

University of Waterloo
SENATE EXECUTIVE COMMITTEE
Notice of Meeting

Date: Monday 4 January 2021

Time: 3:30 p.m.

Place: Microsoft Teams Videoconference

AGENDA	Action
1. Minutes of the 2 November 2020 Meeting	Decision
2. Business Arising from the Minutes	
3. Appointment of Chancellor Nominating Committee	Decision
4. Draft 18 January 2021 Senate Agenda	Decision
5. Other Business	

KJJ/ees
22 December 2020

Karen Jack
University Secretary
Secretary to the Committee

University of Waterloo
SENATE EXECUTIVE COMMITTEE
Minutes of the 2 November 2020 Meeting

Present: Dan Brown, Kofi Campbell, Jeff Casello, Joan Coutu, George Freeman, Feridun Hamdullahpur (chair), Karen Jack (secretary), Christiane Lemieux, Bill Power, Sam Rubin, James Rush, Abbie Simpson, Richard Staines, Johanna Wandel

Regrets: David Billedeau

1. MINUTES OF THE 5 OCTOBER 2020 MEETING

Members heard a motion to approve the minutes of the 5 October 2020 meeting.

Simpson and Staines. Carried unanimously.

2. BUSINESS ARISING FROM THE MINUTES

There was no business arising.

3. DECEMBER MEETING OF SENATE

The secretary spoke to the usual process regarding the decision whether to hold the December meeting of Senate. Members heard that later this month an electronic ballot will be distributed to members to decide whether there is sufficient business to hold the meeting.

4. DRAFT 16 NOVEMBER 2020 SENATE AGENDA

The chair provided members with a brief review of the agenda. Members understood that the minutes of the October meeting will be corrected to include Samer Zu'Mot and Sabrina Khandakar in attendance, and the report from the Faculty of Mathematics will be revised to address an appointment anomaly. Members also heard from the chair that, in response to the toll on the community's wellness due to the ongoing pandemic, he intends to bring something forward at the meeting with regard to changes to the Winter 2020 term. Following discussion, members heard a motion to approve the revised agenda.

Simpson and Coutu. Carried unanimously.

5. OTHER BUSINESS

There was no other business.

3 November 2020

Karen Jack
University Secretary

University of Waterloo
SENATE EXECUTIVE COMMITTEE
4 January 2021

FOR APPROVAL

Appointment of Chancellor Nominating Committee

Dominic Barton's first term as chancellor ends 30 June 2021 and, as provided by the *University of Waterloo Act, 1972* [excerpt (section 30, subsections 1-3) reproduced below], he is eligible to serve for a second three-year term. It has been the practice for the Senate Executive Committee to serve as the nominating committee.

Motion:

That the committee agrees to recommend that Senate appoint its Executive Committee as the Chancellor Nominating Committee.

CHANCELLOR

Chancellor, Election of	30	1. There shall be a Chancellor of the University who shall be elected by the Senate in such manner as the Senate shall determine.
Term of Office		2. The term of office of the Chancellor shall be three years, provided that he shall be eligible for re-election for one additional term.
Duties		3. The Chancellor shall preside at all Convocations and shall admit to degrees, diplomas and certificates such candidates including the recipients of honorary degrees, as may be designated by the Senate.

Feridun Hamdullahpur
Chair

University of Waterloo
SENATE
Notice of Meeting

Date: Monday 18 January 2021

Time: 3:30 p.m.

Place: Microsoft Teams Videoconference

OPEN SESSION		
3:30	<p><u>Consent Agenda</u> Motion: To approve or receive for information by consent items 1-4 below.</p> <ol style="list-style-type: none"> 1. Minutes of the 16 November 2020 Meeting* 2. Reports from Committees and Councils <ol style="list-style-type: none"> a. Joint Report – Graduate & Research Council and Undergraduate Council b. Graduate & Research Council c. Undergraduate Council 3. Report of the President <ol style="list-style-type: none"> a. Recognition and Commendation 4. Reports from the Faculties 	Decision Information Information Decision/Information Information Information
3:35	<p><u>Regular Agenda</u></p> <ol style="list-style-type: none"> 5. Business Arising from the Minutes 	Information
3:40	<ol style="list-style-type: none"> 6. Presentation – Strategic Plan Working Group Implementation Updates 	Information
3:50	<ol style="list-style-type: none"> 7. Reports from Committees and Councils 	Decision
3:55	<ol style="list-style-type: none"> <ol style="list-style-type: none"> a. Executive Committee 	Decision
4:05	<ol style="list-style-type: none"> <ol style="list-style-type: none"> b. Graduate & Research Council c. Undergraduate Council 	Decision
4:15	<ol style="list-style-type: none"> 8. Report of the President <ol style="list-style-type: none"> a. Pandemic Response Update 	Information
4:25	<ol style="list-style-type: none"> 9. Q&A Period with the President 	Information
4:35	<ol style="list-style-type: none"> 10. Report of the Vice-President, Academic & Provost 	Information
4:45	<ol style="list-style-type: none"> 11. Report of the Vice-President, University Research & International 	Information
4:50	<ol style="list-style-type: none"> 12. Other Business <p style="text-align: center;">CONFIDENTIAL SESSION</p>	
4:55	<ol style="list-style-type: none"> 13. Minutes of the 16 November 2020 Meeting* 	Decision
5:00	<ol style="list-style-type: none"> 14. Minutes of the 17 November 2020 Extraordinary Meeting* 	Decision
5:05	<ol style="list-style-type: none"> 15. Business Arising from the Minutes 	
5:10	<ol style="list-style-type: none"> 16. Report of the President 	Information

CONFIDENTIAL SESSION

5:15

17. Other Business

*to be distributed

22 December 2020
KJJ/ees

Karen Jack
University Secretary

University of Waterloo
SENATE GRADUATE & RESEARCH COUNCIL
and
SENATE UNDERGRADUATE COUNCIL
Report to Senate
18 January 2021

Senate Graduate & Research Council (SGRC) met on 14 December 2020 and Senate Undergraduate Council (SUC) met on 15 December 2020. Both councils received for information, temporary exception to calendar guidelines for winter 2021 and agreed to forward this item to Senate for information as part of the consent agenda.

Further details are available at:

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

<https://uwaterloo.ca/secretariat/committees-and-councils/senate-graduate-research-council>

FOR INFORMATION

ACADEMIC CALENDAR GUIDELINES WINTER 2021 – TEMPORARY EXCEPTION

On behalf of Senate, the two councils received for information revised grade submission deadlines for winter 2021, as a result of the revised dates for the winter term. This is a temporary exception to grade submission rules for winter 2021, as presented at Attachment 1.

/rmw & kw

Jeff Casello
Associate Vice-President,
Graduate Studies and Postdoctoral Affairs

Charmaine Dean
Vice President,
Research & International

David DeVidi
Associate Vice-President, Academic



Graduate Studies and Postdoctoral Affairs
Waterloo, Ontario, Canada N2L 3G1
uwaterloo.ca/graduate-studies | gsoffice@uwaterloo.ca

November 27, 2020

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

FROM: Jeff Casello, Associate Vice-President, Graduate Studies and Postdoctoral Affairs

RE: Regulations

Grade Submission – Winter 2021 Exception [for information]

Effective date: For Winter 2021 term only.

Background and rationale: Guidelines for grade submission deadlines are approved by Senate along with the set of yearly academic dates. They apply to both undergraduate and graduate courses, though text to be revised only appears in the Undergraduate Calendar.

Guidelines for Determining Academic Calendar of Dates (Senate approved): Rule #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.

The problem: “Online courses” are no longer defined in the same way they were prior to COVID-19. In the past, “online courses” were CEL courses with in-person exams. Online courses are now offered across all faculties and may include an online exam. Thus, there is confusion about how the grade submission rules apply to the current online courses. The winter 2021 final exam period has been reduced from 14 days to 9 days (including the Emergency Day). The grade submission deadline remains the same, thus the grade submission period has been shortened. The grade submission rules allowing for 14 days will not be possible due to the reduced number of days in the period.

It is proposed that the grade submission rules for winter 2021 be changed as follows as an exception to the guideline (rule #15): As a result of the revised dates of the winter term, the grade submission period will also be revised to April 15-May 2 (was April 7-May 2). Due to a reduction in the number of days scheduled for the exam period, grades for all courses without a scheduled final exam will be due seven days after the start of the examinations. Final grades for courses (on-campus and online/remote) with final exams scheduled during the final exam period are normally due seven days from the date of the final exam. The May 2nd date does not need to move as the end of the final exam period is relatively unchanged.

Date reference chart

	PRIOR WINTER 2021 DATES	REVISED WINTER 2021 DATES
Grade Submission Period β	April 7, 2021-May 2, 2021	April 15, 2021-May 2, 2021
Grades due for courses with a final exam	7 days after the date of the final exam	7 days after the date of the final exam
Grades due for online courses	May 2, 2021	N/A

Grade due for courses without a scheduled final exam	April 21, 2021	April 22, 2021
Grades due for courses with a major assignment due during the final exam period	N/A	May 2, 2021

University of Waterloo
SENATE GRADUATE & RESEARCH COUNCIL
Report to Senate
18 January 2021

Senate Graduate & Research Council met on 9 November 2020 and 14 December 2020 and agreed to forward the following items to Senate for information as part of the consent agenda.

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

FOR INFORMATION

UNIVERSITY RESEARCH ETHICS

On behalf of Senate, council approved the following:

- Clinical Research Ethics Committee –new member (1)
- Human Research Ethics Committee –new member (1)

RENEWAL OF CENTRES AND INSTITUTES

On behalf of Senate, council approved the renewal, for a 5-year term, of the following three centres, as presented: Centre for Computational Mathematics in Industry & Commerce (CCMIC), Centre for Pavement Advancement and Transportation Technology (CPATT), and Institute for Polymer Research (IPR).

ACADEMIC PROGRAM REVIEWS

On behalf of Senate, council approved:

- Two-Year Progress Report – Systems Design Engineering (MASc/PhD/MEng) as presented at Attachment #1
- Two-Year Progress Report – New Program Applied Philosophy (PhD) as presented at Attachment#2
- Final Assessment Report for the 2017-2018 – Global Governance PhD as presented at Attachment#3
- Two-Year Progress Report – Geography and Geomatics (BES), Master of Climate Change (MCC) and Master of Tourism (MA) as presented at Attachment#4
- Final Assessment Report – Bachelor's in Global Business and Digital Art (BGBDA) and Master's in Digital Experience Innovation (MDEI) as presented at Attachment #5

GRADUATE AWARDS

On behalf of Senate, council approved the Martin Simmons Graduate Scholarship for Locally Focused Architecture (trust), the Caivan Future Cities Graduate Scholarship (trust), and the Allan and Cynthia Arnold Graduate Scholarship in Engineering (endowment).

CURRICULAR SUBMISSIONS

On behalf of Senate, council approved new courses, course revisions, minor program revisions for the Faculty of Applied Health Science (department of kinesiology, school of public health and health systems, school of social work), Faculty of Arts (sociology, psychology, social and legal studies, public service), and Faculty of Environment.



Two-Year Progress Report Systems Design Engineering (MAsc/PhD/MEng) July 2020

Background

The review team examined the self-study documentation and conducted a site visit at the University of Waterloo on June 11-12, 2015. The visit included interviews with the Vice President, Academic & Provost, Associate Provost, Graduate Studies¹, the Dean and Associate Dean, Graduate Studies, of the Faculty of Engineering, Chair and Associate Chair, Graduate Studies, of the Department, faculty members, administrative and technical staff and a group of six current graduate students and support staff. The reviewers also had an opportunity to visit three research laboratories.

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

Strengths

- Systems Design Engineering (SDE) is unique in Canada, providing an engineering program that focuses on both design as well as systems analysis, two areas that are typically in separate programs.
- The program boasts leading edge research in emerging areas, such as Biomedical engineering, intelligent systems & signals, human factors engineering as well as societal & environmental engineering.

Challenges

- SDE is a diverse department, which is reflected in the diverse areas of research topics and they continually question what can unify their program. In the undergraduate program the unification is via design & system modelling which is not as explicit in the graduate program.
- There is a difficulty in attracting excellent domestic students to the Department's graduate programs, especially their own undergraduates who are highly desirable in the work force. This problem is also shared by other engineering departments at Waterloo and in Canada in general. A working group at the faculty level is addressing this issue.

¹The Associate Provost, Graduate Studies title changed to Associate Vice-President, Graduate Studies and Postdoctoral Affairs as of June 2017.

- Struggles with graduate course offerings chiefly due to the lack of teaching resources available, i.e., a lack of faculty.

Weaknesses

- Many of the faculty collaborate with other departments and faculties, but comparatively few collaborate with each other. Collaboration is an opportunity to unify the program and attract more domestic graduate students. We anticipate that space consolidation in EC4 (former RIM / Blackberry space) and the opening of E7 will partially address this weakness.

Summary of key findings from the external reviewers

The external reviewers report was positive and noted “The general environment in the department is open, receptive, inclusive and collaborative.” It also reported that the graduate students “value the interdisciplinary, collaboration and freedom that the SDE philosophy facilitates and see it as allowing them to see the big picture and transcend traditional engineering boundaries”.

Faculty members are seen as supportive, personable and compassionate and ‘very special’ people who go beyond what is expected by graduates. In addition, the program’s retention rates and times to completion are good, and overall student numbers are reasonably healthy and growing.

Reviewers identified a few challenges which included a shortage of graduate courses to serve the broad interests of graduate students and a continuing shortage of lab space.

Progress on Implementation Plan

Recommendations

1. A “systems level philosophy to problem solving” is implicitly found in the general environment in the department, but has not been developed and articulated at the graduate level in a formal manner.
 - a. **Status:** We are introducing core courses to the graduate program that addresses this. Initially the core courses will only be core for the MEng students however other graduate students in Systems Design will be able to take these courses. The Department approved these courses at a departmental meeting on July 19, 2017.
 - b. **Details:** The proposed new core courses include SYDE600 Systems Theory, Models, Research & Design; SYDE 660 Systems Design Graduate Workshop 1; & SYDE 662 Systems Design Graduate Workshop 2. These courses are available to MASc, MEng and PhD students in our department as well as within the Faculty of Engineering.

2.

- a. Graduate students in the course based MEng program will benefit greatly from guidance to navigate their course selections.
 - i. **Status:** The Associate Graduate chair has met with students on a regular basis to assist MEng students. We are also introducing core grad courses for MEng students (see above) as well as a variety of five specializations which will provide direction for MEng students as well as providing them with a focus.
 - ii. **Details:** The specializations were approved at Senate in April 2019 with the intention to have these available for students beginning in the Fall 2019 term. The specializations being introduced are: Artificial Intelligence and Machine Learning; Biomedical Systems; Human Factors; Mechatronic & Physical Systems; and Vision, Image & Signal Processing. Concurrently, 5 additional variants of SYDE660 (Systems Design Graduate Workshop 1) were created SYDE660A, SYDE660B, SYDE660C, SYDE660D, and SYDE660E to allow the students to gain design experience specific to their specialization. Those variants are being offered for the first time in Spring 2020.
- b. The mechanism for graduate student body feedback and involvement in matters related to the graduate program should be more formalized.
 - i. **Status:** A Graduate student representative was chosen to act as an intermediary the past two years. We have decided that a formal GSA is necessary and in September elections will be held for its executive.
 - ii. **Details:** The SDE GSA constitution has been approved at the university GSA level in July 2017. A faculty mentor is also working with the SDE GSA leadership.
- c. The average funding for thesis-based students in the department seems good, however, the minimum funding levels could be improved.
 - i. **Status:** The reviewers report suggested looking into offering funded TA-ships at the time of admission; this could certainly make an offer letter more attractive, but carries a risk of offering a TA position to a student with unknown pedagogical skills. We would point out that our average income for funded graduate students is \$31,857, compared to the Faculty of Engineering average income of \$30,295. Similarly, 27.5% of SDE graduate students have external scholarship support, compared to 20.3% across the faculty of Engineering. These two statistics are evidence, in fact, that Systems Design Engineering funding support is competitive relative to the rest of the faculty. The minimum level of funding for full-time research Masters students is set by the Faculty of Engineering and as of May 2019 is \$18,000/year. The minimum level of funding for full-time doctoral

- students is set by the University. In Engineering, any income earned by students serving as TAs/CAs is on top of this minimum funding.
- ii. **Details:** No further progress required at departmental level.
- d. There is a general sense among the graduate students that the hours put in by the teaching assistants are significantly above the expected norms.
- i. **Status:** The program has, and will continue, to articulate to professors the expectation of 130 hours of total work for teaching assistants. This information has been and will continue to be annotated in the TA appointment letter. Instructors are also requested to submit a time allocation sheet for each TA, signed by both the graduate student and instructor, showing a distribution of duties within this time period. To the extent that this expectation is not met in certain courses, we would propose that the graduate student feedback representative or SYDE GSA, discussed in point 2b, should allow such cases to be communicated anonymously to the graduate chair and ensure that discrepancies are dealt with promptly.
 - ii. **Details:** No further details necessary.
3. The number of annual graduate course offerings seems low relative to the wide span of areas in the department.
- a. **Status:** In order to increase annual graduate course offerings, this problem will be addressed by the core courses introduced as well as the need for graduate courses for the specializations.
 - b. **Details:** Core courses are introduced and courses needed to support the specializations are being scheduled to be offered on a regular basis. Courses are also being added to ensure that each specialization has unique graduate courses, as required by the current University of Waterloo guidelines for specializations.
4. Current research space is fragmented and insufficient for the needs of the department.
- a. **Status:** When this review was undertaken in 2015, when the measures of space requirements per student etc. were accounted for, Systems Design was the furthest behind of any other department in Engineering at the University of Waterloo.
 - b. **Details:** Since the acquisition of space in EC4 and E7, Systems Design is now, arguably, further ahead in space than most other departments. However, since hiring for the new Biomedical Engineering undergraduate program in the department remain ongoing, our space allocation will revert to being closer to the faculty average over time.

Address any significant developments or initiatives that have arisen since the program review process, or that were not contemplated during the review

Fourteen faculty members joined the department in the last five years. Two more will be joining before the end of 2020. We are currently reorganizing the graduate course cohort to better serve the needs of our graduate students. As a part of this reorganization, we are planning a new joint graduate program in Biomedical Engineering.

One of the expressed concerns during the review was the number of domestic graduate students. We currently only have anecdotal evidence around the increase in domestic graduate students and the variation in distribution between domestic and international students at various levels (MAsc, MEng, PhD). As our cyclical review is upcoming, this analysis will be a key focus of the upcoming (2021-22) review. It will be helpful to identify any changes in graduate student numbers across the programs since the time of the 2015-16 review and any variation in distribution between domestic and International students.

Updated Implementation Plan

	Recommendations	Proposed Actions	Responsibility for Leading and Resourcing (if applicable) the Actions	Timeline for addressing Recommendations
1.	Systems level philosophy	New core courses	Associate Graduate Chair	Dept approval: July 2017 EGSO approval: Fall 2017 Effective Fall 2018
2.	MEng issues	New specializations	Associate Graduate Chair	Senate approval April 2019 – effective Fall 2019
3.	Shortage of annual graduate course offerings	Annual courses scheduled to support specialization will address this problem	Associate Graduate Chair	Senate approval April 2019 – effective Fall 2019
4.	Department research space fragmented & insufficient	New EC4 space added July 2016. E7 space added fall 2018.	Department Chair	Completed Fall 2018

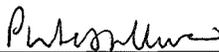
The Department Chair/Director, in consultation with the Dean of the Faculty shall be responsible for monitoring the Implementation Plan.



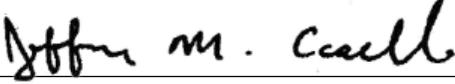
Date of next program review: 2021
Date

S;
 _____ 
Chair/Director Date

N/A
AFIW Administrative Dean/Head (For AFIW programs only) Date

 _____ April 30/2019
Faculty Dean Date

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

 _____ September 24, 2019
Date

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

Checklist for SUC/SGRC Reviewer Feedback Quality Assurance Office

Two-Year Progress Report: Systems Design Engineering

Name of Reviewer: Rhona Hanning

Date: 3/9/2020

Does the Two-Year Progress Report:

- | | | |
|--|--|------------------------------------|
| 1. Clearly describe progress achieved on the various action items in the implementation plan? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 2. Explain convincingly any circumstances that would have altered the original implementation plan? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 3. For items that are behind schedule, propose an amended implementation schedule that is reasonable and credible? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 4. Address significant developments or initiatives that have arisen since the program review process, or that were not contemplated by the program review process? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |

General Comments

Click or tap here to enter text.



