainability space. This would be expected to attract corporate donations as well as other collaborations (e.g., research and student projects). Second, professional/certificate (i.e., post-degree) education could be offered through the CSB in collaboration with WatSPEED. There is an enormous need for business and accounting/finance professionals, as well as scientific and technology-oriented workers, to retool and get up to speed with respect to sustainability and business issues. In light of these perceived synergies, which should result in the CSB and the BSFM initiatives feeding into and fueling one another, it would be optimal to announce the establishment of the CSB contemporaneously with the official launch of the BSFM programme in Fall 2022.

Mission (Objective)

The mission of CSB will be to support interdisciplinary research on sustainability and business that creates a societal impact and increases the visibility of the University of Waterloo as a powerhouse for sustainability and business, accounting and economics.

Scope of Activities

The main scope of the centre is to enable interdisciplinary research in sustainability and business. Hence, it uses a similar approach to WISE, IC3, the Water Institute, and Waterloo.ai. In addition, CSB will be active in policy development for sustainability and business and develop experiential learning concepts, including executive training.

Consequently, CSB plans to host and organize the following activities:

- Creating a platform for sustainability and business researchers to enable collaboration;
- Creating a contact point for sustainability and business research for corporate stakeholders;
- Organizing internal and public workshops and conferences on sustainability and business (see budget);
- Facilitating exchange between the academy and industry;
- Outreach to achieve external funding; and
- Developing new experiential pedagogical materials in sustainability and business.

Alignment with UW's Strategic Plan

The proposed centre will connect imagination with impact, as stated at the beginning of UW's strategy for an area of rapid change, such as Sustainability and Business. Consequently, CSB is aligned with the University of Waterloo's strategy that includes sustainability and impact. The CSB has both sustainability and real-world implications since it strives for an interdisciplinary research approach that creates both local and global impacts. As such, CSB will organize interdisciplinary conferences, annual workshops, and

training programs that address sustainability and business. Many of these activities will be in collaboration with stakeholders outside of academia, such as business representatives, professional associations, and sustainability-related NGOs.

CSB addresses the additional UW strategic goal of interdisciplinarity. Within the centre, interdisciplinary groups will collaborate to solve problems related to sustainability and business. They will address topics such as the use of AI to analyze corporate sustainability reporting or the connection between ESG performance and corporate financial performance in times of crises (e.g., during a pandemic).

Finally, the centre addresses another part of UW's strategy by creating future-ready talent. Combining sustainability with financial management and accounting will be crucial to solving sustainability problems as well as managing financial risks. Hence, students involved in the CSB's research will be prepared to solve problems in a complex world by acquiring interdisciplinary research skills and benefiting from the CSB's collaboration with the corporate world. Future leaders might also benefit from courses offered by CSB through WatSPEED.

Alignment with the Sustainable Futures Cluster

The CSB can be a part of the planned Sustainable Futures Cluster that combines research on water, energy, and climate change. On the one hand, CSB will be a contributor with regard to research on sustainability and business. On the other hand, a collaboration will create synergies for all participants. For instance, faculty involved in the CSB might help to set up a sustainable business panel for the Sustainable Futures Cluster.

Creating Real-World Sustainability Impacts

The University of Waterloo has a long-standing principle of creating positive impacts on society and being proactive regarding new challenges, such as sustainability and business. This is central to CSB research and one of the main motivations for establishing the centre. The centre's members will contribute to the University of Waterloo's primary goal "to be recognized as one of the top innovation universities in the world" and the objective of conducting transformational research with significant results and highly relevant outputs. However, in addition to the individual contributions of UW's faculty, the centre will be able to create research networks between researchers inside UW and those outside of UW, both from within Canada and from abroad. Furthermore, the centre will support corporate partnerships that will address sustainability and business from an interdisciplinary perspective. Collaborations with corporate partners are particularly expected to lead to real-world impacts. Hence, the centre will help develop sustainability and business talent for a complex future, advance sustainability and business research for global impact, and strengthen sustainable and diverse communities by connecting sustainable business talent and knowledge to the real world (see <https://uwaterloo.ca/strategic-plan/>).

Benefit

One of the most important benefits of the CSB will be to put the UW firmly on the map as an important hub for sustainability and business, accounting and economics. Although the relevant expertise for this is already present at UW, sustainability is not perceived as a core competency of the university. By combining our expertise under the umbrella of a single centre, our work will have much greater collective impact. The centre will create a hub for both researchers interested in

interdisciplinary collaboration on sustainability and business, as well as stakeholders interested in the sustainable and business knowledge available at UW. As previously mentioned, CSB will organize workshops and conferences with stakeholders based on current topics related to sustainability and business. These workshops and conferences will not only be a way to distribute knowledge and create outreach, but they will be a basis for industry-related research projects that will benefit the university, academia, society, and industry.