Two-Year Progress Report – New Program Applied Philosophy (PhD) August 2020

Background

The Applied Philosophy PhD program was created by the Philosophy Department through a consultative process between 2013 and 2017. In February 2016, the proposed program was reviewed by two external reviewers: Christy Simpson, Associate Professor and Department Head, Department of Bioethics, Faculty of Medicine, Dalhousie University and Daniel Weinstock Professor and Director, McGill Institute for Health and Social Policy McGill University. Overall, their report was very positive, describing the program as "innovative," "a unique program with little or no equivalent in North America," and one that the "excellent Department of Philosophy" is "uniquely situated, given the range of their [research] interests, and of their professional and personal interests, to make a success." The reviewers also had some suggestions, discussed below. The program was formally approved in 2017, and we began admitting students in Fall 2017.

This new four-year program is distinct from our more traditional Philosophy PhD program, though students in the two programs take some courses concurrently and participate in Departmental life together. The Applied Philosophy PhD program combines traditional PhD requirements (such as the completion of course work and a dissertation project) with experiential learning components. As with PhD programs in general, students are expected to advance the state of knowledge in the field; the particular focus of the Program involves the integration of theoretical training in philosophy with the ability to apply philosophy to practical problems. The most distinctive feature of the new program is the Applied Research Placement, an eight-month research activity in which three or four months are spent doing philosophical work at a host organization. Students also have opportunities to incorporate applied components such as the creation of policy briefs, databases, or the writing for non-scholarly audiences into their coursework and dissertation projects.

Enrolment

We currently have six students enrolled in the Applied Philosophy PhD program; for comparison, we have about twenty students currently enrolled in our (more traditional) PhD Program in Philosophy. The enrolment numbers below include three students who switched into our Applied Philosophy PhD program from our Philosophy PhD program, three who were admitted directly into the Applied PhD program, and one who was admitted into the Applied Philosophy program and chose to switch into our Philosophy PhD program.

Year	Number of Applicants	Number of Students Enrolled
2017-2018 (1 st year)	7	3
2018-2019 (2 nd year)	5	4

Progress on Implementation

The program is working well and there have been no changes to the program structure. We have been pleased to connect with a number of potential host institutions for our Applied Research Placements, and the placements are working as planned. In January 2016, the Department signed a Memorandum of Understanding with Mitacs expressing plans to cooperate on funding for about 4 Applied Philosophy students per year through the Accelerate program. In 2016, the Department ran a pilot project in which three students completed Applied Research Placements, with one funded through Mitacs Accelerate. The host organizations for the pilot program were Sunnybrook Hospital, the Centre for Clinical Ethics in Toronto, and Facilitation Wellington-Dufferin.

The Department appoints an Applied Philosophy Advisor who focuses on the students in the program and coordinates the processes for placements. So far, each student has entered the program with a pretty clear sense of where they would like to do their placement, and the Applied Philosophy Advisor has been able to make personalized connections suited to their particular needs. Since the program is a four-year program, most of the six students are still at early stages of completing their degrees. Since the pilot project, we have had two more students complete placements, one at the Canadian Medical Association and another at the Indigenous Student Centre at UW.

The one challenge we have encountered is that we expected to have more applicants and more students enrolling in the program. However, we are encouraged by the increase between the first and second year. We note that this year there were five applicants and three acceptances, which will grow our overall cohort from six students to nine.

Recommendations

1. Establish an Advisory Council/Group for the Applied Philosophy PhD program

Status: **in progress**

Details: As mentioned in our Department's response to the evaluator's comments in 2016, while we are working toward this aim, we are proceeding deliberately and, at first, somewhat informally. As we planned to do, we are currently seeking out connections in a variety of sectors, making use of our alumni network, and we are in touch with a range of host organizations. One reason the evaluators mentioned for favoring a Council was to help connect us with potential hosts and with people having

experience beyond the university; we have made connections with a good number of potential hosts and others who are interested in our program. As mentioned above, most students come to the program with preferences about hosts already formed, and we have been successful in coordinating placements that meet those preferences. Another reason we are waiting to formalize this committee is that we don't yet have a clear sense of how to populate it, since we haven't run enough students through the program to see what sectors/institutions/industries would be a good fit for the committee. Most of our initial placements were in health/social services fields, but incoming students have other interests (including the potential for on-campus placements in science, for example), and so we want to wait until we have more examples before trying to recruit members to a committee. While we therefore have a solid network of connections, we thought it prudent to wait until the program has more students to formalize an Advisory Council. We plan to start the process of forming the Advisory Council in the academic year 2021-2022.

2. Undertake ongoing monitoring to ensure equivalency across the program (building on the processes and mechanisms already identified and in development).

Status: in progress

Details: The evaluators pointed out that there may be challenges ensuring consistency in evaluation, especially for the work students perform in their placements and the applied components of course work and the dissertation projects. These applied components can take a range of forms, such as the creation of policy briefs or databases or the production of written work for a popular audience.

We have taken several steps toward ensuring the kind of consistency in evaluation that the recommendation refers to. First, we have implemented a new policy in which all the contracts for the Applied Research Placements are reviewed by the Associate Chair for Graduate Studies and the Applied Philosophy Advisor before being approved. Second, we are creating a library of examples of such contracts, so that students and supervisors can compare their plans with past placements. This allows us to develop rough guidelines about how applied components should be compared. Finally, as in our more traditional Philosophy PhD program, three faculty will serve on each student's committee; we expect that as more students move through the program, by working together on committees, faculty will develop shared standards over time.

3. Address the marketability of this new PhD program

Status: in progress

Details: With respect to marketing the PhD program to potential applicants, we have taken several steps. We have created a one-page flyer with information about the program, about the faculty, and about the placements that students have engaged in so far. The flyer has been shared at conferences, on our website, and by email. We have also discussed the new program at conferences, including at a poster session presented by a faculty member at the Philosophy of Science Association. In 2018, we formed an *ad hoc* committee to generate new ideas for reaching potential audiences.

As the evaluators note, the marketability of the new program will be partly fostered through the success of its graduates. Since the program is only two years old and it is a four-year program, this success is still in the future. Of the students who have enrolled or participated in the 2016 pilot project, one has completed her degree. She is now employed as a full-time Clinical Ethicist at the UHN Princess Margaret Cancer Care Centre in Toronto. As expected, she has helped recruit interested students, and regularly puts us in touch with applicants. We expect the two other pilot project students to complete their degrees in the coming year. Our enrolled students also participate successfully in high-profile events like the 3-Minute Thesis competition: in 2017 our pilot project student Andria Bianchi won the Arts Heat and came in second in the University of Waterloo competition, and in 2019 our Applied Philosophy student Kathryn Morrison won the Arts heat.

As mentioned above, while we have fewer students than expected, the numbers are increasingly substantially from year to year. As of September 2020, there were 9 students enrolled in the program. We are thus optimistic that the program will continue to grow and flourish.

2023-2024

Date of first program review: February 16, 2016
Date

Signatures of Approval:

Patricia Mason Apr 30 2019
Chair/Director Date

N/A
AFIW Administrative Dean/Head (For AFIW programs only) Date

[Signature] 23/10/19
Faculty Dean Date

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

Associate Vice-President, Academic Date
(For undergraduate programs)

John M. Croll November 1, 2019
Associate Vice-President, Graduate Studies and Postdoctoral Affairs Date
(For graduate programs)

Checklist for SUC/SGRC Reviewer Feedback Quality Assurance Office

Two-Year Progress Report: Applied Philosophy PhD

Name of Reviewer: Siva Sivoththaman

Date: 10/20/2020

Does the Two-Year Progress Report:

- | | | |
|--|--|------------------------------------|
| 1. Clearly describe progress achieved on the implementation of the program? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 2. Explain convincingly any circumstances that would have altered the original implementation plan? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 3. For items that are behind schedule, propose an amended implementation schedule that is reasonable and credible? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 4. Address significant developments or initiatives that have arisen since the program began? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |

General Comments

N/A



To: Kathy Winter, Secretary, Senate Graduate and Research Council
From: Amanda McKenzie, Director, Quality Assurance (Academic Programs)
Cc: Jeff Casello, Associate Vice-President, Graduate Studies and Postdoctoral Affairs
Re: Global Governance PhD Final Assessment Report

MEMO

The cyclical review of programs joint with other institutions are led by one of the partner institutions and governed by the respective Institutional Quality Assurance Process (IQAP). The review of the PhD in Global Governance was led by Wilfrid Laurier University (WLU). The Final Assessment Report (FAR) for the PhD in Global Governance was approved by Wilfrid Laurier University in early 2019. The FAR was then reviewed at Waterloo by Jeff Casello, as well as Simron Singh, Associate Dean, Graduate Studies in the Faculty of Environment and Linda Warley, Associate Dean, Graduate Studies in the Faculty of Arts in March 2019.

According to the University of Waterloo IQAP, the FAR must also be approved by Senate Graduate and Research Council and reported to Senate for information. As per typical practice, this FAR was reviewed by two members of Senate Graduate and Research Council, Bernie Duncker and David Clausi. Feedback was generally positive, with specific comments such as: “The implementation plan does address which recommendations will be followed along with who will be responsible for each recommendation” and “It would have been helpful to have a synopsis of the self-study findings, but perhaps this is not the practice at Laurier.”

Because this FAR has already been approved by WLU, changes to the report are not possible at this time, though feedback from the reviewers was greatly appreciated.

To streamline this process, moving forward, FARs and Two-Year Reports for joint programs that are previously approved by a partner institution will be approved by Senate Graduate and Research Council without the assignment of reviewers. Comments and suggestions raised at SGRC about these approved reports will be captured in the meeting minutes and will be kept on record with the program files in the Quality Assurance Office for future consideration at their next cyclical program review.

Final Assessment Report for the 2017-2018 Cyclical Program Review of the Joint PhD in Global Governance

INTRODUCTION

In accordance with Laurier's Institutional Quality Assurance Procedures ([Policy 2.1](#)), this Final Assessment Report provides a summary of the review process for the PhD in Global Governance (PhDGG) program prepared by the Quality Assurance Office, along with an identification of strengths of the program authored by the Dean of the Faculty of Graduate and Postdoctoral Studies. All recommendations made by the external review committee are listed, followed by a summary of the PhDGG program's response, and the Dean's response. Recommendations not approved for implementation have been identified, and those that have been prioritized are listed in the Implementation Plan.

The Final Assessment Report is reviewed and approved by the Associate Vice-President: Teaching and Learning and the Vice-President: Academic. Following completion of the Final Assessment Report, it is approved by the Program Review Sub-Committee and Senate Academic Planning Committee. Approval dates are listed at the end of this report. Final Assessment Reports are submitted to Senate as part of an annual report on cyclical reviews, and to the Ontario Universities Council on Quality Assurance for information. Final Assessment Reports and Implementation Reports are posted on the public-facing page of the [Quality Assurance Office](#) website.

The PhDGG is a joint program with the University of Waterloo, housed within the Balsillie School of International Affairs (BSIA). As Directorship of the program was held by Laurier during the review, the review process followed Laurier's Institutional Quality Assurance Procedures, but was highly collaborative. The Self-Study was discussed and reviewed by the necessary constituents at both Laurier and UW. The site visit itinerary was arranged collaboratively and included meetings with senior administrators from both universities. The Final Assessment Report will be approved through the regular procedures at both institutions. Follow-up reporting will adhere to Laurier's process, outlined below.

The Implementation Plan for the recommendations prioritized in the Final Assessment Report can be found at the end of this report. Units will submit their first Implementation Report two years following approval of the Final Assessment Report at Senate. The Implementation Report will include comments from the unit on actions taken toward the completion of recommendations, comments from the relevant Dean(s) related to the progress made, and comments from the Program Review Sub-Committee, which is responsible for approving the Implementation Report and deciding if further follow-up reports are required. The Senate Academic Planning Committee will also approve the Implementation Report.

SUMMARY OF REVIEW PROCESS

The last cyclical review of the PhDGG program was conducted by OCGS in 2010. The program was classified as GOOD QUALITY with no specific issues to be addressed in the next cyclical review. The lead author of the PhDGG Self-Study was Dr. Andrew Thompson, Program Officer, with input from the PhDGG faculty at both institutions through the Inter-University Programming Committee. In addition to the Self-Study (Volume I), the program also submitted a copy of associated faculty curricula vita (Volume 11), a volume of course syllabi, and a list of proposed external reviewers (Volume 111). A draft of the Self-Study was reviewed by the Quality Assurance Office and Dean of the Faculty of Graduate and Postdoctoral Studies at Laurier, and by the Quality Assurance Office and the Associate Vice-President, Graduate Studies and Postdoctoral Affairs at the University of Waterloo prior to submission of the final version.

The external review committee for the review consisted of two external reviewers from outside the university, and one internal reviewer from Laurier but outside of the department. The review committee was selected by the Program Review Sub-Committee on September 14, 2017, and the site visit was scheduled by the Quality Assurance Office for January 4-5, 2018. The slate of reviewer candidates was submitted to the University of Waterloo's Quality Assurance Office in advance of the Program Review Sub-Committee meeting, and a ranking of candidates was brought forward by the Director of Quality Assurance at UW, who attended the meeting.

The review committee consisted of Dr. Suzanne Zeller from the Department of History at Wilfrid Laurier, Dr. David Black from the Department of Political Science at Dalhousie University, and Dr. Randall Germain from the Department of Political Science at Carleton University. During the site visit, the review committee met with the following individuals and groups:

- Dr. Dan Gorman, Director; Dr. Simon Dalby, Outgoing Associate Director, Dr. Andrew Thompson, Program Officer; Kelly Brown, Program Officer; Dr. Alistair Edgar, SIPG
- Dr. Douglas Deutschman, Dean of Graduate and Postdoctoral Studies, Wilfrid Laurier University
- Dr. Paul Jessop, Vice-President: Academic and Dr. Kathryn Carter, Associate Vice-President: Teaching and Learning, Wilfrid Laurier University
- Faculty who teach and supervise in the PhDGG program from both universities
- Dr. John Ravenhill, Director of the Balsillie School of International Affairs
- Graduate students in the PhDGG program
- Library representatives: Ms. Charlotte Innerd, Head of Collections (Laurier), Ms. Helene LeBlanc, Liaison Librarian (Laurier), Ms. Jane Forgay (University of Waterloo)
- Dr. Jeff Casello, Associate Vice-President, Graduate Studies and Postdoctoral Affairs, University of Waterloo
- Dr. Linda Warley, Associate Dean of Graduate Studies, University of Waterloo
- Dr. George Dixon, Vice-President, Academic and Provost, University of Waterloo

The review committee submitted their completed report on February 6, 2018. The executive summary from the report is provided below.

External Reviewers' Report Executive Summary

The joint WLU-WU PhD in Global Governance is an outstanding program. It has benefited from a very high-quality faculty complement, including many productive researchers and dedicated teachers and supervisors. Indeed, largely as a legacy of the CIGI Chairs program, a significant number enjoy prominent international reputations. This in turn has been a key factor in attracting a diverse cohort of excellent students, who bring a wide range of disciplinary and professional experiences to the program. Although the PhDGG is rightly concerned with being able to attract and support a larger number of international students, the products of this relatively young program have already enjoyed success in a range of professional and academic careers. In addition to the high quality of faculty available to them, students are also attracted by the excellent facilities at the CIGI campus, the rich array of events and research clusters at the Balsillie School of International Affairs, and strong financial support, again rooted in the generous initial funding provided to the School and to the program. The curriculum and courses offered by the program have provided a balanced and cutting edge training in the emerging interdisciplinary field of Global Governance, which has prepared them for a range of post-graduate pursuits. Students express a high level of satisfaction with the courses they have access to, and the support they receive from program staff and faculty.

As with any program, there are areas that require periodic re-examination and refinement. Most are relatively routine, and part of the normal process for review of an excellent - indeed flagship - program offering. Two are more pressing, however, and if unaddressed, could compromise the future of the program. In the former category, there are a number of inter-related curriculum issues that would benefit from collective consideration, including: the status of the existing six 'fields'; the current means by which the core course requirements are met; and the existing comprehensive examination process, including a common core examination and a choice of six field examinations. A second set of recommendations concern procedures and processes of communication, in relation to student research and conference funding, website coordination, and processes of complaint and appeal, for example. A third set of recommendations is related to the desire of the two universities to grow the size of the incoming student cohort, and to provide adequate financial support for this process through the systematic introduction of teaching and research assistantships.

In the latter category, and most urgent, is the looming challenge of faculty renewal as the initial cohort of CIGI Chairs (and leading international scholars who were initially recruited as CIGI Chairs) move towards retirement, and/or take up positions in other institutions. This is closely related to a second concern, which is the program's byzantine governance structure. This structure, in effect, means that the program is unable to robustly represent its own interests in the process of faculty renewal, and must rely (problematically) on the goodwill of other units to renew its faculty complement. Since the program's outstanding faculty cohort has been critical to its initial success, a failure to address these linked issues could jeopardize the future of this unique, world-class program.

Following receipt of the External Reviewers' Report, the Department collaborated on a Unit Response, which was submitted on May 24, 2018.

RECOMMENDATIONS AND RESPONSES

The External Reviewers' Report included 21 recommendations, which have been listed verbatim below, followed by a summary of the program's response, and the decanal response from the Dean of the Faculty of Graduate and Postdoctoral Studies at Laurier.

Recommendation #1: It is important for the PhDGG's **websites** at the two partner institutions to provide the same information about the functioning of the program, and the various options available to students. Fields and course codes should be listed in identical order on both sites.

Unit Response: The program agreed to conduct a review of the websites over the summer.

Decanal Response: It is important to note that information for current students leads (from students.wlu.ca) only to the BSIA website and hence we have no access to update that site. Nonetheless, the FGPS agrees a review of the website would be useful.

Recommendation #2: The PhDGG should consider adding to its **Learning Outcomes:**

- a) a series of skills related to **Teaching and Learning** -including the Teaching Certificate available at WLU- especially as the program is likely to add Teaching Assistantships to its student funding packages during the next cycle; and
- b) a series of **research skills** with training offered by the WLU/ UW Libraries. Such skills might usefully be promoted as components of the core course in Research Methods, and/ or as Doctoral Seminar milestones.

Unit Response: The program agreed with the recommendation and indicated that they would add learning outcomes related to both areas.

Decanal Response: The FGPS supports this recommendation and proposed action, which is related to a broader curriculum review that includes recommendations #3 and #5.

Recommendation #3: That the program undertake a formal review of the six **thematic fields**, with a view to reaching agreement on the following questions:

- a) can the field on Multilateral Institutions and Diplomacy be integrated into the core field on Global Governance, and/or can issues of institutions and diplomacy be integrated into the remaining thematic fields?
- b) can the field on Global Justice and Human Rights be made regularly and reliably available over the next cycle, or alternatively integrated into the remaining four thematic fields (and therefore removed as a discrete field option)?

Unit Response: Following the reviewers' visit, the program consulted students about the importance of the fields and have decided to leave them intact. For the 2019-2020 academic year, the program will remove the requirement that students are required to take two courses in their field of concentration.

Decanal Response: FGPS still has significant concerns about the current field structure. In the last 5 years, only 4 of 43 students (9%) took their comprehensive exams in the fields of Multilateral Institutions and Diplomacy or Global Justice and Human Rights. There were no exams in either field in four of the past five years. If these fields have not attracted more students before the 2-year implementation report, I would strongly recommend that the program consolidate the fields as suggested by the external reviewers.

Recommendation #4: That the program inform students in their acceptance packages which field courses will be offered during their first year in the program.

Unit Response: The program indicated that it will aim to inform students in early summer about which field courses would be offered, and to offer suitable alternatives should there be a case where a core field course cannot be offered.

Decanal Response: The FGPS agrees that students should have access to full information about course availability and alternative options as soon as is practical.

Recommendation #5: That the program review the existing **core course sequence and structure**, with a focus on: a) the relationship between the History of Global Governance and Globalization and Global Governance core course requirements; b) the means through which the Economics requirement should be met; and c) the focus and purpose of the Research Methods course.

Unit Response: The program agreed with the recommendation to undertake a review of the course sequence and structure and indicated that any curriculum changes that resulted from this review would be submitted for approval in Fall 2018.

Decanal Response: The FGPS supports the recommendation that course sequencing and progression requirements should be assessed with some regularity and would be pleased to discuss this further with the program.

Recommendation #6: That the program review the structure and format of the **comprehensive examination process**, to:

- a) ensure that comprehensive options align with the range of available core courses and fields; and
- b) consider whether to maintain the current practice of setting a core and a field exam, respectively, or tailoring the second comprehensive exam to the specific research interests of the candidate.

Unit Response: The program indicated that a review of the comprehensive examinations was connected to Recommendation #5, and would take place over the summer with any changes being submitted for approval in Fall 2018.

Decanal Response: FGPS supports a more streamlined process and would be pleased to discuss this further with the program.

Recommendation #7: That the program reconsider the time involved in its internship option and its follow-up requirements, given the tight timelines laid out for the completion of the degree, and therefore whether it should continue to be advertised as a program option.

Unit Response: The program believes that there is value in keeping the internship option available to students and does not wish to remove the option at this time.

Decanal Response: As described in the brief, the interest in the internship option is low in part because of demographics of the PhD students. Internship are likely to be more attractive to students coming directly from a Masters' program. Unless the program shifts its target market, it will have to actively advertise the benefits that students gain as a result of participating in the internship. FGPS thinks that there is a need for an ongoing discussion about the internship option.

Recommendation #8: That all comprehensive examinations be verified for authenticity of authorship and checked for plagiarism, to ensure their Academic Integrity.

Unit Response: The program will include this recommendation as part of its curriculum review process.

Decanal Response: The value of routine screening of graduate exams and theses for plagiarism using software tools like Turnitin is being discussed at the Ontario Council of Graduate Studies. FGPS supports further discussion on this matter. As this is related to several other initiatives that are part of the curriculum review process, it has not been included as a separate item in the Implementation Plan.

Recommendation #9: The program should move towards the incorporation of TA and RA duties as part of funding packages, and in the interest of enhancing student training. This is important not only to enable program growth and fifth-year support, but to link the program more visibly and organically to main campus programs. While both the Self-Study and the students express the hope that future funding packages will limit TA duties to Years 2 and 4 of the program, it may be more realistic to recognize that most other doctoral programs include such duties as essential to student training and support from Year 1.

Unit Response: The program outlined the challenges associated with the incorporation of TA and RA opportunities for PhD students, including the absence of a related undergraduate program and the necessity of consistent practices across institutions. The program reiterated its commitment to identifying suitable teaching opportunities for its students.

Decanal Response: While it is true there is no direct access to an undergraduate program, there are TA opportunities for the students. FGPS agrees with the external reviewers that most other doctoral programs include such duties as essential to student training and support from Year 1.

Recommendation #10: That WLU confirm its commitment to its joint programmes by offering students admitted to these programs funding equal to that offered by partner institutions.

Unit Response: The program indicated that the funding packages offered by both universities are currently consistent.

Decanal Response: FGPS agrees that maintaining funding parity across the university is an important goal. At the same time, it is important to acknowledge that the two universities have access to different resources, so it is not possible to guarantee parity in the future. Given this, this recommendation has not been included in the Implementation Plan.

Recommendation #n: That the program provide transparent and regular communication about the procedures for accessing student research and travel funding.

Unit Response: The program indicated that it agreed with this recommendation and had already begun to implement it. Related information had been communicated to students, and would be included in the program's student handbook.

Decanal Response: The FGPS has also made the request that any BSIA research/travel funds allocated to WLU students should be communicated (and made available to Laurier students) via the institution's standard means, thereby ensuring that each student's financial record is current and reflects the full level of financial support provided.

Recommendation #12: That WLU's Office of Graduate Studies consult with its graduate students to clarify its student policies and procedures with respect to program registration and the disbursement of funding, to align these with the experience of students enrolled through the University of Waterloo.

Unit Response: The program indicated that it would defer to Laurier's Faculty of Graduate and Postdoctoral Studies on this recommendation.

Decanal Response: FGPS uses a multi-channel communication approach through its website, bi-weekly news bulletin. Students are supported by FGPS staff, and that of the program officer and graduate program coordinator. Institutional policies and procedures are available on line for all Laurier students (including the Laurier registrants in the global governance program). While the degree program requirements in this joint program are consistent across both institutions, as registrants in a joint program, the students are bound to policies and procedures of their home institution.

Recommendation #13: That the two universities and the program consult on common rules regarding student complaints and appeals, and ensure that these rules are clearly known to both students and instructors.

Unit Response: The program indicated that students are bound by the rules of their home institution, but that they would add information about relevant policies and procedures to the program handbook.

Decanal Response: The FGPS agrees with the unit response and would be pleased to see the program handbook enhanced to reflect current information equally from both institutions in this regard. It is also appropriate to expect PhD students to take responsibility for being informed about their own degree program.

Recommendation #14: That the two universities agree on an administrative arrangement for the program that ensures strong representation of its interests in university level strategic and appointments decision-making.

Unit Response: The program indicated that its administrative arrangement was a matter for senior administration at both universities to address.

Decanal Response: The FGPS agrees that the program deserves and needs strong representation in university-level strategic planning. The dean of FGPS has discussed this issue with the Provost/VPA.

Recommendation #15: That the PhDGG program consult with its students regarding their Support Service needs, and liaise with appropriate administration and staff to mitigate students' concerns.

Unit Response: The program indicated that it would add information about support services to the orientation session held at the beginning of each year at both institutions.

Decanal Response: The FGPS agrees that Support Services available at each institution should be identified in a program handbook.

Recommendation #16: That the School and the partner universities explore the feasibility of a mechanism by which the share of research overheads generated by BSIA affiliated faculty be transferred to the school in proportion to the share of their time devoted to BSIA program responsibilities.

Unit Response: The program indicated that this recommendation was a matter for senior administration at both universities.

Decanal Response: This recommendation falls outside of the expectations of a program review and is a matter for senior administration at both universities. Thus, it has not been included in the Implementation Plan.

Recommendation #17: That the two universities commit to a plan for recruiting high-level research chairs who will be substantially committed to teaching and supervision in the PhDGG and other BSIA programs.

Unit Response: The program agrees with this recommendation but responded that its implementation was outside of the program's control as hiring decisions are not made by the PhDGG program itself. The program is committed to discussion with senior administration at both universities, which would be required to implement this recommendation.

Decanal Response: This recommendation falls outside of the expectations of a program review and is a matter for senior administration at both universities. This is tied to recommendation #14, which calls for the identification of the person who will advocate for the program at the highest levels of the administration. This recommendation has not been included in the Implementation Plan.

Recommendation #18: That the program carefully monitor its Teaching and Supervisory capacities over the next cycle, to ensure that its commitments to students do not exceed these capacities.

Unit Response: The program responded that it would ensure any growth would be sustainable and in alignment with available faculty resources.

Decanal Response: Enrolment targets are managed at the institutional level, and are established consultatively at the graduate level to ensure that faculty teaching, supervisory and financial resources are sufficient. As this is an ongoing operational process, it has not been included in the Implementation Plan.

Recommendation #19: That the program compile more detailed data regarding its applicants' institutional and disciplinary origins over the next cycle.

Unit Response: The program indicated that it was already collecting this information and would continue to do so throughout the next review period.

Decanal Response: The FGPS welcomes this suggestion, and is prepared to assist in any way possible. As this reflects a current and ongoing rather than new initiative, it has not been included in the Implementation Plan.

Recommendation #20: That the universities and the program continue to explore innovative means to enable and support increased international student recruitment as part of the effort to increase entering cohort numbers.

Unit Response: The program agreed with the importance of attracting international students and is committed to working with the administration at both universities to implement this recommendation.

Decanal Response: Laurier strives to attract a diverse graduate student cohort, including international students. Early recruitment of strong prospects may strengthen the quality of Vanier applicants, which may lead to greater success. Adequate and sustainable financial support contributions from faculty research grants would also strengthen the program's ability to attract and fund additional international students. The scope of this recommendation is institutional rather than program-specific, so it has not been included in the Implementation Plan.

Recommendation #21: That the program compile more detailed data regarding the sources of its students' external funding over the next cycle.

Unit Response: The program indicated that it already tracks this data and would continue to do so.

Decanal Response: The FGPS agrees with this recommendation and would be pleased to discuss this further. As a current and ongoing initiative, it has not been included in the Implementation Plan.

STRENGTHS OF THE PROGRAM(S)

- The program benefits from the unique arrangement supported at the Balsillie School. It is important to continue to leverage that strength in planning for the future.

OPPORTUNITIES FOR IMPROVEMENT AND ENHANCEMENT

- There are two sets of issues where the program and university need to do a better job of collaborating on decision-making and clearly communicating this to the students.
 - The first set of issues are about tactical details like policies, procedures, and day-to-day management of the program (e.g. recommendations 4, 11, 12, 13 and 15).
 - The second set of issues have to do with identifying and institutionalizing the person or people responsible for advocating for resources for students and faculty in strategic planning (e.g. recommendations 14, 16, 17, and 18).

SIGNATURES

Dr. Douglas Deutschman

August 2, 2018



Dr. Kathryn Carter

September 18, 2018



Dr. Rob Gordon

October 5, 2018



RECOMMENDATIONS PRIORITIZED FOR IMPLEMENTATION AND ACTION PLAN

Recommendation to be Implemented	Responsibility for Implementation	Anticipated Completion Date	Responsibility for Resourcing (if applicable)	Additional Notes
<p>Recommendation #1: It is important for the PhDGG's websites at the two partner institutions to provide the same information about the functioning of the program, and the various options available to students. Fields and course codes should be listed in identical order on both sites.</p>	<p>Program Director or designee(s)</p>	<p>July 2019</p>		
<p>Recommendation #2: Addition of learning outcomes related to teaching and research skills.</p>	<p>Program Director or designee(s)</p>	<p>September 2019</p>		
<p>Recommendation #3: That the program undertake a formal review of the six thematic fields.</p>	<p>Program Director</p>	<p>September 2019</p>		
<p>Recommendation #4: That the program inform students in their acceptance packages which field courses will be offered during their first year in the program. (Notice, this should also be reflected in the revisions to the website mentioned in #1 and the university policies and funding packages described in #2)</p>	<p>Program Director, FGPS</p>	<p>December 2019</p>		<p>The offer letter for all graduate students are generated within FGPS and contain information on funding and deadlines. The Program Director and FGPS need to coordinate communication so that the information is sent at the same time, whether in a separate communication or combined into a single communication.</p>

Recommendation to be Implemented	Responsibility for Implementation	Anticipated Completion Date	Responsibility for Resourcing (if applicable)	Additional Notes
<p>Recommendation #5: That the program review the existing core course sequence and structure, with a focus on: a) the relationship between the History of Global Governance and Globalization and Global Governance core course requirements; b) the means through which the Economics requirement should be met; and c) the focus and purpose of the Research Methods course.</p>	Program Director	September 2020		This is an essential part of the review of the thematic fields (#3) and the comprehensive examination (#6).
<p>Recommendation #6: That the program review the structure and format of the comprehensive examination process, to ensure that comprehensive options align with the range of available core courses and fields; and consider whether to maintain the current practice of setting a core and a field exam, respectively, or tailoring the second comprehensive exam to the specific research interests of the candidate.</p>	Program Director	September 2020		
<p>Recommendation #7: That the program reconsider the time involved in its internship option and its follow-up requirements, given the tight timelines laid out for the completion of the degree, and therefore whether it should continue to be advertised as a program option.</p>	Program Director	September 2020		Two more years of data will inform the decision about maintaining this option.

Recommendation to be Implemented	Responsibility for Implementation	Anticipated Completion Date	Responsibility for Resourcing (if applicable)	Additional Notes
Recommendation #9: The program should move towards the incorporation of TA and RA duties as part of funding packages, and in the interest of enhancing student training.	Program Director, VPA/Provost, Dean of FGPS	September 2020		If the program has aspirations for growth, the incorporation of TA and RA opportunities may prove integral to funding a larger cohort. In accordance with the university's funding policy for doctoral students, the opportunity to TA or to teach a course is deemed integral to the program and student training.
Recommendation #n: That the program provide transparent and regular communication about the procedures for accessing student research and travel funding.	Program Director, VPA/Provost, Dean of FGPS	September 2020		Related to Recommendation #9 above: while funding currently is reasonably comparable between institutions, increasing the variety of sources from which funding can be drawn will help diversify the opportunities available to students.
Recommendation #12: That WLU's Office of Graduate Studies consult with its graduate students to clarify its student policies and procedures with respect to program registration and the disbursement of funding, to align these with the experience of students enrolled through the University of Waterloo.	FPGS with input from PhDGG Program Director.	July 2019		Alignment of our policies and procedures will be harmonized with the University of Waterloo as much as possible. FGPS will communicate policies and procedures and highlight any areas where the two schools operate under different systems or constraints.
Recommendation #14: That the two universities agree on an administrative arrangement for the program that ensures strong representation of its interests in university level	VPA/Provost, Dean of FGPS, Associate Dean (SIPG)	September 2019		This is an important recommendation to ensure that the programs in SIPG have strong advocacy and adequate representation at Laurier.

strategic and appointments decision-making.				
Recommendation #15: That the PhDGG program consult with its students regarding their Support Service needs, and liaise with appropriate administration and staff to mitigate students' concerns.	Program Director or designee(s)	September 2019		



Two-Year Progress Report

Geography and Geomatics (BES), Master of Climate Change (MCC) and Master of Tourism (MA)

March 2020

Background

The review of two core plans in the Department of Geography and Environmental Management (GEM) programs, specifically Geography and Environmental Management (BES) and Geomatics (BES) was conducted on April 13 and 14, 2015. The two core programs that were reviewed also form part of the Joint Honours plans in Geography and Environmental Management and in Geomatics, plus the three year general degree plan in Geography and Environmental Management. In addition, the Department's two course-based Master's degrees, Master of Tourism and Master of Climate Change, were reviewed. The remaining graduate research thesis-based plans at the Master's and PhD levels were reviewed under a separate process and do not fall under this report.

The two review visit days comprised interviews with various administrators from the Department, Faculty and central administration at the University of Waterloo. In addition, several sessions were conducted with the faculty and students of the programs being reviewed along with visits of the main map library and the GEM facilities.

The resulting report from the examiners was completed on June 11, 2015. A written response to the reviewers' recommendations was submitted to the University on August 17, 2015, by the Chair, Professor Peter Deadman.

Overall, the Reviewers' general comments on the program objectives and learning outcomes stated that *"the requirements for the programs and the learning outcomes were clearly laid out in the reports we were provided. There is clearly a strong emphasis at the University of Waterloo's Geography on educating graduates for future employment. This is part of the Waterloo brand and the programs associated with the co-ops seems to be very well developed and successful."*

The following section provides updates on the recommendations made by the reviewers. Each **Recommendation** is followed by the Department's initial **Response** (August 17, 2015) followed by a **Progress on Implementation** as of May 2018.

Responses to the Reviewers' Recommendations

Recommendation 1: *We recommend that GEM consider a strategic visioning of the Department as a whole, to define future plans and identify priorities for faculty positions, undergraduate and graduate teaching programs, and resources.*

Response: We agree with this recommendation. Discussions around the future of the department are ongoing. Currently, we are reviewing our experiential learning activities, our undergraduate recruitment activities, and the overall research and teaching focus of the Department, with a particular emphasis on human geography. These activities will continue over the next year with the following specific goals: reviewing and revising the undergraduate and graduate curriculum, clarifying and improving our experiential learning activities, and arriving at a plan for future hiring, with a focus on human geography. These activities will be led by the Department Chair and Associate Chairs.

Progress on Implementation: Since the review, the Department has embarked on several far-reaching initiatives which respond directly to this recommendation. In January 2017, a standing Curriculum Committee was struck to monitor, adapt and adjust the undergraduate curriculum in response to the report but more importantly to respond to existential needs from students as well as workplace demands, and to strengthen our identity from a programmatic perspective. This activity is making significant progress in several areas of the curriculum. Significant structural adjustments to the curriculum have been developed in 2017 for the new undergraduate intake to the BES GEM program in 2018 and BES Geomatics Program in 2019. These changes streamline the pathways through the GEM BES program with similar adjustments to the Geomatics program. The goals are a) to provide students with more clearly prescribed pathways through our BES programs, including our specializations, b) to increase predictability of core course offerings for each incoming cohort to help improve student course selection and curriculum management, and c) to better define our experiential learning activities within courses and explicit field course offerings.

With respect to undergraduate recruitment efforts, the Department initiated a dedicated Committee on Undergraduate Recruitment (CUR) tasked with increasing outreach to high

school students and teachers. CUR recognizes two challenges to the sustained recruitment of geography undergraduate students. First, the prominence of Geography as a scholarly university discipline has increasingly been challenged in high school curricula; currently, the last time students are exposed to geography is in Grade 9. Students now see Geography as one of many "environmental" pathways available to them. This identity strengthening is a priority of Canadian Association of Geographers for which GEM has been an active member (the current incoming president, 2018-20 is Professor Sanjay Nepal). Second, the discipline of Geography is broad covering human geography (e.g. economic geography, geographies of urban and rural regions, cultural geography, environmental sustainability, climate change), physical geography (e.g. geomorphology and physical landscape change, water science, cryospheric science, soil science, hillslope processes) and geographical information science (geographical information systems, remote sensing, surveying and mapping). While GEM covers many of these elements, students have a wide range of disciplinary choices within the Faculty of Environment, some of which intersect with GEM. In addition, GEM competes with other geography departments at other universities for new undergraduate students.

Therefore, CUR is developing specific outreach materials that highlight key issues that Geography addresses and which can be delivered in a "roadshow" format to high school students, *in situ*. The "Climate Change Roadshow" package has been taken to high schools in Southern Ontario (over 100 Grade 11 and 12 classes since September 2017) and similar human and physical geography packages will be developed for 2018-19. These efforts are supported by a co-op student each term.

Finally, the Department's strategic vision is being refined. First, our research themes have been adjusted to reflect our collective identity: Geomatics, Climate Change and Environment, Earth Systems Science, Economy and Society. Geomatics and Earth Systems Science have remained largely unchanged since the review. However, our Climate Change theme has been strengthened to be Climate Change and *Environment* and our previous human geography theme of Development and Environment has been changed to *Economy and Society*. This is in response to strengthening of our human geography sub-discipline. Two appointments were made in Economic Geography in 2016-17 to re-invigorate this area of the discipline in GEM and across the faculty. The following rationale defines this approach:

"new economic geography has moved away from viewing economic processes as separate from social, cultural and political contexts. Instead, social, cultural,

and institutional factors now tend to be seen as key factors in understanding economic dynamics. Unlike previous genres, the new economic geography is not represented by a particular theoretical perspective or methodological practice..." (Coe *et al.*, 2007, p. 13)¹

Status: Significant progress, ongoing

Recommendation 2: Undergraduate student advising and mentorship should be broadened within the department to include a wider range of faculty and on a more frequent basis.

Response: We will take this recommendation under advisement. The Department has two Associate Chairs and two staff who are available to advise students on academic and curriculum matters. We are not aware of any complaints from students regarding a lack of access to academic advising. Further, we are concerned that other faculty in the Department do not have sufficient knowledge of policies, procedures, and curriculum requirements to provide accurate and uniform advice. Over the next year, we will review and discuss our current academic advising activities with student representatives to determine if adjustments are required to improve the service we provide. This activity will be led by the Department Chair and Associate Chairs.

Progress on Implementation: The retirement of the long-standing staff Undergraduate Advisor (GEM) took place in 2015; however, their replacement continues to provide this important advisory function and is highly proactive in advising our students. The Associate Chair for Undergraduate Studies (GEM) also has continued oversight of this important activity. With respect to the Geomatics plan, a new staff Undergraduate Advisor was appointed to replace a second retirement, and this position is gradually coming up to full advising capacity. Oversight of this plan is provided by our Associate Chair for Undergraduate Studies (Geomatics, Geography and Aviation and International Students) who remains a significant mainstay of these programs, along with a new faculty hire in the Geography and Aviation field who supports this program. The Associate Chair for Undergraduate Studies (Geomatics, Geography and Aviation and International Students) also spends significant time advising our international students in the 2+2 and 1+2+1 programs (see Recommendation 9 below).