Another benefit of the CSB is to serve as a centre of collaboration between the university's faculties. There are many interdisciplinary research topics in sustainability and business that can be addressed through inter-faculty research projects. Cooperation between science and engineering, on the one side, and social science on the other side, will be fostered through CSB. This might lead to a better ability to apply for interdisciplinary research grants, such as those supported by Canada's three research funding agencies.¹¹

Finally, the centre will create improved opportunities to attract research funding from the Canadian financial industry, the corporate sector, government agencies, as well as professional organizations such as CPA Ontario, CPA Canada, and the Responsible Investment Association Canada (RIA). Indeed, such fundraising will be essential to ensuring the continued impact of UW research in the sustainability and business field.

Research/Educational Component

The creation of CSB will advance the frontiers of sustainability and business research through an interdisciplinary approach that combines research in accounting, finance, economics, statistics, sustainability, computer science, engineering, environment, sociology, psychology, and health. It will combine this knowledge at the University of Waterloo to make the UW an international hub that is not exclusively based on finance and management research, but that follows an interdisciplinary approach. The approach can be described as a combination of interdisciplinary research based on arts, environment, health, mathematics, science, and engineering that addresses real-world problems related to sustainability and business. Hence, we expect an increased impact on academic research and progress in applying new sustainability-related products and services through the centre's research.

Research examples include the development of fintech applications to address the sustainable development goals, research on algorithms to analyze companies' financial and sustainability performance or to understand sustainable finance and accounting of health care. Potential funders of these projects are SSHRC, NSERC, and CIHR as well as foundations, such as the Master Card Foundation, the Ivey Foundation, or Microsoft AI for Good, amongst others. In addition to the academic community, results will be communicated to the financial industry and sustainable business stakeholders through working papers, policy papers, webinars, conferences, and other forms of communication addressing a broad audience. Consequently, the centre's success will be assessed

¹¹ https://www.sshrc-crsh.gc.ca/news_room-salle_de_presse/latest_news-nouvelles_recentes/2021/pilot_committee_interdisciplinary_research-comite_pilote_recherche_interdisciplinaire-eng.aspx

through the number and the impact of peer-reviewed publications as well as through outreach measurement, including stakeholder surveys.

With regard to the educational component, the centre has two main goals. The first is to contribute to the development of university curricula addressing sustainability and business. These might be specific case studies, instructions, and other pedagogical material that can be used in courses that address sustainability and business. Secondly, since there is a need for professional training in sustainability and business, the centre will develop pedagogical material and courses that can be used for microcredentials and continuing education courses offered in collaboration with WatSPEED.

Constitution

The objective of CSB is to support interdisciplinary research on sustainability and business that creates a societal impact and increases the visibility of the University of Waterloo as a powerhouse for sustainable finance, accounting, and economics.

CSB's organizational chart (see Figure 1) is compliant with Policy 44 for University-funded Centres. The **Governing Body** is chaired by the Deans of Environment and Arts¹² and serves as a primary executive authority to oversee CSB's activities. This committee will include two Executive Co-Directors, the non-chairing Dean, and regular faculty representatives from all six Faculties. Regular faculty members will serve for a non-renewable term of up to four years to provide for regular rotation of the membership. The Governing Body will meet at least once per year and will be open to members of CSB. Minutes will be taken at every meeting and made available to the members.

This Governing Body will have the authority to execute and monitor the affairs of CSB, subject to all applicable University policies, procedures and guidelines. This includes the ability to:

- Enact rules and regulations for membership of the Governing Body and conduct of its affairs;
- Recommend appointment of the Executive Director and other staff;
- Appoint and remove Members, and establish categories of membership and associated fees;
- Contribute to and implement CSB's strategic plan;
- Establish processes to manage and monitor financial affairs (annual budget review);
- Establish and enforce rules and regulations governing activities, provided such rules and regulations are consistent with University policies, procedures and guidelines; and,
- Establish committees as deemed necessary to discharge its responsibilities.

¹² For the first half of the five-year term the Dean of Environment will chair the governing body. For the second half, the Dean of Arts will be the Chair.