¹ Coe, N.M., Kelly, P.F. and Yeung, H.W.C. 2007. *Economic Geography: A Contemporary Introduction*. Oxford: Blackwell.

Status: Completed

Recommendation 3: We strongly recommend the Department seek to improve communication with undergraduate students related to course enrollment. Determining Department course offerings prior to student registration would eliminate many challenges faced by students in meeting their program requirements. Additionally, given the complexity on offering courses due to the co-op programs, we recommend the Department consider multi-year course planning to improve student access to courses.

Response: We agree with this recommendation. We currently advise students of our term-by-term course offerings one year ahead of time. However, the specific scheduling of these courses in each term is handled by the Registrar's Office, with notice of the schedule given about two months prior to the start of that term. This scheduling of classes and times is beyond the control of the department. We will review our communication of course offerings to students to improve the availability of this information and lengthen advance notice of course offerings. This activity will be led by the Chair and Associate Chairs over the next year.

Progress on Implementation: Ongoing efforts to strengthen the curriculum continue. As described in our progress report to Recommendation 1, GEM provided all Fall 2018 incoming undergraduate students with an explicit roadmap of the core courses in their plan and specializations from terms 1A to 4B. A similar roadmap will be provided for incoming Geomatics students in Fall 2019. Students will be fully aware of when their core courses should be taken. It is anticipated that this will help students in course selection and enable them to better understand where they are in the program. It is also expected that this "road mapping" will progressively improve their learning confidence. Program roadmaps will be created each year starting in Fall 2018. This is only achievable having developed the increased streamlining and predictability of the three single Honours undergraduate programs (including regular and co-op tracks).

Status: Ongoing monitoring

Recommendation 4: The program in Human Geography is in a transition period and we recommend initiating a review and visioning for the program to reflect the current faculty complement. We anticipate elements of the geography of health would be well supported by

the expertise in the group, and natural linkages could be developed to the Geomatics and other units in the Faculty and across campus.

Response: We agree that The Department is in transition with respect to its strengths in Human Geography. We would note, however, that the Department's combined strengths in the human and physical dimensions of climate change are noteworthy, that the ways in which social science and natural science are integrated around this theme reflect an important aspect of Waterloo's Geography programming, and that Human and Physical Geography do not exist as two silos. That said, we agree that a review and visioning exercise is needed, with a particular focus on human geography, and this has been underway for the past year. These will continue with a view to outlining a vision for the Department that will guide future hiring. This activity will be led by the Department Chair and Associate Chairs.

Progress on Implementation: Since the last report, the faculty complement of 26 (25 FTE) has increased to 32 (20.25 FTE). Whilst three of the 2015 complement have retired or moved, eight new hires have been made to the faculty complement. This includes one new position in health geography, one position in geography and aviation and two new positions in economic geography. We have also benefited from a faculty appointment at the lecturer level in resource management for which the incumbent has a home in GEM. The decision was made in 2015 to pursue re-building the area of economic geography for which the Department has been known in the past and for which strong links exist across the faculty. In addition to these five hires, we have also hired two new physical geography faculty (both successful CRC Tier II holders) and have made a joint appointment with a faculty member in the Faculty of Science.

Status: Completed

Recommendation 5: The program in Geomatics has rapidly developed and appears poised for further growth. Increased promotion to incoming undergraduate students with interests in computing may further increase enrollments.

Response: We agree with this recommendation. We have recently struck a committee for undergraduate recruiting. This committee will develop a strategy that will include raising awareness of geomatics amongst high school students. Additional resources from the Dean's Office may be required for promotional activities, such as the revival of the

"Geomatics Roadshow" or the preparation of promotional materials. This activity will be led by the Department Chair, working with the Undergraduate Recruitment Committee.

Progress on Implementation: Since the last report was released, the undergraduate Geomatics plan is now one of the strongest recruitment plans in the faculty. The Fall intake in 2017 recruited 92 new geomatics students of whom ~55 were deflections from Computer Science and 37 were direct applications. Despite the Geomatics plan not being able to offer a Computer Science minor, this plan continues to be a robust recruiter for GEM. CUR continues to be active in strategizing on approaches for ongoing geomatics recruitment. What is very gratifying is that anecdotally, our geomatics students who deflected into the program are highly appreciative of this stream and once they become engaged in the program, demonstrate a high level of satisfaction with the plan. Through the Dean, the Department continues to engage with Computer Science regarding the possibility of re-opening the CS minor pathway.

Status: Ongoing monitoring

Recommendation 6: Development of a Master's program in Geomatics appears to hold strong potential. The existing faculty complement could support an advanced program that would be uniquely positioned to train students for research and development aspects of Geomatics. A co-op offering would be a logical consideration given the university strengths.

Response: We agree with this recommendation. Discussions regarding the development of a Master's program in Geomatics have taken place in the past. The Department will consult with the Dean of Environment to explore the feasibility of developing a co-op Master's program in Geomatics.

Progress on Implementation: Since the last report was released, the funding landscape has shifted and the emphasis now is on the funding of domestic doctoral students. Whilst the aspiration in the medium term is to consider a program in Geomatics, the current focus is on increasing Honours Geography numbers (see recommendation 1) and encouraging increased domestic graduate applicants at the doctoral level.

Status: Ongoing monitoring

Recommendation 7: The new Master of Climate Change (MCC) program has already built a strong international attraction and positive feedback from students. Maintaining the "lead" of this program in a rapidly developing sector in Ontario and globally will require continuing to innovate [and] attract high quality students. We recommend considering the development of co-op and research program streams to better meet student career goals and to make sure that student expectations are being matched effectively.

Response: We agree with this recommendation. Over the next year, we will explore and discuss the possibility of adding a co-op stream to the MCC program. This initiative will be led by the Director of the MCC program, working with the Department Chair and Associate Chairs.

Progress on Implementation: Since the last report was released, the MCC program has blossomed in student number and quality. In 2016 our intake was 19 students, while in 2018 we accepted 32 new MCC graduate students. In 2016, 2017 and 2018, 15 (94%), 15 (83%), and 26 (93%) MCC students respectively, were successfully placed for internships. The use of internships in 2017, 2018 and 2019 has been especially successful with students placed at Federal ministries, municipalities and NGOs. This is in part the outcome of the strengthening of ties between the faculty and these various entities in the past three years. For example, the MCC program makes efforts to engage key senior federal employees in course development; for the past three years, a resource management and climate change course was taught by a senior federal employee. Furthermore, we are in the process of developing an online climate change and health course in collaboration with Health Canada. Students in the program have secured internships which in some cases have segued into full time positions. And the strength of these internship placements has been demonstrated by repeat requests for more interns from the partners involved. In addition, the flexibility that the program offers in terms of taking advantage of an internship or completing a major research paper is a real attractor for students. Adding a co-op term will both extend the program and increase student financial and time burden, and reduce flexibility at a time (Spring term) when they typically have demonstrated an ability to optimize their options to suit their own needs. It seems now that adding a co-op stream will very likely reduce this flexibility for a program that can be agile at a key time in the student experience. Furthermore, given the nature of our relationships with external partners it is not clear what the role of Co-operative and Experiential Education would be for implementing co-op in such a program given the nature of the tight connections between faculty instructors and

internship placement organizations. It is also unclear whether a co-op track is even available to the MCC program. So, while a co-op stream in the MCC was initially attractive, it is still premature. Moreover, significant internship placements are proving very popular with our students.

Status: Completed.

Recommendation 8: The Master of Tourism appears to be at a crossroads, with declining enrollments and a change in the faculty complement that makes the viability of this program questionable.

Response: We agree with this observation. GEM has already decided to discontinue offering the Master of Tourism. The Department of Recreation and Leisure Studies has decided to admit students to the Tourism program for the Fall of 2015. However, they will review their commitment to the program over the next year. We will coordinate with them as they make that decision.

Progress on Implementation: This program is no longer offered since the application pool became not sustainable to support its delivery and the clustering of faculty expertise in this area is no longer sufficient to support the program. This is in part due to retirements and to core faculty being engaged in other high profile programming in the Department.

Status: Completed

Recommendation 9: Based on feedback, we feel that the Department needs to invest in expanding cultural and related support for the programs that attract a sizable international cohort (2+2, Master of Climate Change).

Response: We will take this recommendation under advisement. The Faculty of Environment has a full-time Coordinator of International Education who works with international students, and especially the 2+2 students, to support their adjustment to the Canadian academic environment. We will work with the Dean of Environment to review the activities of the coordinator and address any perceived needs.

Progress on Implementation: The continued implementation of this student support is ongoing. Since the review was conducted, new China university 2+2 and 1+2+1 programs have been developed each of which requires significant oversight by the Associate Chair for

Undergraduate Studies (who also has oversight responsibilities for the Geomatics, Geography and Aviation and Science and Aviation plans). As indicated in the Department's response to the original review, the Faculty has a full-time Coordinator of International Education who works with our international students and we are continually reviewing our activities and responding to perceived needs.

Status: Ongoing monitoring

Recommendation 10: Graduate student application review and acceptance practice in the Department appears to be heavily weighted towards support staff with limited academic oversight. The volume of applicants and the screening process should be reviewed to increase faculty involvement.

Response: We disagree with this assertion and recommendation. Support staff facilitate the review of graduate applications, but they do not make decisions with respect to the admission of graduate students. The final decision regarding the admission of each applicant is made by the potential faculty advisor of that student and the Associate Chair, Graduate Studies, under the supervision of the Associate Dean, Graduate Studies.

Progress on Implementation: As a matter of standard procedure, we monitor admissions procedures with specific reference to the MCC program, to ensure that the burden on the support staff continues to be managed in support of the review process and not the acceptance process. In addition and for the record, in September 2019 the Graduate Program Administrator position for MCC and the new Diploma in Climate Risk Management, which was previously split with School of Environment Enterprise and Development, was consolidated in GEM to a full time FTE staff position.

Status: Completed

Recommendation 11: Support staff in the Department are in the process of developing documentation for best practices and procedures to enhance the continuity of staff support. We recommend continuing to support this positive initiative.

Response: We agree with this recommendation. This activity will be ongoing, under the supervision of the Department Chair.

Progress on Implementation: With significant turnover of three of the support staff positions, replacement hires and existing staff have taken on the responsibility for creating and maintaining documentation of best practice and procedures of their roles. Staff have developed or are in the process of developing documentation for standard operating procedures. This will help provide continuity.

Status: Ongoing monitoring

Updated Implementation Plan

	Recommendations	Proposed Actions	Responsibility for Leading and Resourcing (if applicable) the Actions	Timeline for addressing Recommendations
1.	GEM consider a strategic visioning of the Department as a whole, to define future plans and identify priorities for faculty positions, undergraduate and graduate teaching programs and resources.	Streamlining and clarification of the plans. Significant outreach activities to Ontario high schools. Refined research themes that more clearly propagate through all programs. Increased complement of Economic Geography cluster.	Chair, Associate Chair, Undergraduate Studies, Associate Chair, Graduate Studies, Standing Curriculum Review Committee, Committee for Undergraduate Recruitment	Curriculum review and recruitment outreach activities ongoing. Research themes refinement completed. Two Assistant Professors hired in Economic Geography completed.
2.	Undergraduate student advising and mentoring should be broadened within the department to include a wider range of faculty and on a more frequent basis	Staffing turnover in advising positions has injected fresh energy and vision into this activity. In addition, associate chairs are now able to be more proactive in their capacity.	Chair	Completed
3.	Improved communication with undergraduate students with respect to course planning, selection and registration.	Turnover of support staff has injected new energy and increased activity in this support role. Cohort road mapping is underway for 2018 to provide students predictability of core course offerings in their plans and specializations.	Chair and Associate Chairs, Undergraduate studies. Curriculum Review Committee	Ongoing monitoring
4.	The program in Human Geography is in a transition period and we recommend initiating a review and visioning for the program to reflect the current faculty complement. We	Following a Departmental white paper on Human Geography needs in the Department, two new hires in the economic geography theme were made	Chair	Completed

	anticipate elements of the geography of health would be well supported by the expertise in the group, and natural linkages could be developed to the Geomatics and other units in the Faculty across campus.	at the Assistant Professor level. A further appointment was made in health geography.		
5.	The program in Geomatics has rapidly developed and appears poised for further growth. Increased promotion to incoming undergraduate students with interests in computing may further increase enrollments.	The Geomatics plan is the strongest recruitment pathway in the department. In 2017, nearly twice as many geomatics students were accepted as any other plan. Some rebalancing between Geomatics, GEM and the Aviation plans is needed.	Associate Chairs Undergraduate Studies, Committee on Undergraduate Recruitment	Ongoing monitoring
6.	Development of a Master's in Geomatics	Changes in the provincial funding landscape has meant that there is more focus on the doctoral graduate level than a Geomatics Master's degree.	Chair, Associate Chair, Graduate Studies	Monitoring
7.	Development of a co-op stream and research pathway in the Master of Climate Change plan.	Co-op graduate programs are not the norm and will be challenging for the international students in this cohort. Internships are highly desirable especially for those placed in government departments (Federal and Provincial). MCC has been successful in this area. Major Research Paper students seem satisfied with their pathway through the MCC. Strong MCC students can segue into a Doctoral program after their Master's.	Director of MCC, Program Chair	Completed

8.	The Master of Tourism appears to be at a crossroads, with declining enrollments and a change in the faculty complement that makes the viability of this program questionable.	Program no longer offered	NA	NA
9.	Expand cultural and related support for the programs that attract a sizable international cohort (2+2, Master of Climate Change)	Faculty has a full-time Coordinator of International Education who takes on this responsibility. Associate Chairs also provide oversight of these students.	Chair, Associate Chairs, Undergraduate Undergraduate Advisors	Ongoing monitoring
10.	Graduate student application review and acceptance practice in the Department appears to be heavily weighted towards support staff with limited academic oversight. The volume of applicants and the screening process should be reviewed to increase faculty involvement.	Support staff facilitate the review of graduate applications. They do not make decisions with respect to the admission of graduate students. The potential faculty advisor makes the final decision about whether or not to accept the student, given the student's academics are satisfactory.	Associate Chair, Graduate Studies. Director of MCC program. Administrative Assistant to MCC program.	Completed
11.	Support staff documenting best practices and procedures to enhance continuity of support staff.	Ongoing with recent turnover of support staff	Administrative Manager, Chair, Associate Chairs.	Ongoing monitoring

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



Date of next program review: _____ 2021-2022
Date

Signatures of Approval:

Chair/Director _____ Date 13 July 2018

Richard Jackson Kelly

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

Jan Carl

Sept 26/19

Faculty Dean _____ Date

Hans Conigli

March 26, 2019

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

Jeffrey M. Czell

March 29, 2019

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

Checklist for SUC/SGRC Reviewer Feedback Quality Assurance Office

Two-Year Progress Report: Geography and Geomatics (BES), Master of Climate Change (MCC) and Master of Tourism (MA)

Name of Reviewer: Nathan C. Funk

Date: 11/3/2020

Does the Two-Year Progress Report:

- | | | |
|--|--|------------------------------------|
| 1. Clearly describe progress achieved on the various action items in the implementation plan? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 2. Explain convincingly any circumstances that would have altered the original implementation plan? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 3. For items that are behind schedule, propose an amended implementation schedule that is reasonable and credible? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 4. Address significant developments or initiatives that have arisen since the program review process, or that were not contemplated by the program review process? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |

General Comments

The progress report offers a clear, substantive, and convincing account of progress made in responding to the recommendations of the external reviewers. Statements concerning completed measures as well as issues that warrant continued monitoring are credible, and address changes that have occurred since the current review cycle began.



Final Assessment Report

Bachelor's in Global Business and Digital Art (BGBDA) and Master's in Digital Experience Innovation (MDEI)

October 2020

Executive Summary

External reviewers found that the programs (BGBDA, MDEI) delivered by the Stratford School of Interaction Design & Business were in good standing.

“As the external reviewers we found that these programs are in overall good standing. The undergraduate Bachelor's in Global Business and Digital Arts (BGBDA) is an excellent program, managing a complex interdisciplinary curriculum which leads to a very high job placement one year after graduation (above 92%). The Masters in Digital Experience Innovation (MDEI) is also in overall good standing [...].”

A total of 16 recommendations, touching on curriculum development, student life, and improving the nature of the satellite campus, were provided by the reviewers. In response, the program created a plan outlining the specific actions proposed to address each recommendation as well as a timeline for implementation. The next cyclical review of these programs is scheduled for 2025-2026.

BGBDA: First Year Enrolment

2017/18	191
2016/17	162
2015/16	123

MDEI: New Enrolment

2017/18	26
2016/17	18
2015/16	28

Background

In accordance with the University of Waterloo's Institutional Quality Assurance Process (IQAP), this final assessment report provides a synthesis of the external evaluation and the internal response of the programs (BGBDA, MDEI) delivered by the Stratford School of Interaction Design & Business. A self-study (Volume I, II, III) was submitted to the Associate Vice-President, Academic and Associate Vice-President, Graduate Studies and Postdoctoral Affairs on September

17, 2018. The self-study (Volume I) presented the program descriptions and learning outcomes, an analytical assessment of the programs, including the data collected from a student survey, along with the standard data package prepared by the Office of Institutional Analysis & Planning (IAP). The CVs for each faculty member with a key role in the delivery of the program(s) were included in Volume II of the self-study.

From Volume III, two arm's-length external reviewers were selected by the Associate Vice-President, Academic and/or Associate Vice-President, Graduate Studies and Postdoctoral Affairs: Dr. James Nadler, Professor and Chair, School of Creative Industries, Ryerson University, and Dr. Stanley Reucker, Professor, Department of Art and Design, University of Illinois.

Reviewers appraised the self-study documentation and conducted a site visit to the University on December 3-4, 2018. An internal reviewer from the University of Waterloo, Dr. Bill Power, Associate Professor and Chair, Department of Biology, was selected to accompany the external reviewers. The visit included interviews with the Vice-President, Academic & Provost; Associate Vice-President, Academic and Associate Vice-President, Graduate Studies and Postdoctoral Affairs; Dean of the Faculty of Arts; Director and Associate Directors of the Stratford School; as well as faculty members, staff and current students. The Review Team also had an opportunity to meet with representatives from the Library and Co-operative Education.

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

Program characteristics

Bachelor of Global Business and Digital Arts (BGBDA): BGBDA is a four-year, direct entry program that combines creativity, technology and business competencies. Students spend the first year at the main University of Waterloo campus and then take all required courses and electives at the Stratford School in years two, three, and four. The combination of digital media and global business has opened up new global markets and business opportunities, but also entails a complex network of political, ethical, environmental, and ultimately humanistic concerns. Given the need to develop thoughtful and critically-informed citizens of a global digital culture, BGBDA provides students with a combination of global awareness and digital design skills that will position them as mindful leaders and transformers of 21st century business, government, and culture.

Master of Digital Experience Innovation (MDEI):

MDEI is a one-year (full-time) or two-year (part-time) professional degree targeting recent graduates as well as mid-career professionals. The MDEI program offers a unique combination of creativity, technology and business in one professional degree that allows students to:

- Develop team and project management skills, as well as leadership skills
- Connect with industry mentors and work on major projects from concept to completion
- Gain basic technical skills of digital products and implementation
- Enjoy a flexibility of full-time or part-time studies, with courses offered in the early evenings

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

Strengths

- The Global Business and Digital Arts program has seen unanticipated growth. When the program was launched, the estimated annual intake was 60 students. This target has been exceeded year over year. The current target is 180 students (150 domestic and 30 international).
- The mandatory internship for BGBDA students between the third and fourth year is one of the highlights of the program because they are able to gain valuable professional experience.
- The job placement rate for MDEI graduates one-year post-graduation is 92% of graduates are successful in finding employment in their field. This indicator serves to confirm that students are able to successfully complete the program and be career-ready.

Challenges

- Creating an undergraduate student community in Stratford has been a challenge in that students are reluctant to relocate to Stratford after their first year of study.
- MDEI is deemed a professional degree program and, thus, MDEI students have been historically excluded from the internal applicant pool for Ontario Graduate Scholarships. This is problematic because MDEI is a course-based Master's program like many course-based Master's programs in the Faculty of Arts.
- The Stratford Campus does not have a dedicated graduate student space, though effort is made to schedule the MDEI classes on the third floor of the building in order to afford graduate students the option of using the collaborative space and project rooms on that floor.