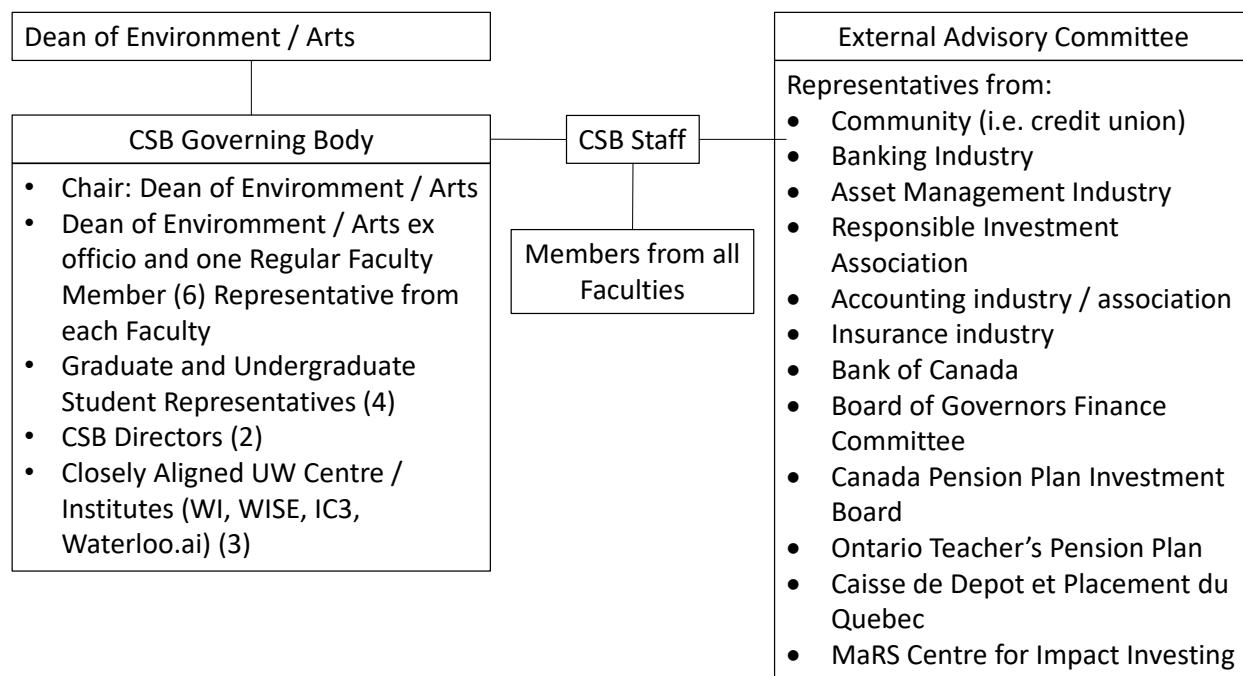


Figure 1: CSB Organizational Chart

The initial membership of the Governing Body is presented in Table 1. Faculty representatives have been contacted. A list of faculty who announced interest to become members is presented in the Annex.

Table 1: Initial Governing Body Membership (TBC)

Unit/Organization	Representative
Dean of Environment	Bruce Frayne
Dean of Arts	Sheila Ager
CSB Executive Co-Directors	Olaf Weber (SEED), Elizabeth Demers (SAF)
Arts	TBD
Health Sciences	TBD
Engineering	TBD
Environment	TBD
Math	TBD
Science	TBD
Graduate Student (3)	From different faculties
Undergraduate Student (2)	From different faculties
Water Institute	Roy Brouwer
WISE	Claudio Canizares
IC ³	Sarah Burch
Waterloo.ai	TBD

The **External Advisory Committee** (EAC) will be comprised of members external to the University to provide an independent perspective and offer expertise to help guide strategic planning and future initiatives of CSB. The EAC can also provide advice on partnerships and research and knowledge mobilization opportunities. The EAC will meet once a year (including by video conference) and provide an external evaluation of progress and recommendations to CSB Staff and the Governing Body.

Table 3. Proposed External Advisory Committee Membership*:

Organization/Sector	Name
Community representative (Kindred Credit Union)	Benjamin Janzen (TBC)
Banking Industry Representative	Michael Torrance (BMO) (TBC)
Asset Management Industry	Northern Ethical Funds Representative (TBC)
Responsible Investment Association	Dustyn Lanz (TBD)
Accounting	TBD
Insurance	Sun Life (TBD)
Bank of Canada	(TBD)
Board of Governors Finance Committee	Sheryl Kennedy (TBC)
Canada Pension Plan Investment Board	TBD
Ontario Teacher's Pension Plan	TBD
Caisse de Dépôt et Placement du Québec	TBD
MaRS Centre for Impact Investing	TBD

* Pending approval of Governing Body and TBC by the members

CSB will be led by a Director Team similar to that which oversees Waterloo.ai. The **Director Team** will consist of two faculty members from different faculties. The team will be appointed for up to five years by the VP, Research and International (VPRI) on the Governing Body's recommendation. The first appointment will be by the VPRI exclusively until a governing body will be installed. This position may be extended or renewed by the VPRI with the support of the Governing Body. In accordance with Section 10.4.6 of Policy 44, the Director Team is responsible for the overall management of CSB, the preparation of its annual budget, supervision of employees, development and execution of a strategic plan with input from the Governing Body and the External Advisory Committee, establishing working groups or committees to provide appropriate guidance and advice to the Director Team, preparation of an annual report to the Governing Body and VPRI, and discharging all responsibilities set out in the constitution or charter, and as directed by the Governing Body. Course releases for the Director Team will be negotiated with the respective Deans to enable the executive directors to commit at least 25% of their time to CSB.

The **Administration and Communications Assistant** will be the initial point of contact between CSB and internal/external individuals and organizations. They will perform administrative functions (including finance, project reporting, and website development), organize events (workshops, seminars, conferences, and public lectures) and support other internal/external communications. Presently this position needs to be filled. During the first two years, the administrative assistant will help with recruiting faculty as members of the centre as well as establishing an advisory board. After two years, the administrative assistant will help to access funding opportunities, coordinate funding proposals, and acquire sponsors for the centre. The assistant will also help to organize internal and external workshops and conferences.

Research Centre Membership Criteria and Categories

Regular Members

Regular members must be tenured or tenure-track faculty or teaching-track faculty appointed to any UW department. Membership is open and ensured for UW faculty who are engaged in sustainability and business-related research or teaching. Membership of faculty members from diverse perspectives is encouraged and will be automatic pending approval of the Director Team.

Regular members of CSB are eligible to apply for CSB research grants once they are established¹³, access support from CSB regarding event development and promotion, shared services offered on a cost-recovery basis, and communication and media services and training. Regular members may also provide input on recommendations to the Governing Board of Directors on the selection of the CSB Executive Directors.

Affiliate Members

CSB Affiliate Membership is for external individuals who support or are active in research and development with UWaterloo faculty members engaged in sustainability research. Affiliate members are non-voting and encouraged to participate in CSB's activities, dialogues, committees, and events.

Other Members

This non-voting membership category includes non-faculty researchers (research professors, research associates, postdoctoral fellows, and research staff), adjunct faculty, and graduate and undergraduate students who support or are active in research and development with UW faculty members engaged in sustainable business research or teaching.

Collaborating Organizations

CSB may identify external organizations that are engaged in sustainability and business research and application. Collaborating organizations may include academic institutions, public and private research institutes, professional associations, government agencies, corporations, non-profit organizations, and foundations. Collaborating organizations may be based in Canada or internationally.

Membership Privileges and Responsibilities

All members of CSB, including Regular, Affiliate, Other, and Collaborating Organizations, will receive regular communication from CSB regarding sustainability-related activities, events, and opportunities, and may access CSB support to promote and mobilize research advancements.

All members should act as ambassadors for CSB and sustainability research at UWaterloo, where appropriate and upon request, and relay opportunities for new partnerships and initiatives to the Director or CSB staff team.

Strategic Direction

Should the proposal to establish CSB as a faculty-funded Centre be approved, critical next steps will include installing the Governing Body and External Advisory Committee. The Director Team will lead

¹³ The executive directors of the centre will develop a strategy to acquire external funding for seed grants and research grants.

consultations to develop a strategic plan for the first phase of CSB in collaboration with the members of the centre.

Management

The centre’s Director Team will report to UW’s VPRI.

Facilities

The centre will need one office room, including a filing cabinet for documents, and a computer for the administrative assistant. If the part-time administrative assistant is employed at UW in another part-time position simultaneously, an additional computer is not needed. It is planned to have the office space for the administrative assistant at the School of Environment, Enterprise and Development (SEED). Additional research facilities are not needed.

Budget Proposal

The proposed five-year budget is presented in Table 2. We expect a start of the centre in Fall 2022.

Table 2: Proposed Budget (Salaries). Funds in white cells will be provided by the provost and the deans of art and environment. Funds in grey cells are planned to be acquired externally through grants, industry contributions, and advancement activities

	2023	2024	2025	2026	2027	Total
In-kind contribution of the Faculties of Arts and Environment for course release	\$18,000	\$18,000	\$18,000	\$18,000	\$18,000	\$90,000.00
Administration / Communication Assistant (50%)	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000	\$175,000.00
Research funding	\$20,000	\$20,000	\$20,000	\$40,000	\$40,000	\$140,000.00
Academic workshops	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$50,000.00
Total	\$83,000.00	\$83,000.00	\$83,000.00	\$103,000.00	\$103,000.00	\$455,000.00

Course releases will be an in-kind contribution by the respective faculty of the Directors.¹⁴ To finance the first five years of the centre, \$20,000 per year has been committed by the Provost’s office, \$7,500 has been committed by the Dean of Environment office, and \$7,500 has been committed by the Dean of Arts office. A concurrent initiative by the Faculties of Arts and Environment, together with assistance from UW Advancement, was started in February 2022 with a view to securing funding for sustainability and business research and related activities, including to support the proposed Centre for Sustainability and Business.