Summary of key findings from the external reviewers

The external reviewers found that these programs are in overall good standing. The undergraduate Bachelor's in Global Business and Digital Arts (BGBDA) is an excellent program, managing a complex interdisciplinary curriculum which leads to a very high job placement one year after graduation (above 92%). The Masters in Digital Experience Innovation (MDEI) is also in overall good standing, although there seems to be some frustration reported by the faculty about

whether the program is providing the career acceleration its candidates seek. On the other hand, the Master's candidates seemed quite satisfied with the MDEI.

The School's faculty and staff exhibit admirable comradery and passion for the two programs and their students. It was an important and positive step for the Stratford campus to obtain the status of a School in the Faculty of Arts. This will allow the School to continue to develop its faculty, research capability and impact and curriculum. The academic progression of a student through both the BGBDA and MDEI is highly prescribed but, at the same time, very clear.

In the eyes of the external reviewers, the top priority that the School should address is how to best deal with the issues and challenges arising from the School being a satellite campus in the smaller tourism-based center of Stratford. It is a 40-45 minute commute to the main campus of the University of Waterloo and employment and co-op opportunities in Kitchener / Waterloo, and about two hours from Toronto.

Program response to external reviewers' recommendations

Recommendations

1. Transportation for students needs to be improved from Waterloo. Since the cancellation of the Greyhound line there is no public transportation service between Kitchener-Waterloo and Stratford. The proposed addition of a GO-Bus service would make a significant difference.

Response

Students who reside in Stratford have expressed a feeling of isolation and lack of transportation to travel back to Waterloo for academic and other purposes. There is a regular shuttle service to/from Stratford and Waterloo on Fridays. However, the School now runs additional small shuttle buses from Stratford to Waterloo and back on Wednesdays and Sundays.

The City of Stratford is actively pursuing a partnership with Metrolinx to begin GO Train service to/from Stratford. This would benefit not only our campus population, but also the greater Stratford community. The City of Stratford is also investigating the possibility of adding three new bus routes; one of these will provide transportation between Kitchener/Waterloo and Stratford. It is hoped that these routes will be implemented in April 2020, providing students and faculty an additional method of transportation between the cities. Though neither of these solutions address the transportation issue fully, they are a step in the right direction for our student community.

2. As many students will continue to commute from Waterloo, avoid wherever possible the scheduling of evening classes especially in winter term. This is a safety issue as the backroads are treacherous in the snowbelt. Faculty members report that their cars often left the road for the ditch in the winter. Currently, only one faculty member lives in Stratford and the others split their time between the Stratford campus and the departments at Waterloo where they are cross-appointed.

Response

In the past, the programs have been small enough to avoid scheduling evening classes. However, more recently, evening classes are necessary to accommodate the growing number of students. The School will continue to monitor the scheduling of evening classes during the Winter term.

As of fall 2019, all undergraduate and graduate students, except for first year students, will be at the Stratford School full-time. Students will take required courses and electives at the Stratford School. We are confident that this will contribute to a positive change in the student culture and a greater buy-in by students to reside in Stratford.

Since undergraduate students spend their first year of their program at the University of Waterloo campus, it was never feasible to build a student residence in Stratford. However, the School has been actively working with a private developer who will complete attractive and affordable student living in close proximity to the campus by winter 2020. A significant number of students have expressed interest in renting accommodation in this new space.

As of fall 2020, there will also be a total of 100 new beds added to the off-campus housing inventory in Stratford. Currently, Stratford has its own menu tab on the UW off-campus housing website to ensure that residence options are advertised to students.

Concerns about road conditions voiced by faculty members will also be addressed through the careful monitoring of scheduling evening classes.

3. Improve the administrative connection with the Waterloo main campus. Students and faculty seem to have a sense of isolation. In other words, recognize and fully accommodate the satellite nature of the school.

Response

The School believes that obtaining the status of a School within the Faculty of Arts (as of July 1, 2018) will foster clearer, stronger, and well-defined connections with the Faculty of Arts and the central administration at UW. Establishing Stratford as a School has removed

ambiguity and lack of clarity for those in charge of the Stratford School. Previously, the Stratford Programs were not administered or delivered by an academic unit, such as a department or a school. Therefore, aspects of administration fell outside of university policy and were problematic to handle. Creating a distinct administrative unit gives faculty and students an increased sense of belonging to a community and might decrease the sense of isolation.

4. Establish a Program Advisory Board drawn from industry and government of experts who could serve as program advisors, employers, and potential donors. This will help the programs avoid falling behind industry trends.

Response

The suggestion to establish an advisory board drawn from industry, government and faculty experts is very much appreciated. The School agrees with the reviewers that such a body would help us identify gaps and weaknesses in the program in order to avoid falling behind industry trends. We will establish a Program Advisory Board that will consist of a small group of interested industry, government and faculty experts who will meet annually to address specific curricular questions pertaining to the undergraduate and graduate programs.

5. Develop program outcomes that are explicitly keyed to individual course learning outcomes and deliverables: a course mapping exercise. The Center for Teaching Excellence can help to organize this. Tie this back to the messaging of the program. We suggest that the School consider specific program outcomes for MDEI and how they differ from the undergraduate program.

Response

Although the learning outcomes for both programs are expressed quite well, what is lacking is a clear definition of learning goals. The School is aware of this gap and has made the articulation of learning goals for BGBDA a priority for the School's curriculum committee. The curriculum committee conducted one session led by the Center for Teaching Excellence to begin the process of defining learning outcomes that are specifically keyed to individual course learning outcomes and deliverables, which are defined in individual course syllabi. The curriculum committee then continued to meet to complete this task (see Appendix A).

For MDEI, we established an ad-hoc committee that accomplished the same task (see Appendix B).

6. We appreciate that the School conducted a major curricular review two years ago. Allow the current curricular changes of two years ago to play out and be analyzed for a year or two before tackling any further major changes.

Response

As discussed in recommendation 5, the program has developed detailed learning outcomes that are tied to the deliverables of the program (see Appendix A). Curricular changes made two years ago will be re-analyzed in two years' time, before any other major changes will be made.

7. We suggest that the School strongly consider, if at all possible, extending the summer internship into a full co-op option.

Response

Both reviewers felt very strongly about extending the one-term internship for BGBDA students into a full co-op option. BGBDA students consider the mandatory internship between their third and fourth year as one of the highlights of the program because they are able to gain valuable professional experience. The School agrees that in order to enhance the experiential learning experience for students, creating a full co-op option would be highly beneficial for the program and the students for the following reasons:

- post-degree employability and personal awareness vis-à-vis the workplace;
- enhanced professional development education: with a minimum of three co-op terms, students would be able to experiment with more than one potential career path providing them with a much clearer idea of the future direction they wish to take post-graduation;
- employer demand: a recent employer survey showed that employers seek BGBDA students for more than one term, citing the unique skill set that these students bring;
- recruitment: co-operative education is UW's brand. Adding a full co-op option to BGBDA would attract even higher numbers of outstanding applicants to the program.

The CEE is currently working on a feasibility study with the aim of implementing this change for the 2021-2022 academic year (see Appendix C for summary of Co-op proposal).

8. Continue to expand the business side of the curriculum, especially dealing with finance.

Response

An introductory course in business financials (GBDA 311) has been added to the BGBDA curriculum and will be offered for the first time in the 2020-2021 academic year.

9. Explore opening up more electives to allow students to specialize more than is currently possible in a highly prescribed undergraduate program. We would suggest allowing undergraduates in third year be allowed to take two or three electives within BGBDA. This would allow those interested students to explore business or design in more depth.

Response

As part of the new curriculum that launched in 2018-19, BGBDA students will be offered one elective in 2019-20, steadily increasing the number to 3-5 electives per term, open to all BGBDA students. BGBDA students will have the opportunity to take four more electives in their upper years, in addition to the electives taken in first year. This will allow students to pursue academic interests outside of their required courses and/or pursue a minor in a different field.

10. In new tenure track hires, try to recruit faculty with formal training in Design.

Response

The reviewers strongly suggested strengthening our faculty expertise in Design. This would require the addition of a minimum of one new tenure-track position to the existing faculty complement. This position has been approved by the Provost and will be in place in July 2020.

11. Do an inventory on what services would be important for Stratford campus and do those right. For example, does Stratford need some kind of food bank for its students?

Response

The reviewers recommended conducting a complete inventory of needed services for the Stratford School. This process has been launched and will be finalized by mid-2020 with recommendations for student services and an implementation plan.

12. Find some way to provide an introduction of the students to the library. Reinstate library services as part of the orientation program for both undergraduates and masters students. Increase classroom invitations to librarians; explore some librarian office hours on site.

Response

The School will continue to work with Dana Porter Library to provide opportunities for our students to visit the library facilities. There are no plans to have an onsite librarian at the Stratford School. However, library visits and tours are encouraged during Orientation for incoming students.

13. Increase on-site hours for student counselors.

Response

The School is currently in conversation with Counselling Services to increase the presence of counselling from one to two counsellors at the Stratford School.

14. We encourage the School to arrange new spaces for classes, accommodation, and student life. For example, we suggest that the University could support the creation of local student clubs, and provide them with space. Provide or support student events that might also attract other students from main campus. We recognize and appreciate that the School and University are already planning to rent more space in Stratford for these purposes and working with a private developer to build apartment spaces appropriate for the students and that can compete with quality of rental accommodation available in Waterloo.

Response

In addition to the added space that will be available in fall 2019, the reviewers recommend that the University support the creation of local student clubs, and provide students with the necessary space. It is also important to attract students from main campus to Stratford for events. One of our staff members has taken on the responsibility of creating a more vibrant student community. In addition, the GBDA student society has been given a dedicated space at the Stratford School. Recently, students have created the Creators Collective, which is a student-led initiative, where students curate their own digital artwork on the first floor of the Stratford School. The first exhibit drew 150 attendees from the Stratford School and beyond. The Stratford School administration is in full support of this initiative and staff assist students with the logistics of mounting the annual exhibit. The program plans on building on this successful event, which is the responsibility of the staff person in charge. We will also connect with colleagues on main campus regarding increased student support at the Stratford School.

15. For the MDEI candidates, we suggest establishing some course work and formal networking opportunities in Toronto.

Response

The current program is restricted in impact by its location in Stratford because the target learners for the part-time option of MDEI are professionals, at the mid-career stage, who typically are employed full-time. For this type of learner, it is often difficult to physically travel to the Stratford campus twice a week to attend class. Instead of establishing course work and formal networking opportunities in Toronto, we are in the process of developing a hybrid version of the MDEI program that will provide these students with greater flexibility in their schedule. Indeed, the reviewers suggested to teach courses such as DEI612 “Working in Teams” on campus and moving the other courses online. As part of this hybrid program, students will benefit from two short intensive bootcamps/workshops (Intensives) interspersed with online instruction. The first four weeks of DEI612 have been incorporated into the first Intensive. The ad-hoc committee for MDEI is currently working on completing their plan and roll-out schedule for the MDEI online program.

In addition, instead of the MDEI annual fieldtrip we will use this budget to allow our students to attend a relevant conference, such as TrueNorth in KW or an appropriate conference/event in Toronto.

16. Consider development of a research masters and PhD to enrich the curriculum and extend the reach of the program.

Response

Changing the on-campus MDEI program to a hybrid delivery model will allow more space for a research Master's and PhD program. We will begin the development process of these new programs in December 2019 and expect to have a draft brief by summer 2020.

Implementation Plan

	Recommendations	Proposed Actions	Responsibility for Leading and Resourcing (if applicable) the Actions	Timeline for addressing Recommendations
1.	Transportation for students needs to be improved from Waterloo. Since the cancellation of the Greyhound line there is no public transportation service between Kitchener-Waterloo and Stratford. The proposed addition of a Go-Bus service would make a significant difference.	<ul style="list-style-type: none"> • Increased shuttle service • Create partnership with Metrolinx 	Director, Stratford School Dean of Arts City of Stratford	Complete – shuttle service added on Wednesdays and Sundays. Regular service available on Fridays. Metrolinx pilot project will launch in spring 2020.
2.	As many students will continue to commute from Waterloo, avoid wherever possible the scheduling of evening classes especially in winter term. This is a safety issue as the backroads are treacherous in the snowbelt. Faculty members report that their cars often left the road for the ditch in the winter. Currently, only one faculty member lives in Stratford and the others split their time between the Stratford campus and the departments at Waterloo where they are cross-appointed.	<ul style="list-style-type: none"> • Move courses to the Stratford School • Add privately developed student accommodation 	Director, Stratford School Director, Stratford School	Complete – effective Fall 2019, all students (except for 1 st year students) will be in Stratford full time. Fall 2019
3.	Improve the administrative connection with the Waterloo main campus. Students and faculty seem to have a sense of isolation. In other words, recognize and fully accommodate the satellite nature of the school.	<ul style="list-style-type: none"> • Establish stronger administrative connection with main campus 	Dean of Arts Director, Stratford School	Complete – effective July 1, 2018, the Stratford School of Interaction Design & Business obtained official status as a School.
4.	Establish a Program Advisory Board drawn from industry and government of experts who could	<ul style="list-style-type: none"> • Establish a Program Advisory Board 	Director, Stratford School	First meeting planned for fall 2020

	serve as program advisors, employers, and potential donors. This will help the programs avoid falling behind industry trends.			
5.	Develop program outcomes that are explicitly keyed to individual course learning outcomes and deliverables: a course mapping exercise. The Center for Teaching Excellence can help to organize this. Tie this back to the messaging of the program. We suggest that the School consider specific program outcomes for MDEI and how they differ from the undergraduate program.	<ul style="list-style-type: none"> Articulate program outcomes and learning goals 	Director, Stratford School Centre for Teaching Excellence Curriculum committee	Complete – GBDA Learning Outcomes Complete – MDEI Learning Outcomes
6.	We appreciate that the School conducted a major curricular review two years ago. Allow the current curricular changes of two years ago to play out and be analyzed for a year or two before tackling any further major changes.	<ul style="list-style-type: none"> Conduct review of impact of curriculum changes 	Director, Stratford School Curriculum committee	2022-2023
7.	We suggest that the School strongly consider, if at all possible, extending the summer internship into a full co-op option.	<ul style="list-style-type: none"> Introduce full co-op option for BGBDA 	Director, Stratford School CEE	2021-2022
8.	Continue to expand the business side of the curriculum, especially dealing with finance.	<ul style="list-style-type: none"> Offer introductory course in business financials (GBDA 311) 	Director, Stratford School	2020-2021
9.	Explore opening up more electives to allow students to specialize more than is currently possible in a highly prescribed undergraduate program. We would suggest allowing undergraduates in third year be allowed to take two or three electives within BGBDA. This would allow those interested students to explore business or design in more depth.	<ul style="list-style-type: none"> We will offer one elective in 2019-20, steadily increasing the number to 3-5 electives per term. 	Director, Stratford School Curriculum committee	2019-2020

10.	In new tenure track hires, try to recruit faculty with formal training in Design.	<ul style="list-style-type: none"> • Hire one faculty in Design 	Director, Stratford School Dean of Arts, SACA	July 1, 2020
11.	Do an inventory on what services would be important for Stratford campus and do those right. For example, does Stratford need some kind of food bank for its students?	<ul style="list-style-type: none"> • Conduct inventory of needed services 	Administrative Officer	winter 2020
12.	Find some way to provide an introduction of the students to the library. Reinstate library services as part of the orientation program for both undergraduates and masters students. Increase classroom invitations to librarians; explore some librarian office hours on site.		Administrative Officer	winter 2020
13.	Increase on-site hours for student counselors.	<ul style="list-style-type: none"> • Increase the presence of counseling from 1 to 2 counsellors 	Director, Stratford School Counselling Services	winter 2020
14.	We encourage the School to arrange new spaces for classes, accommodation, and student life. For example, we suggest that the University could support the creation of local student clubs, and provide them with space. Provide or support student events that might also attract other students from main campus. We recognize and appreciate that the School and University are already planning to rent more space in Stratford for these purposes and working with a private developer to build apartment spaces appropriate for the students and that can compete with quality of rental accommodation available in Waterloo.	<ul style="list-style-type: none"> • Hire one staff member to oversee and coordinate the creation of local student clubs, student-run initiatives (on hold) • Reorganization of staff members to allocate more to this role 	Director, Stratford School Administrative Officer Dean of Arts	fall 2020

15.	For the MDEI candidates, we suggest establishing some course work and formal networking opportunities in Toronto.	<ul style="list-style-type: none"> • Develop hybrid online/on campus MDEI • Allocate budget for students to attend relevant conferences (e.g., TrueNorth in KW or other conferences/events in Toronto) 	Director, Stratford School Curriculum committee Administrative Officer	In progress, implementation planned for 2021-22
16.	Consider development of a research masters and PhD to enrich the curriculum and extend the reach of the program.	<ul style="list-style-type: none"> • Changing the on-campus MDEI program to a hybrid delivery model would also allow us to create space for a research Master's and PhD program. 	Director, Stratford School, Curriculum committee	In progress

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

Date of next program review

2025-26

Date

Signatures of Approval



November 17, 2020

Chair/Director

Date

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

Date



Faculty Dean

Date: 27 November 2020

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

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

Date

Associate Vice-President, Graduate Studies and Postdoctoral Affairs

Date

(For graduate and augmented programs)

Appendix A

Bachelor of Global Business and Digital Arts

Program-Level Learning Outcomes

Graduates of the Bachelor of Global Business and Digital Arts (GBDA) will have developed and demonstrated a wide range of knowledge and skills. They will meet the Undergraduate Degree Level Expectations (UDLEs) formulated by the Ontario Council of Academic Vice-Presidents (OCAV) in:

1. Depth and breadth of knowledge
2. Knowledge of methodologies
3. Application of knowledge
4. Communication skills
5. Awareness of limits of knowledge
6. Autonomy and professional capacity

They will also meet the extended expectations of the University of Waterloo:

7. Experiential learning, and
8. Diversity

Our articulation of the learning goals of GBDA has been informed by the VALUE rubrics of the Association of American Colleges and Universities (AAC&U). Each of these rubrics was selected as especially relevant to GBDA and reviewed by a stakeholder in the meeting:

- Creative Thinking
- Critical Thinking
- Ethical Reasoning
- Global Learning
- Inquiry and Analysis
- Integrative Learning
- Intercultural Knowledge and Competence
- Foundations and Skills for Lifelong Learning
- Problem-Solving
- Quantitative Literacy
- Teamwork
- Written Communication

1. Depth and breadth of knowledge

Graduates will demonstrate depth and breadth of knowledge in global business and digital arts, including:

- a developed knowledge and critical understanding of the key concepts, methodologies, current advances, theoretical approaches and assumptions in global business and digital arts;
- a developed understanding of many of the major fields in global business and digital arts, including from an interdisciplinary perspective, and how the fields may intersect with fields in related disciplines;
- a developed ability to: i) gather, review, evaluate and interpret information; and ii) compare the merits of alternate hypotheses or creative options, relevant to one or more of the major fields in global business and digital arts;
- a developed, detailed knowledge of and experience in research in an area of global business and digital arts;
- developed critical thinking and analytical skills inside and outside global business and digital arts;
- the ability to apply learning from one or more areas outside global business and digital arts.

The learning goals around depth and breadth of knowledge specific to GBDA are that students should be able to:

- engage in thorough market and user research in order to synthesize data into usable knowledge;
- develop an understanding of customer and user needs in the marketplace for the purpose of revealing problems that could be solved;
- combine existing approaches to the understanding of what global customers and users value in the marketplace;
- demonstrate empathy in the planning, designing and execution within product/service development with a focus on the interactions of global customers and users in the marketplace;
- seek out and develop expert perspectives on design solutions;
- develop creative propositions and solutions that take into account market research and user needs;
- utilize interdisciplinary perspectives to develop technological solutions for clearly understood global problems;

2. Knowledge of methodologies

Graduates will demonstrate an understanding of methods of inquiry and creative activity in global business and digital arts that enable them to:

- evaluate the appropriateness of different approaches to solving problems using well established ideas and techniques;
- devise and sustain arguments or solve problems using these methods;
- describe and comment on particular aspects of current research or equivalent advanced professional practice.