The budget for the academic workshops described above will be acquired from outside of the University of Waterloo, either through industry sponsorships from financial institutions and associations, and/or

¹⁴ One course release is worth \$16,000. If there is only one director, the person has a course release each year.

through applications for SSHRC grants. To begin, the workshops will be conducted in a hybrid mode with external participants attending online and local participants attending in-person. The budgeted costs are expected to cover communications and other organizing costs, as well as food and beverages for attendees.

Research funding will be in the form of research grants for faculty and graduate students in order to support database subscriptions and/or field work. The intention is to acquire external funding from industry partners, grants, and through advancement initiatives in order to support this budget item.

Statements of Sanction and Commitment (see the attachments)

Dean of Environment, Jean Andrey

Dean of Arts, Sheila Ager

Provost, James Rush

Library and other UW Service Departments

Specific requirements, commitments or agreements are not expected.

IST Support Requirements

No specific requirements are expected.

References

- Christensen, D. M., Serafeim, G., & Sikochi, A. (2021). Why is Corporate Virtue in the Eye of The Beholder? The Case of ESG Ratings. *The Accounting Review*. <https://doi.org/10.2308/tar-2019-0506>
- Degnarain, N. (2020, May 19). What Canada Is Getting Right With Its Covid-19 Economic Response Plan. *Forbes*. <https://www.forbes.com/sites/nishandegnarain/2020/05/19/what-canada-is-getting-right-with-its-covid-19-economic-response-plan/?sh=a625be35357d>
- Hong, H., Karolyi, G. A., & Scheinkman, J. A. (2020). Climate finance. *The Review of Financial Studies*, 33(3), 1011-1023.
- Raghunandan, A., & Rajgopal, S. (2021). Do socially responsible firms walk the talk? *Available at SSRN* 3609056.

Annex 1: List of Faculty Members Interested to be a Member of CSB

Name	Department	Faculty
Angela Carter	PoISci	Arts
Ponnambalam Kumaraswamy	SYDE	Engineering
Chrystopher Nehaniv	SYDE	Engineering
Alain-Desiré Nimubona	Econ	Arts
Horatiu Rus	Econ	Arts
Juan Moreno-Cruz	SEED	Environment
Amelia Clarke,	SEED	Environment
Jason Thistlethwaite	SEED	Environment
Sean Geobey,	SEED	Environment
Michael Wood	SEED	Environment
Tony Wirjanto	SAS	Mathematics
Sarah Burch	GEM	Environment
Jennifer Clapp	SERS	Environment
Maura Grossman	CS	Mathematics
Gordon Cormack	CS	Mathematics
Mark Weber	Conrad School	Engineering
Andrew Bauer	SAF	Arts
Blake Phillips	SAF	Arts
Shari Mann	SAF	Arts
Elizabeth Demers	SAF	Arts
Adam Vitalis	SAF	Arts
Seda Oz	SAF	Arts
Adam Presslee	SAF	Arts
Elizabeth Demers	SAF	Arts
Olaf Weber	SEED	Environment
Ranjini Jha	SAF	Arts
Ken Klassen	SAF	Arts
Nancy Vanden Bosch	SAF	Arts
Carl Haas	CEE	Engineering
Jatin Nathwani	MS	Engineering
Rebecca Saari	CEE	Engineering

Annex 2: Decanal Letters

November 10, 2021

Re: Letter of Support for the formation of the Centre for Sustainability and Business.

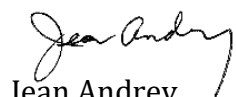
As Dean of the Faculty of Environment, I am writing to enthusiastically support the formation of the “Centre for Sustainability and Business” as a Senate-approved research institute to provide campus, national and international leadership on interdisciplinary research on sustainability and business. Sustainable business approaches are increasingly recognized as essential for achieving a low-carbon transition, and for addressing other challenges associated with planetary boundaries in the context of consumption-production patterns. It is a timely initiative that connects with growing national and global movements related to sustainability/ESG reporting and responsible investment, as articulated in the proposal. The proposed external advisory committee will ensure that the centre’s mandate is informed by industry and government—who are on the front lines of this rapidly evolving field.

The proposed centre aligns well with University of Waterloo commitment to sustainable futures/communities in its 2020-2025 Strategic Plan, and further maps onto the University’s goal of interdisciplinarity. More specifically, the proposed centre will integrate financial, accounting, environmental, social science, and technology research; and its initial membership and governing body composition includes researchers from all six Faculties. Further, the proposed centre will provide a focal point on campus for those involved in the University of Waterloo’s distributed model of business education. Not accidentally, the proposal is being led by faculty members in the School of Accounting and Finance in Arts and the School of Environment, Enterprise and Development in Environment, who have recently launched the joint Bachelor’s program in Sustainability and Financial Management.