The learning goals around the knowledge of methodologies specific to GBDA are that students should be able to:

- combine and synthesize existing ideas, images, or expertise in original ways, and work in imaginative ways characterized by a high degree of innovation, divergent thinking, and risk taking:
 - evaluate creative processes and products using domain appropriate criteria
 - solve problems, recognize the consequences of the solution and articulate the reasons for choosing that solution
 - embrace contradictions, integrating alternate, divergent, or contradictory perspectives or ideas fully
 - think innovatively, extending a novel or unique idea, question, format, or product in order to create new knowledge or knowledge that crosses boundaries
 - connect, synthesize, and transform ideas or solutions into entirely new forms
- explore issues, ideas, artifacts, and events before accepting or formulating an opinion or conclusion:
 - state an issue clearly and describe it comprehensively
 - thoroughly, systematically and methodically analyse their own and others' assumptions and carefully evaluate the relevance of context when presenting a position
 - select a specific position, perspective, thesis, or hypothesis that is imaginative and takes into account the complexities and points of view inherent to the issue
 - draw logical conclusions and related outcomes that reflect an informed evaluation and an ability to place evidence and perspectives discussed in priority order
- produce informed conclusions and judgements:
 - identify an object of research that addresses significant yet previously less explored aspects and synthesize gathered research representing various points of view and approaches
 - design an appropriate methodology or theoretical framework
 - organize and synthesize evidence to identify insightful patterns, differences, or similarities related to object of research
 - state a conclusion that is a logical extrapolation from the inquiry findings
- reason and solve quantitative problems from a wide array of authentic contexts and everyday life situations:
 - accurately read and understand information presented in mathematical forms, charts, graphs and geometric figures
 - make appropriate inferences based on information presented in mathematical forms
 - visualize relevant information into various mathematical forms such as equations, graphs, diagrams, tables, or words, in a way that contributes to a further or deeper understanding
 - evaluate assumptions and draw appropriate conclusions based on the quantitative analysis of data, while recognizing the limits of this analysis
 - explicitly describe assumptions and provide a compelling rationale for why each assumption is appropriate
 - communicate quantitative evidence in support of an argument effectively
- design, evaluate, and implement a strategy to answer an open-ended problem or achieve a desired goal:

- identify and construct a clear and insightful problem statement that takes into account evidence of relevant contextual factors
- ideate alone and with others to identify multiple approaches for solving the problem
- propose one or more solutions or hypotheses sensitive to contextual factors and the ethical, logical, and cultural dimensions of the problem
- evaluate potential solutions, deeply and thoroughly considering the history of the problem, reviewing the logic or reasoning, examining the feasibility, and weighing the impact of the solutions
- implement and evaluate a solution in a manner sensitive to the multiple contextual factors of the problem

3. Application of knowledge

Graduates will demonstrate an ability to apply their knowledge of global business and digital arts:

- demonstrate the ability to review, present and critically evaluate qualitative and quantitative information;
- develop lines of argument;
- make sound judgments in accordance with the major theories, concepts and methods of global business and digital arts;
- apply underlying concepts, principles, and techniques of analysis, both within and outside global business and digital arts;
- demonstrate the ability to use a range of established techniques to:
 - initiate and undertake critical evaluation of arguments, assumptions, abstract concepts and information
 - propose solutions
 - frame appropriate questions for the purpose of solving a problem
 - solve a problem or create a new work
- demonstrate the ability to make critical use of scholarly reviews and primary sources.

The learning goals around the application of knowledge specific to GBDA are that students should be able to:

- apply the industry-standard digital tools and platforms to their work;
- synthesize methodologies and approaches learned in the classroom, during the internship or while studying abroad into applied skills for employment;
- ascertain how different cultures and businesses respond to an action;
- determine the viability of appropriate business models for economic transactions;
- develop skills and technical knowledge pertaining to digital storytelling, including storyboarding and narrative development, using industry standard software and equipment through both practice and self-directed learning;
- understand the complexity of the relationship between digital technologies and the communities that employ those technologies and shape the scale and nature of their diffusion through society;
- develop an understanding of “digital culture” and the implications it has on our cultural lives;

4. Communication skills

Graduates will demonstrate the ability to communicate information, arguments, and analyses accurately and reliably, in the many modalities of global business and digital arts, including orally, in writing, and visually to a range of audiences.

- demonstrate a thorough understanding of context, audience, and purpose that is responsive to the assigned task and focuses on all elements of the work;
- use appropriate, relevant, and compelling content to explore ideas within the context of global business and digital arts;
- demonstrate detailed attention to and successful execution of a wide range of conventions particular to a specific project and medium including organization, content, presentation, formatting, and stylistic choices;
- use graceful and accurate language that skillfully communicates meaning to readers with clarity and fluency.

The learning goals around the application of knowledge specific to GBDA are that students should be able to:

- fulfil assignments by choosing a format, language, graphic or other visual representation in ways that enhance meaning, making clear the interdependence of language and meaning, thought, and expression;
- demonstrate mastery of the narrative techniques of storytelling that connect with your audience;
- design visuals to communicate quantitative information clearly and accurately for specialist and generalist audiences;
- express themselves clearly and expressively, formally and informally, in multiple media;
- integrate multiple media of expression for convincing storytelling;
- present project proposals, design research, and project outcomes, orally and with industry-standard presentation tools;
- articulately defend their design decisions to peers, leadership, and clients.

5. Awareness of limits of knowledge

Graduates will demonstrate an understanding of the limits to their own knowledge and ability, and an appreciation of the uncertainty, ambiguity and limits to knowledge and how this might influence analyses and interpretations.

The learning goals around an awareness of limits of knowledge specific to GBDA are that students should be able to:

- recognize the need to make reasonable assumptions in order to move forward;
- articulate the assumptions underlying a calculation, conclusion, design, or recommendation;
- recognize their own biases, cultural or otherwise;
- evaluate assumptions throughout the design process.

6. Autonomy and professional capacity

Graduates will demonstrate autonomy and professional capacity. This includes:

- qualities and transferable skills necessary for further study, employment, community involvement and other activities requiring:
 - the exercise of initiative, personal responsibility and accountability in both personal and group contexts
 - working effectively with others
 - decision-making in complex contexts.
- the ability to manage their own learning in changing circumstances, both within and outside the discipline and to select an appropriate program of further study;
- exercise academic integrity and social responsibility.

The learning goals around autonomy and professional capacity specific to GBDA are that students should be able to:

- learn independently:
 - explore a topic in depth
 - pursue knowledge and experiences outside the classroom
 - review prior learning and past experience, inside and outside the classroom, to establish a foundation for lifelong learning
 - apply prior learning and past experience to new situations.
- collaborate respectfully and effectively on interdisciplinary teams;
- demonstrate a professional work ethic individually and in teams: positive and productive team communication, consistently meeting deadlines, delegate and employ multiple production roles, and establish a pre and post-production workflow;
- reflectively evaluate one's own performance and examine skills that need improvement;
- follow agile processes and frameworks for team work, including contributing to team meetings, equitable collaboration, group organization, workflow management, and communication;
- respond to conflict directly and constructively;
- anticipate and clarify differences in specialist vocabulary between disciplines;
- stay current technically:
 - transfer skills from familiar digital tools and platforms to new versions or variants
 - learn the use of common digital tools and platforms with self-guided tutorials and minimal coaching
 - learn the use of emerging digital tools and platforms with coaching and applied practice.
- behave ethically:
 - recognize ethical issues when they emerge in complex, multilayered global, business, and creative contexts
 - independently apply ethical concepts and consider the full implications of that application.

7. Experiential learning

At the University of Waterloo, we also expect graduates to be able to articulate their learning from experiential or applied opportunities.

The learning goals around experiential learning specific to GBDA are that students should be able to:

- meaningfully synthesize connections among experiences outside the formal classroom (including life experiences and academic experiences such as internships and travel abroad) to deepen understanding of global business and digital arts and to broaden their own points of view;
- evaluate changes in their own learning over time;
- adapt and apply skills, abilities, theories, or methodologies gained in one situation to new situations;
- develop an understanding of complexity through active engagement and study of subjects through real world contexts;
- develop ideas and theories by actively engaging with digital media and design objects;

8. Diversity

At the University of Waterloo, we also expect graduates to demonstrate an understanding of the intellectual, social, cultural, and political diversity of the world in which we live.

The learning goals around diversity specific to GBDA are that students should be able to:

- contribute effectively on diverse teams:
 - collaborate respectfully with diverse others
 - facilitate the contributions of diverse others
 - negotiate a common understanding of the project goals and planning
- demonstrate and apply an understanding of cultural differences to their work
 - demonstrate cultural self-awareness:
 - demonstrate an understanding of the complexity of elements important to members of another culture
 - interpret intercultural experience from the perspectives of their own and more than one worldview
 - demonstrate the ability to act in a supportive manner that recognizes the feelings of another cultural group
 - recognize cultural differences in verbal and nonverbal communication and applies that knowledge to their behaviour and their work
 - ask complex questions about other cultures, seek answers, and apply that knowledge to their behaviour and their work
 - initiate and develop interactions with culturally different others
 - suspend judgement in valuing their interactions with culturally different others.
- seek to understand how their actions affect both local and global communities:
 - evaluate the global impact of their own and others' specific local actions on the natural and human world

- evaluate and apply diverse perspectives to complex subjects within natural and human systems in the face of multiple and even conflicting positions
- adapt and apply a deep understanding of multiple worldviews, experiences, and power structures while initiating meaningful interaction with other cultures to address significant global problems
- take informed and responsible action to address ethical, social, and environmental challenges in global systems and evaluate the local and broader consequences of individual and collective interventions
- examine the historical and contemporary roles, interconnections, and differential effects of human organizations and actions on global systems within the human and natural worlds
- apply knowledge and skills to implement sophisticated, appropriate, and workable solutions to address complex global problems using interdisciplinary perspectives independently or with others.

Appendix B

Master of Digital Experience Innovation Program-level Learning Objectives

Summary

In the Master of Digital Experience Innovation (MDEI) program, we explore new forms of design innovation that emerge through the intersections between business and digital technologies. We use applied management to solve complex challenges through human-centred approaches to design, and interdisciplinary, forward-thinking modes of collaboration. Working with partners outside the university, we use creative leadership to develop innovative solutions for industry.

Guiding Principles

The MDEI program is organized around two organizational pillars: Applied Management and User Experience (UX) Design and User Research.

- **Applied Management** critically examines business management practices and implements innovative strategies to streamline or improve them.
- **UX Design and User Research** focus on understanding the needs of users and developing empathic design solutions to address their needs.

Overall Learning Objectives

1. Develop a *theoretical* and *practical* understanding of innovation in marketing, business strategy, UX design, and digital media.
2. Conceptualize the relationships between innovation, creativity, customer insight, strategy and customer experience that are relevant in contemporary business and institutional practice.
3. Design, prototype, and evaluate innovative, forward-thinking human-centred design solutions to empathically address the needs, desires, and abilities of different audiences.

Learning Objectives - Applied Management

1. Formulate problems: Students will develop a theoretical and practical understanding of evaluating current external business markets, and internal management practices, in order to understand problem spaces and establish where opportunities to innovate exist.
2. Design solutions: Students will use emerging technologies, and original research to generate innovative ideas, for existing companies, in order to create business plans and roadmaps, that enable firms to better meet customer needs and improve shareholder value.
3. Deliver solutions: Students will produce a project plan, and a proof of concept, focused on improving business practices that will deliver a superior customer experience and result in greater performance on key success factors relevant to the competitive landscape of the firm.

Learning Objectives - UX Design and User Research

1. Identify the needs, desires, and abilities of different people using design thinking to create technological solutions that address these.
2. Design and prototype solutions using a variety of physical and digital assets.
3. Design and implement user tests to gather information, validate design decisions, and generate insights.
4. Assess the impact of design using a variety of evaluation methods.

Appendix C

Bachelor of Global Business and Digital Arts (GBDA) Co-op

1. Summary

Current state:

GBDA students are required to complete a one-term internship as a mandatory graduation milestone, taking place in the spring term following the completion of their 3b term. Over the course of 12 to 16 weeks (between May 1st and August 31), students work a 35 to 40-hour week at an approved organization earning an average hourly wage of \$20/hr. Cooperative and Experiential Education (CEE) facilitates the GBDA internship Recruitment Cycle for GBDA students. Students gain limited professional experience in the areas of digital media, including UX/UI, visual/product design, digital marketing, graphic design, social media, project management, product development, etc., as well as business experience in general.

Rationale for proposed change:

- The Honors Bachelor of Global Business and Digital Arts program (GBDA) is an industry-facing program in the sense that students explore the methods, meanings, impacts, and futures of digital and interaction design in heterogeneous global business contexts with the ultimate goal of developing solutions for industry. Although the one-term internship provides a valuable experiential learning experience to GBDA students, it is a very limited experience. With an additional three work terms and an enhanced professional development education through the required WatPD courses, our students will have more opportunities to apply their competencies throughout their program, and not only for one term before their final year of study. This change will increase post-degree employability and personal awareness vis-à-vis the workplace.
- Students consider the mandatory internship between their third and fourth year as one of the highlights of the program because they are able to gain valuable professional experience. With more than one work term, students will be able to experiment with more than one potential career path providing them with a much clearer idea of the future direction they wish to take post-graduation. For example, currently a student may be employed as a web designer or a user experience specialist for their internship. Thanks to the interdisciplinary nature of the program, students also acquire knowledge in areas such as project management, interaction design, marketing and other fields. Given the opportunity of additional work terms, a student might discover a particular professional interest in more than one field, which would impact their career choice in a significant way.
- Additional work terms would also add to fundamental business experience which would be an asset for future employability.

- While we do not have firm data on employer recommendations, we have a strong indication through anecdotal evidence that many of our employers are asking for students every term, not just in the summer.

2. Requirements

- All GBDA requirements as per Calendar
- PD1, Co-op Fundamentals, and PD12, Reflection and Learning (Work term 1)
- Two PD electives (<http://www.ucalendar.uwaterloo.ca/1920/COURSE/course-PD.html>)
- Work term reports/Reflections for Work terms 2,3,4 will be covered by the completion of the PD courses (new as of 2023/24)

3. Work and academic term sequence

After consultation with CEE, we are proposing the following streams:

	F21	W22	S22	F22	W23	S23	F23	W24	S24	F24	W25	S25	F25
	1A	1B	Off	2A	2B	3A	WT	3B	WT	4A	WT	WT	4B

A minimum of three co-op terms are required for graduation. We have scheduled four co-op terms in order to provision for one unsuccessful co-op term. The first work-term is scheduled for the term following the 3A term; this will allow students to have the spring term between year 1 and 2 off and will allow them to study abroad in their 4A term between two work terms.

4. Enrollment

GBDA is technically capped at 180 students, but we currently have an annual intake of 200 students. This proposal is based on an intake of 200 students.

5. Implications for the current curriculum and faculty/staff resources

Courses: Currently, students who fail a required GBDA course, often have to wait two terms (winter, spring or spring, fall) to retake the failed course because all required courses are only offered once per academic year. In order to help students move through the program as seamlessly as possible, we will encourage those who might have failed a course to accept 4-month co-op jobs until they have the opportunity to work for 8-months in work terms 3 and 4. This will reduce the number of students off-

sequence or having to sit out for a term or two. We are currently also in the process of identifying key courses that we will offer in more than one term per academic year in order to reduce the wait time for students who are looking to retake a failed course or who are off sequence for other reasons.

Administrative and advising support: Students will need advising in all three terms, which is and will be handled by the Associate Director, Undergraduate and the Advising Manager. Advisement will include information and support related to co-op requirements and options. As of 2023, all work term reports/reflections will be covered by the students' completion of PD courses. No additional support from the Stratford School will be required. In addition to the Advising Manager, the Stratford School currently has a part-time staff person for administrative support of the internship, who will transition to support co-op.

Employment development: in co-ordination with the CEE, the Stratford School assists in developing and cultivating relationships with prospective employers, which will help students secure suitable employment.

Space requirements: There is currently no on-site teaching in the spring term. With the introduction of co-op, we will be able to utilize the space better by offering courses in the spring term. Conversely, in the fall and winter terms, the Stratford School is at capacity. Moving to a schedule where we teach all three terms and have students on work terms will lighten the burden on the building.

All other resources will remain unchanged.

6. Process

- The Director met with the Associate Dean, Undergraduate, Kathy Acheson; Associate Dean for Co-operative Education and Planning, Bob Park; Associate VP, Academic, David DeVidi to discuss the plan.
- CEE is in the process of conducting a feasibility study that assesses employer availability and CEE resources relevant to the new plan. The feasibility study will be passed on to the Director and Associate Director, Undergraduate. It will be completed by December, 2019.
- The Director and Administrative Officer met with Amanda McKenzie from the Quality Assurance Office. Honours GBDA Co-op is a major modification to an existing plan (Honours GBDA) and therefore is subject only to internal approvals, rather than having to go to the Ministry.
- The Director and Administrative Officer met with IAP for fee assessments for co-op.
- The planned start date for Honours GBDA Co-op is September 2021.

- Please find below the course sequencing for students starting the program in fall 2021 (please note that previous cohorts will not be able to opt-into GBDA Co-op):

Honors GBDA Co-op 2021-2025			
	Fall	Winter	Spring
2021-2022	<ul style="list-style-type: none"> • ARTS 130 Inquiry & Communications • ECON 101 Intro to Microeconomics • Second Language • 2 Electives 	<ul style="list-style-type: none"> • ARTS 140 Information & Analysis • GBDA 101 Intro to Digital Media Design • Second Language • 2 Electives 	<i>Term off</i>
2022-2023	<ul style="list-style-type: none"> • CS 105 Intro to Computer Programming 1 • GBDA 201 Digital Media Project 1 • GBDA 203 Introduction to Digital Culture • GBDA 210 Intro to User Experience Design • GBDA 228 Digital Imaging for Online Applications 	<ul style="list-style-type: none"> • CS 106 Intro to Computer Programming 2 • GBDA 202 Digital Media Project 2 • GBDA 204 Working in Teams & Project Management • GBDA 211 Introduction to Global Business • GBDA 212 Portfolio & Professional Communication 	<ul style="list-style-type: none"> • GBDA 301 Global Digital Project 1 • GBDA 303 Data and Society • GBDA 304 Marketing in the Digital World • GBDA 305 Global Business & Development • GBDA 311 Intro to Business Financials
2023-2024	Work term 1	<ul style="list-style-type: none"> • CS 330 Management Information Systems • GBDA 205 Quantitative Methods • GBDA 302 Global Digital Project 2 • GBDA 306 Ethics and Values in Design • GBDA 310 Advanced User Experience Design & Research 	Work term 2
2024-2025	<ul style="list-style-type: none"> • GBDA 410 Seminar in User Experience Research • GBDA 412 Special Topics in Digital Cultures • GBDA 414 Special Topics in Design & Society • 2 Electives 	Work term 3	Work term 4
2025-2026	<ul style="list-style-type: none"> • GBDA 402 Capstone Course – Cross-Cultural Digital Business (2.0CR) • GBDA 413 Special Topics in Interaction Design 		

Checklist for SUC/SGRC Reviewer Feedback Quality Assurance Office

Final Assessment Report: Bachelor's in Global Business and Digital Art (BGBDA) and Master's in Digital Experience Innovation (MDEI)

Name of Reviewer: Anita Layton

Date: 11/2/2020

Does the Final Assessment Report:

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

General Comments

Click or tap here to enter text.

Checklist for SUC/SGRC Reviewer Feedback Quality Assurance Office

Final Assessment Report: Bachelor's in Global Business and Digital Art (BGBDA) and Master's in Digital Experience Innovation (MDEI)

Name of Reviewer: Mike Szarka

Date: 11/16/2020

Does the Final Assessment Report:

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

General Comments

In my view the School has considered all the recommendations thoroughly and is dedicating a very substantial commitment of faculty and staff time to make the suggested improvements to the program and the Stratford campus environment. Given the explosive growth and success of the program, finding the resources to pursue so many issues is a clear demonstration of having taken the review seriously and striving to improve in every way possible. The responsibilities and anticipated timelines are clearly articulated.

University of Waterloo
SENATE UNDERGRADUATE COUNCIL
Report to Senate
18 January 2021

Senate Undergraduate Council met on 10 November 2020 and 15 December 2020 and agreed to forward the following items to Senate for information or approval, as noted, in the consent agenda.

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

FOR DECISION

REGULATION CHANGES

Arts

Liberal Studies – Inclusion of non-Arts Cross-listed Courses in Average

1. **Motion:** That Senate approve the following proposed revisions to the academic standings regulations as they apply to Liberal Studies students, effective 1 September 2022.

Rationale and Background:

- MAV = Major Average; calculated using courses in major.
- FAV = Faculty Average; calculated using all Arts courses (including those in MAV that are Arts courses).
- FAV and MAV are based on different sets of courses, so they typically differ for an Arts student in a major.
- Liberal Studies currently substitutes the FAV in place of the MAV, which isn't consistent with how MAV's are calculated for majors.
- This creates a problem for cross-listed courses in MAV and FAV, and inconsistencies in average calculations.
- The proposed solution is to change the Liberal Studies average to be based on a MAV, rather than FAV, bringing it in line with the way averages are calculated for majors.
 - o LIBST isn't a "major" in the pedagogical sense of a focused subject (or set of), but does behave like one in that it's a group of courses that should have a distinct MAV.
 - o For LIBST students who only take Arts courses, the MAV and FAV would still be the same.
 - o For LIBST students who take a course in another faculty cross-listed with an Arts course, that grade would be included in the LIBST MAV, similarly to how it's used to calculate any other major MAV.

Undergraduate Calendar Text: <https://ugradcalendar.uwaterloo.ca/page/ARTS-Academic-Standing-and-Averages>

New Calendar text:

bold = new; strikeout = deleted

Academic Standing Definition

Academic standing is a measure of the student's academic achievement relative to their degree requirements, and determines their eligibility to be admitted to and/or proceed in their academic plan and to qualify for graduation.

A student's academic standing is determined by the averages attained:

- Cumulative Overall Average (CAV): Average of the grades in all courses taken regardless of faculty.
- Faculty (Arts) Average (FAV): Average of the grades in all Faculty of Arts courses.
 - o Does not include courses with the following subjects: BASE, EFAS, SWREN, UNIV.
- Major Average (MAV): Average of the grades in all courses taken within the student's major.
 - o All courses taken under the subject code of the student's major and those courses listed under the plan-level requirements are included in the major average regardless of whether any of these courses are in

Senate Undergraduate Council
18 January 2021, Report to Senate (Consent)

excess of the minimum required by the major.

o For Liberal Studies academic plans, the MAV reflects the average of the grades in Faculty of Arts courses and includes courses in other faculties cross-listed with Arts courses.

- Term Average: Average of the grades in all courses taken within a particular academic term.
- Minor Average: Average of the grades in all courses taken within the student's minor.
 - o All courses taken under the subject code of the student's minor and those courses listed as optional requirements are included in the minor average regardless of whether any of these courses is in excess of the minimum required by the minor.
 - o Cross-listed courses count towards the minor average in the same way they do for the major average (see below for details).

Students who meet the academic requirements for their major will be in Excellent, Good, or Satisfactory standing, depending on the major and their term and overall averages. Failure to meet minimum average requirements for the major may result in a Conditional or a Failed standing (see Note 3).

Students can find their term grades in Quest and academic standing on their unofficial transcripts.

Cross-listed Courses in Calculation of Averages

- Any course taken (under any subject code) which was cross-listed with a course in a student's plan in the Undergraduate Calendar they are following (that is, is included in their requirement term) is included in the plan average.
 - o For example, a Psychology student enrolled in PHIL 256 (cross-listed with PSYCH 256) will have the course grade counted towards the Psychology plan average only if PHIL 256/PSYCH 256 was cross-listed in their requirement term. If a course is later cross-listed and a student takes the course when it is cross-listed, it will not count in the plan average unless a student changes their requirement term to a term in which the course is cross-listed. For example, if PHIL 256 was de-cross-listed from PSYCH 256, PHIL 256 would continue to count in the student's plan average unless they switched their Psychology requirements to a later requirement term, when the pair is no longer cross-listed, at which point it would stop counting. Similarly, if PHIL 256 was not cross-listed at the time the student took the course, but became cross-listed and the student opted into a newer Psychology requirement term, PHIL 256 would now count towards the plan average.
- Cross-listed courses in a different faculty will not be included in the Faculty of Arts average (FAV).
- **Cross-listed courses in a different faculty taken to fulfil Arts Major plan requirements will be included in the corresponding MAV.**
- **Cross-listed courses in a different faculty taken to fulfil Liberal Studies plan requirements will be included in the Liberal Studies MAV.**

Notes

1. For Wilfrid Laurier University courses, see Wilfrid Laurier University Cross-Registration.
2. Students who have received transfer credit(s) or had grades cleared should refer to Transfer Credit for further details.
3. Even while otherwise in satisfactory standing, a student who fails two or more academic courses within the first five academic course units or fewer may be required to withdraw if the Arts Examinations and Standings Committee considers that the student will not profit by further study.

FOR INFORMATION

ACADEMIC PROGRAM REVIEWS

Two-Year Report – Chemistry BSc. Following discussion, Council approved the two-year report on behalf of Senate. See Attachment #1.

Senate Undergraduate Council
18 January 2021, Report to Senate (Consent)

MINOR PLAN & CURRICULAR MODIFICATIONS

Council approved the following on behalf of Senate:

- minor plan changes for the faculty of arts (English language and literature, east Asian studies, Indigenous entrepreneurship minor, diploma in Indigenous entrepreneurship).
- new courses for the faculty of arts (cultural identities).
- course changes for WatPD and the faculties of arts (accounting and financial management, communication arts, English language and literature, fine arts, religious studies, sociology and legal studies); engineering (management engineering, mechatronics engineering); and environment (geography & environmental management, knowledge integration).
- course inactivations for WatPD and the faculty of arts (religious studies).

/rmw

David DeVidi
Associate Vice-President, Academic



Two-Year Progress Report

Chemistry (BSc)

June 2020

Background

The Undergraduate Chemistry program was reviewed in 2016-17, following the procedures described in the University Institutional Quality Assurance Process, with a self-study document submitted in September 2016, a site visit by two external reviewers with an internal reviewer accompanying them in January 2017, and a final assessment report was completed in May 2017.

The external reviewers' report indicated that the University of Waterloo offers its students a range of accredited Chemistry programs that is unmatched by any Canadian university. Recent curriculum review and planning processes, coupled with the open and effective leadership within the Department of Chemistry, have strategically positioned the Department to face the future in an increasingly competitive environment.

The Department of Chemistry at Waterloo is one of the most research-active chemistry departments in Canada. Students benefit from learning in a research intensive environment in multiple ways: they gain hands-on research experience by completing fourth-year research projects; they can join a research group as part of a work term in the co-op program; they can work or volunteer in the research groups (e.g., NSERC Undergraduate Student Research Awards); and, finally, they have the opportunity to learn from the Department's faculty and to select upper year (year 3 and 4) courses that align with their interests.

Progress on Implementation Plan

Recommendations

1. Self-study reports should contain the detailed program requirements for all degree programs under review.

Status – complete

Completed by Quality Assurance Office

2. The Dean of Science and the senior administration should ensure that the upgrades of Building C2, in particular the ventilation system upgrade, are to be completed as soon as possible.

**Status – complete**

After extensive review and engineering consulting, a contractor was retained and rehabilitation of the ventilation system was completed in summer 2019.

3. The Department should review the existing laboratory facilities and develop a plan for space management and upgrade, to align with ongoing equipment/infrastructure renewal.

Status – complete

Space planning and renovations are now part of the new annual budget planning process. Currently no renovations are planned, but will be undertaken with faculty renewal as needed. The Faculty is working on a modernization plan for the oldest buildings that may commence in the next 3-5 years.

4. The future plans of the Department of Chemistry should include a dedicated study space/resource center for Chemistry students.

Status – complete

Student space within the Department is available through the ChemClub room in C2. The Department judges that this as well as the large amount of study and student life space now available in the STC building is sufficient.

5. The Department of Chemistry should review its safety procedures at regular intervals.

Status – ongoing

This is and has always been reviewed annually under Policy 34 by the Chair and Safety Committee. An online system of safety inspection monitoring has been in place for several years.

6. The Department should review the coordination of multi-section courses. Course coordinators (if applicable) and instructors should place a high priority on following an agreed-upon timeline for delivering the course content, as students are distressed when sections are out of sync.

Status – complete

Course coordinators, in place for multi-section courses in first year, are responsible for ensuring sequencing and timing of courses is consistent. This team-based approach to multisection courses has removed any issues with syncing of course content.

7. The Department should review the coordination and grading of CHEM 494 projects. Reminders with respect to the expectations for the time devoted to the project should be



widely circulated, information about projects and the course should be circulated to students in a timely manner, and a greater emphasis on grading by reviewers should be considered.

Status – complete

The Chem 494 Coordinator has implemented orientation sessions for all students at the beginning of each term. 60% of the final grade is completed by faculty reviewers. A LEARN site has been created for students to access information, be informed of timelines, and submit reports throughout their projects.

8. The Department should review the coordination of joint programs.

Status – complete

Coordinating committees are now in place for each of our joint programs: Biochemistry, Materials and Nanosciences, and Nanotechnology Engineering.

9. The Department should review the list of required courses for the Materials and Nanoscience program to ensure that required core courses meet the students' needs and that pre-requisites adequately prepare students for upcoming courses.

Status - ongoing

Program changes have been completed and approved, and implementation is underway. Issues around sequencing of courses were addressed first, then progressive and related learning outcomes applied to each course and its content.

10. The Department should continue to support initiatives that strengthen the library-department relationship.

Status – complete

The Chemistry Liaison Librarian is invited annually to department meetings to provide updates and receive feedback. Instructors are reminded of the availability of the library to enhance the program and courses delivered. Upper year courses and the fourth year research project now include library tools and often visits from the liaison librarian.

11. The Department should review placement information to ensure that co-op students receive a breadth of experiences throughout their co-op program.

Status – complete

A Co-op liaison has been appointed with the specific aim of educating co-op students on the placement process and helpful tips to ensure success with placements. This provides



a point of contact to students as well as consistent communication from Coop Education and the Faculty of Science on changes and supports for coop programs.

12. We recommend that the Department develop a long-term plan for the sustainability of the 2+2 and 2+1+1 initiatives and that the issue of resources and support be discussed with the Faculty of Science and the University.

Status – complete

Coordination of the program with external partners was formalized, and a sustainable teaching plan for the additional courses was devised. Out of that plan, a full-time lecturer with specific responsibility for the MNS program and teaching in Beijing was appointed in May 2018.

13. The Department should consider discontinuing programs with chronic low enrolments, such as geochemistry and chemical physics.

Status – complete

The Chemical Physics program and Materials specialization of the Chemistry program have been inactivated, effective September 1, 2020 and September 1, 2019 respectively. Geochemistry is awaiting action from the Department of Earth and Environmental Science, which currently holds administrative leadership of the program.

14. We recommend that the Department continue to assess its programs, ensuring that all accredited programs provide outstanding training in chemistry while, at the same time, balancing workload and accommodating diverse student interests.

Status – ongoing

The Department, through its Undergraduate Affairs Committee, will continue to review its programs. Since the curriculum has undergone significant changes over the last three years, student success and outcomes will be monitored annually over the next five years to identify any ongoing or new weaknesses. Continued investment in the lab components will remain a high priority. A full assessment will be presented as part of our next program review.

15. The Department should consider the implementation of annual Department-level review of the suite of experiments for the labs, with the goal of identifying issues with current experiments and selecting potential new experiments. The external reviewers



recommended that the Department explore means, such as assistance from students, to support the lab instructors in updating and developing experiments.

Status – ongoing

The Chair, along with the Dean and Undergraduate Affairs Committee will plan to adjust workloads so instructors have time for lab updates and development. Revisions to terms of offering has permitted more lab development time for instructors to update lab curriculum. In addition, replacement of some aging lab equipment has permitted new experiments and better student experience.

16. The Department should review its website to ensure that potential students can easily identify the many programs offered.

Status – complete

The Faculty of Science has undertaken a reorganization of all web information on Science programs to ensure information is available in a coherent and accessible manner.

17. The Department should review its mechanisms for communicating with successful graduates.

Status – ongoing

The Department will continue to run its exit survey of graduating students and will work with the Science Alumni Office to facilitate ongoing communication with them. Special events to invite alumni back to campus for Chemistry focused activities have occurred, such as the unveiling of our Timeline of the Elements in October 2019, and more are planned but unfortunately these have been delayed due to the pandemic.

18. The Department should explore opportunities for including student members on committees.

Status – complete

Students are regularly invited to faculty interviews which now include teaching seminars and asked to provide feedback with our latest faculty hires. The Undergraduate Affairs committee now includes as non-voting members one CHEM undergraduate and one BIOCHEM undergraduate as student representatives.

19. The Department should explore opportunities to include more discussion and group work into the curriculum.

**Status – ongoing**

Second (254), third (360) and fourth year (430) courses have added group activities to their curriculum, particularly team-based learning exercises where students first work alone on a problem, then come together in groups to solve a related but more involved problem. In addition, peer review has been introduced, including coaching on how to give constructive feedback in Chem 430. Compilation of the many efforts involving group work is ongoing and will be shared throughout the Department for information.

Attachment #1

**Implementation Plan:**

	Recommendations	Proposed Actions	Responsibility for Leading and Resourcing (if applicable) the Actions	Timeline for addressing Recommendations
1.	Self-study reports should contain the detailed program requirements for all degree programs under review.	Include program requirements in future templates and instructions	Quality Assurance Office	Report templates updated in Fall 2017
2.	The Dean of Science and the senior administration should ensure that the upgrades of Building C2, in particular the ventilation system upgrade, are completed as soon as possible.	Upgrade of ventilation system to extend life of equipment by ten years.	Dean's Office	Upgrades completed summer 2019
3.	The Department should review the existing laboratory facilities and develop a plan for space management and upgrade, to align with ongoing equipment/infrastructure renewal.	Space planning and renovations will be part of new annual budget planning process	Department Executive Committee and Chair	Space needs and renovations reviewed annually during budget planning. Modernization plans for older buildings received in 2019.
4.	The future plans of the Department of Chemistry should include a dedicated study space/resource center for Chemistry students.	Short-term: make seminar room available for students	Chair	ChemClub space available since 2017; STC study space an additional resource.
5.	The Department of Chemistry should review its safety procedures at regular intervals.	Review at least annually under Policy 34	Chair and Safety Committee	Reviewed annually
6.	The Department should review the coordination of multi-section courses. Course coordinators (if applicable) and instructors should place a high priority on following an agreed-upon timeline for	Review with course coordinators in CHEM 120 & 123	First-year Coordinator, UG Affairs Committee and Associate Chair, UG programs	Completed Fall 2017 –focus in all upcoming offerings.

Attachment #1



	delivering the course content, as students are distressed when sections are out of sync.			
7.	The Department should review the coordination and grading of CHEM 494 projects. Reminders with respect to the expectations for the time devoted to the project should be widely circulated, information about projects and the course should be circulated to students in a timely manner, and a greater emphasis on grading by reviewers should be considered.	Additional Orientation with 494 students; Highlight website; New LEARN site as student resource	CHEM 494 coordinator (Chair)	Completed Fall 2017
8.	The Department should review the coordination of joint programs.	Establish Coordinating Committees for joint programs	Chair and Chairs of Biology and Physics and Astronomy	Biochem/Biol Coordination completed Winter 2017. MNS/Physics coordination completed Fall 2017
9.	The Department should review the list of required courses for the Materials and Nanoscience program to ensure that required core courses meet the students' needs and that pre-requisites adequately prepare students for upcoming courses.	Course changes and sequencing to be reviewed	MNS Coordinating Committee	Curriculum review completed Fall 2017 with course changes implemented by Spring 2019
10.	The Department should continue to support initiatives that strengthen the library-department relationship.	Explore opportunities to include library in courses and programs within the department.	UG Affairs Committee	Librarian involved in course and department meetings annually. New course CHEM 200 and existing CHEM 494 and many upper year CHEM courses now involve librarian.
11.	The Department should review placement information to ensure that co-op students	Hold information sessions for students,	Co-op Coordinator, Chair, instructors.	Coop liaisons established, information regularly shared

Attachment #1



	receive a breadth of experiences throughout their co-op program.	establish coop liaison responsibilities and mentoring by second year instructors		with students particularly as they approach first work term process
12.	The Department should develop a long-term plan for the sustainability of the 2+2 and 2+1+1 initiatives and that the issue of resources and support be discussed with the Faculty of Science and the University.	Develop a plan with the Dean's Office. Consult with Department. New dedicated faculty lecturer position to be filled	Chair, Associate Chair (UG programs) and Dean; Chemistry Executive Committee, Department of Physics & Astronomy	Sustainable teaching plan developed Fall 2017. Dedicated lecturer hired in May 2018.
13.	The Department should consider discontinuing programs with chronic low enrolments, including geochemistry, chemical physics and materials specialization in Chemistry.	Review enrolments and sustainability of specializations.	UG Affairs Committee	Geochemistry – referred to EES department; Chemical Physics and Materials Specialization in Chemistry inactivated in Winter 2019
14.	We recommend that the Department continue to assess its programs, ensuring that all accredited programs provide outstanding training in chemistry while, at the same time, balancing workload and accommodating diverse student interests.	Additional plan flexibility to be introduced as part of new curriculum beginning September 2019.	UG Affairs Committee	Complete Sept 2019, success and adjustments made as necessary as students move through new plan.
15.	The Department should consider the implementation of annual Department-level review of the suite of experiments for the labs, with the goal of identifying issues with current experiments and selecting potential new experiments. We recommend that the Department explore means, such as assistance	Plan to adjust workloads so instructors have some time for lab updates and development	Chair with Dean on resources; UG Affairs Committee on priorities and implementation.	2018 and annually as part of teaching schedule planning.

Attachment #1



	from students, to support the lab instructors in updating and developing experiments.			
16.	The Department should review its website to ensure that potential students can easily identify the many programs offered.	Reorganize information regarding programs in partnership with the Science Undergraduate Office website changes	UG Affairs Committee, Associate Chair (UG programs), and Dean's Office	Website has been revised, completed Summer 2017
17.	The Department should review its mechanisms for communicating with successful graduates.	Alumni events to be held	UG Affairs and Grad Affairs Committees and Science Alumni Office	Alumni events now held regularly, recent graduates celebrated at each convocation
18.	The Department should explore opportunities for including student members on committees.	To be added as additional members when appropriate	Chair and Executive Committee	Summer 2017 for current and future hiring committees and ongoing with curriculum changes.
19.	The Department should explore opportunities to include more discussion and group work into the curriculum.	To investigate, implement and share different approaches to incorporating group work into curriculum	UG Affairs Committee, Teaching Fellow	Second (254), third (360) and fourth year (430) courses have added group activities to their curriculum, completed 2017. Further incorporation ongoing.

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



2023-24

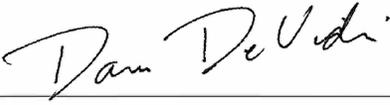
Date of next program review: _____
Date

Signatures of Approval:

 _____ 01/05/19
Chair/Director Date

AFIW Administrative Dean/Head (For AFIW programs only) Date
 _____ 6-5-19
Faculty Dean Date

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

 _____ February 11, 2020
Associate Vice-President, Academic Date
(For undergraduate and augmented programs)

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

Attachment #1
Checklist for SUC/SGRC Reviewer Feedback
Quality Assurance Office

Two-Year Progress Report: Chemistry BSc

Name of Reviewer: Martin Cooke

Date: 10/8/2020

Does the Two-Year Progress Report:

- | | | |
|--|---|-----------------------------|
| 1. Clearly describe progress achieved on the various action items in the implementation plan? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 2. Explain convincingly any circumstances that would have altered the original implementation plan? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 3. For items that are behind schedule, propose an amended implementation schedule that is reasonable and credible? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 4. Address significant developments or initiatives that have arisen since the program review process, or that were not contemplated by the program review process? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |

General Comments

Overall, the review was very positive. The 2-year report clearly presents actions taken to address the reviewers' suggestions.