Academically, the field is growing rapidly, as evident by several new high-impact journals and a relatively new academic association on sustainability and financial management (of which UW is a member). Proponents of the centre are publishing in and involved with these initiatives. The proposed centre will contribute to the University of Waterloo becoming a national leader in this space through its stated mission, which is “to support interdisciplinary research on sustainability and business that creates a societal impact and increases the visibility of the University of Waterloo as a powerhouse for sustainability and business, accounting and economics.”

As Dean of the Faculty of Environment, I am pleased to wholeheartedly support the creation of this centre, and to provide ongoing support to enable time release for co-directorship of the Centre as well as some financial support for administrative functions.

Sincerely,



Jean Andrey

Dean, Faculty of Environment

November 26th, 2021

Dr. Bessma Momani
Associate Vice-President, Interdisciplinary Research
University of Waterloo

Re: Decanal Letter of Support for the formation of the Centre for Sustainability and Business.

Dear Bessma,

As Dean of the Faculty of Arts, I am writing to whole-heartedly support the formation of the “Centre for Sustainability and Business” as a Senate-approved research institute to provide campus, national, and international leadership on interdisciplinary research related to sustainability and business issues.

According to Morningstar, the estimated size of the Canadian sustainable investments market is nearly \$30 billion as of September 30th, 2021, reflecting a doubling in its scale year-over-year, with continued significant growth expected going forward. Coincident with this rise in investor appetite for responsible investments, Canadian companies are facing unprecedented demand for the provision of information related to their environmental, social, and governance (“ESG”) activities. Following the recommendations of the Ontario Capital Markets Modernization Taskforce that issued its report in early 2021, a new mandate requiring Canadian public companies to disclose climate-related risks, as well as other ESG-related metrics, is expected to be coming soon. Each of the Big-Four accounting firms have announced billion-dollar investments in the ESG space, and some of Canada’s financial institutions are already heeding the advice of Mark Carney (former Governor of the Bank of Canada and UN Special Envoy for Climate Action and Finance) by becoming leaders in their measurement, management, and reporting of the climate risks affecting their companies’ investments. In November 2021, it was announced that Canada would host the second office of the IOSCO-backed, newly formed International Sustainability Standards Board (ISSB), the organization tasked with creating the global standards for

corporate sustainability reporting. In short, sustainability-related concerns are increasingly affecting Canadian businesses and society in very dynamic and economically important ways.

The establishment of the proposed centre is therefore extremely timely, being focused on one of the most important set of measurement, management, and reporting challenges that Canadian business and society has faced in recent decades. Notably, the proposed external advisory committee will ensure that the centre's mandate is informed by key players in industry and government, those who are actively dealing with these rapidly evolving issues.

The proposed centre aligns well with the University of Waterloo's commitment to sustainable futures/communities, as explained in our 2020-2025 Strategic Plan, and further maps onto the University's goal of interdisciplinarity. More specifically, the proposed centre will integrate finance, accounting, environment, social science, and technology research, with its initial membership and governing body being composed of researchers from all six Faculties. Further, the proposed centre will provide a focal point on campus for those involved in the University of Waterloo's distributed model of business education. The proposal is being led by faculty members in the School of Accounting and Finance in Arts and the School of Environment, Enterprise, and Development in Environment, who have recently launched the joint Bachelor's program in Sustainability and Financial Management. The centre will bring together researchers from across the UW campus and beyond. Its partnerships with corporate and government institutions are expected to result in significant spillover benefits to UW students in the form of internships, research project partnerships and sponsorships, and not least through leading edge knowledge-sharing in the classroom.

Academically, the field is growing rapidly with several new high-impact journals, a relatively new academic association on sustainability and financial management (of which UW is a member), and special issue conferences being held by many of the existing top-tier business journals. Proponents of the centre are publishing in, and involved with, many of these initiatives. The proposed centre will contribute to the University of Waterloo becoming a national and international leader in this space through its stated mission, which is "to support interdisciplinary research on sustainability and business that creates a societal impact and increases the visibility of the University of Waterloo as a powerhouse for sustainability and business, accounting and economics."

As Dean of the Faculty of Arts, I am pleased to enthusiastically support the creation of this centre, and to provide ongoing support to enable time release for co-directorship of the centre, as well as some financial support for administrative functions.

Sincerely,

A handwritten signature in black ink, appearing to read "Sheila Ager". The signature is fluid and cursive, with the first name "Sheila" being larger and more prominent than the last name "Ager".

Sheila Ager
Dean, Faculty of Arts

Cc: Jean Andrey, Dean of Environment
Elizabeth Demers, School of Accounting and Finance
Steve Fortin, Director, School of Accounting and Finance
Olaf Weber, School of Environment, Enterprise and Development

Olaf Weber

From: Jean Andrey
Sent: Tuesday, January 11, 2022 12:58 PM
To: Vice Pres Academic Provost
Cc: Kim Gingerich; Jennifer Kieffer; Olaf Weber
Subject: RE: Centre for Sustainability and Business SGRC Package.pdf

Many thanks, Jim.

From: Vice Pres Academic Provost <provost@uwaterloo.ca>
Sent: Tuesday, January 11, 2022 12:57 PM
To: Jean Andrey <jandrey@uwaterloo.ca>
Cc: Kim Gingerich <katgingerich@uwaterloo.ca>; Jennifer Kieffer <j2kieffer@uwaterloo.ca>
Subject: Re: Centre for Sustainability and Business SGRC Package.pdf

Dear Jean,

Consistent with our previous discussions on this initiative during which you flagged that the centre proposal would be coming forward, and in support of the broader interdisciplinary approach to sustainability and financial management this represents together with the new undergraduate program and other activities across the Faculties of ARTS and ENVIRONMENT, I am pleased to approve your request to contribute to the funding of the first five years of this Centre @ \$20k/ year for 5 yrs.

Given the stated intention that the Centre be self-sufficient after 5 yrs, this central commitment should be understood as non-renewable.

All the best,

Jim

James W.E. Rush
Vice-President Academic and Provost
University of Waterloo
200 University Ave. W.
Waterloo, ON, CANADA N2L3G1

From: Jean Andrey <jandrey@uwaterloo.ca>
Date: Monday, January 10, 2022 at 4:10 PM
To: Vice Pres Academic Provost <provost@uwaterloo.ca>
Subject: Centre for Sustainability and Business SGRC Package.pdf

Dear Jim,

Connected with the new Bachelor of Sustainability and Financial Management, the Faculties of Arts and Environment are moving forward with a proposal to create a new research centre on Sustainability and Business. The proposal is attached, and on page 12 we propose a funding model for the first 5 years. Their proposed budget is only \$40K/year

and they are requesting \$20K/year from the Provost's Office, \$7500/year from each of Arts and Environment and then propose to give sponsorship or have other external sources of funding for the remaining \$5K.

I think that this is a good way to support Environment's connections with SAF beyond the new undergrad program, and I expect that the Centre will be self-sufficient at the end of five years based on a fundraising plan that we are putting together for all "sustainable finance" initiatives.

Could I provide you with any other information that would help inform your decision? Apparently, the proposal goes to Senate Grad and Research Committee later this week.

Jean

From: Olaf Weber <oweber@uwaterloo.ca>

Sent: Monday, January 10, 2022 1:35 PM

To: Jean Andrey <jandrey@uwaterloo.ca>

Subject: Centre for Sustainability and Business SGRC Package.pdf

Hello Jean

Please find the package in the attachment.

Best

Olaf

Annex 3: CVs

Material can be found here

To: Senate Graduate & Research Council

From: Charmaine Dean, Vice-President, Research & International
Jeff Casello, Associate Vice-President, Graduate Studies and Postdoctoral Affairs

Date: 31 August 2022

Subject: **Consultation Plan: Senate Governance Review: Future of SGRC**

For Discussion and Feedback

The following outlines a consultation plan to round out recent discussions regarding the Future of SGRC per Senate Governance Review [recommendation #32; \(page 10 of 99\)](#). In addition to SGRC, this plan will be presented to other bodies (e.g., Senate Executive Committee, Deans Council) for information. As you will recall, our council began discussing its structure and functioning at the 9 May 2022 and 13 June 2022 meeting and [memos](#) submitted by the Associate Deans Research (ADR) and Associate Deans Graduate (ADG) formed the basis of, as well as informed this important conversation (see Appendix for summary of discussions to date).

Consultation Plan

Problem Statement:

To assess the efficacy of the Senate Graduate and Research Council (SGRC) with the view to determine whether it should remain as one council or dissolve into separate research and academic councils. To that end, council members are tasked with considering the following questions for discussion during SGRC Stakeholder Consultations to be held in fall 2022: What is the intersection amongst our member roles¹? Are there synergies among the roles of SGRC members that warrant continued, regular interactions? Or, are the roles independent such that joint meetings are not likely to be productive?

Milestones and Time frame:

Milestone	Date
Initial discussions: per ADR/ADG memos	Spring 2022
Senate Graduate and Research Council	9 May 2022; 13 June 2022
Introduce Consultation Plan and incorporate feedback	September 2022
Senate Graduate and Research Council	12 September 2022
Senate Executive Committee / Deans Council	6 September 2022; 7 September 2022
Initiate SGRC stakeholder consultations	September and October 2022
Associate Deans Graduate	tbd
Associate Deans Research	tbd
Graduate Students	tbd
Ancillary Members ²	tbd
Compile consultation data and formulate recommendations	November 2022
Present consultation data and recommendations	November 2022 / December 2022
Senate Graduate and Research Council	14 November 2022
Senate Executive Committee / Deans Council	5 December 2022; 16 November 2022
Senate	December 2022 / January 2023

¹ See Senate Bylaw 2 ([section 4.03](#)); see Associate Dean Graduate [role](#) description.

² associate vice-president interdisciplinary research, associate vice-president research oversight and analysis, director research partnerships, director research ethics, assistant vice-president graduate studies and postdoctoral affairs, director graduate academic services, university librarian, faculty member of affiliated and federated institution of Waterloo.

Appendix
Discussion Summary:
Structure and Functioning of Senate Graduate and Research Council

Council members raised a variety of subjects relating to SGRC's operations, including whether it should remain as one council or dissolve into separate research and academic councils. Council members identified that:

- SGRC (or any other University committee³) does not serve as a mechanism for essential research content and discussions (e.g., IP, research risk, research security, grants, data management, etc.)
- SGRC business is heavily and disproportionately weighted to graduate academic content
- SGRC is unnecessarily administrative with little time spent in fruitful, substantive, synergistic discussion—whether academic or research-related
- regardless of the future of SGRC, student membership is necessary in both graduate and research governance, but resources are finite

From these discussions, a number of key foci emerged in order to improve SGRC efficacy:

- To review SGRC mandate per Senate [Bylaw 2 \(section 4\)](#) and make recommendations for improvements.
- To identify key strategic research and academic matters for discussion and ensure equitable time for each
- To consider the role of new (sub)committees (e.g., curriculum committee) and/or working groups to delegate appropriate matters elsewhere and allow more time at SGRC for increased engagement on critical research and academic topics and strategic matters
- To refine and improve SGRC agendas (e.g., implement consent agenda) Council

Council agreed to continue discussion at 12 September 2022 SGRC.

³ The existing Research Operations Council (ROC) is not a formal or deliberative body of the University.

FACULTY OF ENVIRONMENT - GRADUATE STUDIES COMMITTEE

REPORT TO SENATE GRADUATE & RESEARCH COUNCIL

September 12, 2022

1. New Courses for Approval

a. Environment, Enterprise and Development

i. SUSM 680: Industrial Ecology: Principles and Approaches

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

Faculty: Environment

Effective date: Term: Winter Year: 2023

Milestone

Note: milestone changes also require the completion/submission of the [Graduate Studies Program Revision Template](#).

- New: Choose an item.
- Inactivate: Choose an item.
- Revise: from Choose an item. to Choose an item.

Course

Note: some course changes also require the completion/submission of the [Graduate Studies Program Revision Template](#).

- New: Complete all course elements below
- Inactivate: Complete the following course elements:
Course subject code, Course number, Course ID, Course title
- Revise: Complete all course elements below to reflect the proposed change(s) and identify the course elements being revised (*e.g. Course description, Course title*):

Course elements (complete as indicated above. Review the [glossary of terms](#) for details on course elements)

Course subject code: SUSM

Course number: 680

Course ID:

Course title (max. 100 characters including spaces): Industrial Ecology: Principles and Approaches

Course short title (max. 30 characters including spaces): Industrial Ecology

Grading basis: Numerical

Course credit weight: 0.50

Course consent required: Instructor

Course description: Industrial ecology is the study of flows and stocks of materials and energy as humans interact with nature. Conceived as a metaphor, industrial ecology provides understanding to support design and management of industrial systems. The course introduces key ideas, theories, and terminology for industrial ecology using seminal and current articles that define the field. Fundamental principles and approaches are explored, including social and urban metabolism, input/output analysis, life cycle assessment and material flow analysis.

Meet type(s): Lecture Choose an item. Choose an item. Choose an item.

Primary meet type: Lecture

Delivery mode: On-campus

Requisites:

Special topics course: Yes No

Cross-listed course: Yes No

Course subject code(s) and number(s) to be cross-listed with and approval status:

Sections combined/held with:

Rationale for request:

Course has been offered over the last years as a special topics course, and has been well subscribed. The topic serves research students in the School, and may be of interest to other students, including those in professional course-based programs.

Form completed by: Steve Young

Department/School approval date (mm/dd/yy): 06/05/22

Reviewed by GSPA (for GSPA use only) date (mm/dd/yy): 06/22/22

Faculty approval date (mm/dd/yy): 08/10/22

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