University of Waterloo
SENATE
Report of the President
18 January 2021

FOR INFORMATION

Recognition and Commendation

St. Paul's University College is proud to announce the appointment of the **Right Honorable Michaëlle Jean**, 27th Governor General of Canada, as **Chancellor**, for a three-year term starting immediately. "We are delighted to have someone of Mme. Jean's talent and stature take on the role of Chancellor," said Brad Siim, incoming Board Chair. "Her interests and values align beautifully with those of our College." St. Paul's University College is unique in offering programs in Indigenous Studies, International Development, Canadian Studies and Human Rights. The College is also home to the Waterloo Indigenous Student Center, the Student Refugee Program, and GreenHouse, a nationally-recognized social enterprise incubator. These are all areas which are dear to the Right Honorable Michaëlle Jean, that she will want to follow closely, promote and encourage, as she states in words that express her desire to get involved: "I am particularly honored to be associated with the highly innovative, inspiring, creative and inclusive approach that sets St. Paul's University College apart and of which this institution and the University of Waterloo can be proud. I thank them for including me and I would like to give my full support to their influence. I look forward to being in contact with and alongside the teams as well as the students, to let myself be won over by their enthusiasm, their aspirations, their desire to surpass themselves in a spirit of achievement and excellence." Michaëlle Jean succeeds Jean Paul Gladu, former President of the Canadian Council for Aboriginal Business, who served as Chancellor from 2017 to 2020.

(adapted from the *Daily Bulletin*, 29 October 2020)

Professor Aiping Yu is one step closer to her dream of establishing a world-leading carbon nanotechnology centre at the University of Waterloo after winning a prestigious award for highly promising researchers. The chemical engineering professor is one of six nation-wide recipients of 2020 **E.W.R. Steacie Memorial Fellowships** by the **Natural Sciences and Engineering Research Council of Canada**. Winners receive \$250,000 in research grants over two years and, via payments of up to \$90,000 a year to their universities, are freed from teaching and administrative duties so they can concentrate on research full-time. Yu, who has been at Waterloo Engineering for more than a decade after working for a year in the plastics industry, is thrilled by the recognition and the opportunity to take her work in the lab to the next level. "As a female researcher, it is difficult to balance family life and career development," she says. "I appreciate this award because it gives me two years of teaching relief so I can really take off and fly." As director of the Applied Carbon Nanotechnology Laboratory, Yu's main research focus is on carbon nanomaterials, particularly carbon nanotubes and graphene, to make longer-lasting, smaller, faster-charging batteries and supercapacitors. Carbon nanotubes and graphene are particularly well-suited to those applications, including use in electric vehicles and consumer electronics such as smartphones and laptops, because they are highly conductive and have large surface areas. A secondary area of research involves the use of graphene at the nanoscale level as an additive to an extremely expensive polymer coating for corrosion protection of pipelines made of carbon steel.

(adapted from the *Daily Bulletin*, 13 November 2020)

A landmark international student work/study exchange program is being lauded for its achievements as it celebrates a decade of successful experiences abroad. The **Canada-Europe (CANEU) Co-op program** has been awarded the **2020 Canadian Bureau for International Excellence (CBIE) Panorama Award** to recognize innovation and excellence in design, planning, implementation and management of high quality endeavours in international education with programming that focuses on academic, extracurricular, capacity-building and/or learning abroad. A partnership between Waterloo, the University of Victoria (UVic) and two European institutions, CANEU Co-op brings together students in Canada and Europe for memorable work-integrated learning and study abroad experiences as part of a hybrid exchange program. Canadian students travel to Europe for co-op work terms, while European students come to Canada for study terms. “It’s wonderful to be acknowledged for this award and to recognize that the reason why these programs are so important is to not only bring institutions together, but to really set the foundation for exciting and powerful transformative experiences for our students,” says Norah McRae, associate provost of Co-operative and Experiential Education at Waterloo. Students from Waterloo and UVic participate in this memorable experience with partner institutions FH Joanneum University of Applied Sciences in Austria and Baden-Württemberg Co-operative State University in Germany. The CBIE award ceremony was held virtually on November 18 which allowed founding partners to attend and celebrate regardless of location.

(adapted from the *Co-operative and Experiential Education News*, 19 November 2020)

Nikolay Videnov, a master’s student at the Institute for Quantum Computing (IQC) has won the title of **Best University of Waterloo Presenter** at the virtual research colloquium, jointly hosted by the University of Waterloo and the University of Strathclyde. Nikolay’s presentation was selected from a short list of 11 presenters, out of a field of 28 submissions from Waterloo, which focused on research areas such as, Nuclear Engineering, Quantum Technology, Digital Health, Sustainable Energy and Entrepreneurship. The IQC student’s presentation of his research on Building an Open-access Quantum Information Processor won a \$500 award. Nikolay said he was extremely impressed with the diversity of the research shared by his colleagues at both institutions. He added that he valued the opportunity to receive feedback from international scholars. President Feridun Hamdullahpur and Principal of the University of Strathclyde Sir Jim McDonald opened the one-day research colloquium with a fireside chat that discussed the challenges facing higher education in light of COVID and the value of strengthening international collaboration among strategic partnerships. They also reiterated their commitments to working together to continue to provide ideas and research that solve vexing global challenges. Organized by Waterloo International, in collaboration with Graduate Studies and Postdoctoral Affairs, the Office of Research, and several faculties, the virtual research colloquium drew wide campus involvement and strengthened international partnerships.

(adapted from the *Daily Bulletin*, 20 November 2020)

Cheriton School of Computer Science **Professors Shalev Ben-David** and **Eric Blais** have received a prestigious **best paper award** at **FOCS 2020**, the **61st Annual IEEE Symposium on Foundations of Computer Science**. FOCS and its counterpart — the Symposium on Theory of Computing — are the top international meetings in theoretical computer science. Their award-winning paper, “A New Minimax Theorem for Randomized Algorithms,” extends the minimax theorem, a seminal contribution to computer science by Andrew Yao, the 2000 Turing Award laureate. Yao’s 1977 paper, “Probabilistic Computations: Toward a Unified Measure of Complexity,” introduced what is now known widely among computer scientists as Yao’s min-max principle, which uses von Neumann’s minimax theorem from game theory to relate average-case complexity for deterministic algorithms to worst-case complexity for randomized algorithms. “Our work on the minimax theorem came about because we came across a problem where Yao’s minimax theorem applied, but it was not strong enough to give the conclusion we

needed,” Professor Blais said, “That problem is known as the *composition conjecture for randomized query complexity*.” One important ingredient in the proof of Ben-David and Blais is a new notion called *forecasting* algorithms. The idea of using forecasting algorithms comes from the observation that measuring the error probability of randomized algorithms is not always the best way to measure the accuracy of an algorithm. “We can sometimes get much more insightful results by asking the algorithm to output a prediction of the correct output, along with a measure of the confidence the algorithm has in its prediction,” Professor Ben-David said.

(adapted from the *Daily Bulletin*, 26 November 2020)

The **Natural Sciences and Engineering Research Council (NSERC)** announced it is naming an award for outstanding researchers after **Donna Strickland**. Strickland, a professor in the Department of Physics and Astronomy, won the Nobel Prize in Physics in 2018. The new award, called the **NSERC Donna Strickland Prize for Societal Impact of Natural Sciences and Engineering Research** is worth \$250,000 and will go to a researcher or team of researchers whose work benefitted Canadian society, the environment, or the economy in an exceptional way. The award is open to any NSERC-funded researcher who conducted the research in Canada. “Sometimes you don’t realize when you are working on a project just how much of an impact it will have down the road,” said Strickland. “I’m so grateful for the honour of having an award named after me that will go to colleagues who have made really positive contributions with their work.” NSERC also announced an award named after Arthur McDonald, from Queen’s University and who won the Nobel Prize in Physics in 2015. The Arthur B. McDonald Fellowships replace the EWR Steacie Memorial Fellowships. The awards recognize academic researchers in the natural sciences and engineering who are early in their careers, and support them so that they may become global leaders in their field. The fellowships are worth \$250,000 over two years.

(adapted from the *Daily Bulletin*, 26 November 2020)

More than 75 teams competed once again to be among the Fall 2020 **Concept \$5K Winners**. As the pandemic slows down many industries and businesses, these incredible students continue to develop new ideas. Student ideas covered an incredibly wide variety of sectors, and the semi-finals featured representatives from every Faculty. The new Climate Change Grant, in partnership with the Interdisciplinary Centre on Climate Change (IC³) saw a number of impressive teams advance to the Concept \$5K Finals. Of the finalists, four are directly focusing on climate change solutions.

Winners included:

- **ChangeRoom**, a fashion-tech startup that connects the vast array of sustainable clothing brands with the growing number of eco-conscious customers through an intuitive and simple mobile marketplace.
- **Miss Mechanic**, an on-call automotive service support system provided by women, for women, to make informed decisions in a traditionally male-dominated industry.
- **mtion Interactive**, which is developing a twitch for virtual reality.
- **XP Fantasy**, an esports community platform where users can use their knowledge, experience and passion for various esports to compete in daily fantasy contests to win tangible prizes.

Climate Change Grant Winner:

- **UBIAir – Air Pollution Monitoring Platform**, is a real-time, crowdsourced, IoT-based air quality monitoring ecosystem using IoT sensors for air pollution surveillance.

The People's Champ (\$500.00):

- **Cove** is building a platform that provides healthcare providers and their patients with digital suicide intervention tools they can use to improve mental healthcare outcomes related to suicide.

(adapted from the *Daily Bulletin*, 7 December 2020)

Athletics and Recreation is extremely proud to announce that 336 student-athletes have been named to the **2019-20 President's Academic Honour Roll**. This distinguished recognition is given to student-athletes who have maintained an average of 80 per cent and higher while competing for an interuniversity sport. The University of Waterloo has one of the highest percentages of Academic All-Canadian student-athletes in the country on an annual basis. The 336 student-athletes honoured represents more than 50 percent of the student-athlete population at Waterloo, and was an increase of 84 student-athletes from a year ago. In addition, 22 of the 31 Warriors varsity teams have at least 50 per cent of their student-athletes represented on the Honour Roll, while all 31 programs have at least four student-athletes represented. For the fifth year in a row, the number of student-athletes receiving this honour is an all-time high for the Warriors. Consistently Waterloo student-athletes have demonstrated excellence both in the classroom and on the playing field.

Top Academic Student-Athletes: **Selena Dirven** from women's hockey and **MacKenzie Strong** from baseball were the top undergrad award winners thanks to their staggering averages of 96.7 per cent and 98.3 per cent respectively. Dirven is in her fourth year of Kinesiology and Strong is in his third year of Chemical Engineering. Dirven and Strong were also recipients of the Fairfax Financial Award along with **Karen Fan** (Biomedical Sciences) from women's volleyball and **Ahmed Fouad** (Biomedical Sciences) who is a dual student-athlete with football and squash.

(adapted from the *Daily Bulletin*, 14 December 2020)

Two members of the Faculty of Applied Health Sciences captured two of the top three spots in the **AGE-WELL Network's** video competition. **Hector Perez**, a postdoctoral fellow with the School of Public Health and Health Systems, won first prize in AGE-WELL's Trainee Video Competition with his submission, "Dementia – The risk of going missing." **Lauren McLennan**, an undergraduate student also in the School, was one of two runners-up with her entry, "First responders' perspectives of return home interviews." Every year, the AGE-WELL Network of Centre of Excellence organizes a video competition, where researchers from across Canada within its network prepare two-minute videos about their research project, progress, and impacts. "The evaluation of this competition is about the researcher's ability to explain in an easy-to-understand manner their research projects, how they will address their research problem and the potential impact of the research," writes Perez. AGE-WELL is Canada's technology and aging network, dedicated to the creation of technologies and services that benefit older adults and caregivers.

(adapted from the *Daily Bulletin*, 21 December 2020)

UNIVERSITY OF WATERLOO
REPORT OF THE DEAN OF THE FACULTY OF ARTS TO SENATE
January 18, 2021

FOR INFORMATION

A. APPOINTMENTS

Probationary Term Appointments – Change in Date

KADIR, Aynur, Assistant Professor, Department of Communication Arts, **from** July 1, 2019 to June 30, 2022 **to** July 1, 2019 to June 30, 2023.

Definite Term Reappointments

AL ETHARI, Lamees, Lecturer, Department of English Language and Literature, September 1, 2021 to August 31, 2023.

BENNETT, Christopher, Lecturer, Department of Political Science, September 1, 2021 to August 31, 2024.

BERGSTROM, Anders, Lecturer, Department of Communication Arts, August 1, 2021 to July 31, 2024.

BLOEMHOF, Barbara, Lecturer, Department of Economics, September 1, 2021 to August 31, 2024.

DENTON, Stacy, Lecturer, Department of English Language and Literature, September 1, 2021 to August 31, 2024.

FORRESTER, Clive, Lecturer, Department of English Language and Literature, September 1, 2021 to August 31, 2023.

JANZEN, David, Lecturer, Department of Communication Arts, August 1, 2021 to July 31, 2024.

JONAHS, Andrea, Lecturer, Department of English Language and Literature, September 1, 2021 to August 31, 2023.

LAMONT, George, Lecturer, Department of English Language and Literature, September 1, 2021 to August 31, 2023.

MCCARTHY, Megan, Lecturer, Department of Psychology, September 1, 2021 to August 31, 2024.

NEAL, Carter, Lecturer, Department of English Language and Literature, July 1, 2021 to June 30, 2024.

SELINGER, Megan, Lecturer, Department of English Language and Literature, July 1, 2021 to June 30, 2024.

TAYLOR, Christopher, Lecturer, Department of History, September 1, 2021 to August 31, 2024.

Cross Appointment

DAWSON, Lorne, Professor, Department of Religious Studies to Department of Sociology and Legal Studies, May 1, 2020 to April 30, 2025.

HALL, Peter, Professor, School of Public Health and Health Systems to Department of Psychology, September 1, 2021 to August 31, 2026.

Adjunct Appointments – Miscellaneous (research, consultations, etc.) – Change in Date

MCRAE, Norah, Assistant Professor, Department of Psychology, **from** February 1, 2020 to July 31, 2022 **to** February 1, 2020 to January 31, 2022.

Adjunct Reappointments – Miscellaneous (research, consultations, etc.)

SMITH, Larry, Associate Professor, Department of Economics, January 1, 2021 to December 31, 2021.

B. ADMINISTRATIVE APPOINTMENTS

Administrative Reappointment

BOIDO, Mario, Associate Chair, Undergraduate Studies, Department of Spanish and Latin American Studies, January 1, 2021 to December 31, 2021.

HABIB, Jasmin, Associate Director, PhD in Global Governance, Political Science, January 1, 2021 to June 30, 2022.

C. SABBATICAL LEAVES

For approval by the Board of Governors:

MILLIGAN, Ian, Associate Professor, Department of History, July 1, 2021 to December 31, 2021, six month leave at 85% salary.



Sheila Ager
Dean, Faculty of Arts

UNIVERSITY OF WATERLOO
REPORT OF THE DEAN OF ENGINEERING TO SENATE
January 18, 2021

FOR INFORMATION

A. *APPOINTMENTS*

New Definite Term-full-time

HE, Jiayuan, Research Assistant Professor, Department of Systems Design Engineering, December 1, 2020 – November 30, 2021. PhD, Institute of Robotics, Shanghai Jiao Tong University, China, 2016; BS, College of Mechanical and Electrical Engineering, Nanjing University of Aeronautics and Astronautics, China, 2010. He is an emerging expert in the field of neural signal processing & control and its applications in neurorehabilitation engineering, as well as advanced human-machine interfacing. This appointment complements the Department's commitment to the University of Waterloo's expanding research expertise in biomedical engineering including the biosignal and biodevice areas.

XIA, Jingjing, (Peter), Research Assistant Professor, Department of Electrical and Computer Engineering, November 1, 2020 – October 31, 2022. PhD in Electrical and Electronics Engineering, Nanyang Technological University, Singapore, 2013; MSc in Electrical and Computer Engineering, University of Waterloo, ON, 2013; BEng in Electrical and Electronics Engineering, Nanyang Technological University, Singapore, 2008. Dr. Xia's expertise lie in the broad area of mixed-signal/RF design, Digital Signal Processing and associated firmware development. Dr. Xia has several years of experience in the design of analog and RF circuits.

New Definite Term-full-time Reappointment

CAMLICA, Ahmet, Research Assistant Professor, Department of Electrical and Computer Engineering, September 1, 2021 – March 31, 2024. PhD, Electrical and Computer Engineering, University of Waterloo, Waterloo, ON, 2019; MS, Mechanical and Mechatronics Engineering, University of Waterloo, Waterloo, ON, 2013; BS, Electrical and Computer Engineering, Erciyes University, Kayseri Turkey, 2009.

GHAURIAN, Moojan, Research Assistant Professor, Department of Electrical and Computer Engineering, May 1, 2021 – April 30, 2023. Doctor of Philosophy, Information Sciences Technology, PhD, minor in Computational Science, The Pennsylvania State University, USA, 2017; BSc, Computer Science and Engineering (Software Engineering), University of Tehran, Iran, 2013.

REDDY, Roopa, Lecturer, Conrad School of Entrepreneurship and Business, July 1, 2021 – June 30, 2024. BEd, Intermediate/Senior (Mathematics and Business), OISE, University of Toronto, Toronto, ON, Research Placement: Enseña por Colombia (Teach for Colombia), Bogotá, Colombia, 2011; MSc, Development Studies (with Merit), London School of Economics; London, ON, Dissertation: Overcoming Child Labour through Schooling: A Rights-Based Approach, Advanced French Course, 2009; BBA Honours, BMath Honours (Double Degree program), Wilfrid Laurier University, University of Waterloo, Waterloo, ON, Exchange program: L'Institut Supérieur de Commerce, Paris, France, 2006.

Visiting Appointments

JUN, Sima, Researcher, Department of Civil and Environmental Engineering, February 25, 2021 – February 24, 2022.

Lee, Justin, L. Scholar, Department of Electrical and Computer Engineering, February 1, 2021 – August 2, 2021.

LI, Lin, Scholar, Department of Chemical Engineering, August 1, 2021 – July 31, 2022.

SU, Juanjuan, Scholar, Department of Chemical Engineering, July 1, 2021 – June 30, 2022.

ZAMANI SIBONI, Hossein, Scholar, Department of Electrical and Computer Engineering, October 27, 2020 – October 26, 2021.

Adjunct Appointments

Research and Graduate Supervision

HASHEMI, Ehsan, Assistant Professor, Department of Mechanical and Mechatronics Engineering, January 4, 2021 – January 3, 2024.

HIPEL, Keith, W., Professor, Department of Systems Design Engineering, October 1, 2020 – September 30, 2023.

SCOTT, Stacey, Associate Professor, Department of Systems Design Engineering, October 1, 2020 – September 30, 2023.

Adjunct Reappointments

Graduate Supervision

APLEVICH, Dwight, Professor, Department of Electrical and Computer Engineering, August 1, 2020 – June 30, 2024.

Adjunct Reappointments

Research and Graduate Supervision

BONAKDAR, Ali, Assistant Professor, Department of Mechanical and Mechatronics Engineering, July 1, 2020 – June 30, 2023.

CHAUDHURI, Sujeet, S.K., Professor, Department of Electrical and Computer Engineering, January 1, 2020 – June 30, 2024.

ELMASRY, Mohamed, Professor, Department of Electrical and Computer Engineering, January 1, 2021 – June 30, 2024.

GLAWDEL, Tom, Assistant Professor, Department of Mechanical and Mechatronics Engineering, June 1, 2020 – May 31, 2023.

JOMAAS, Grunde, Professor, Department of Mechanical and Mechatronics Engineering, June 1, 2020 – May 31, 2023.

KODUR, Venkatesh, Professor, Department of Mechanical and Mechatronics Engineering, November 1, 2020 – October 31, 2023.

NAOUM-SAWAYA, Joe, Associate Professor, Department of Management Sciences,

September

1, 2020 – August 31, 2023.

PANG, Xin, Assistant Professor, Department of Mechanical and Mechatronics Engineering, September 1, 2020 – August 31, 2023.

VARIN, Robert, A., Professor, Department of Mechanical and Mechatronics Engineering, February 1, 2021 – January 31, 2024.

WRIGHT, John, L., Professor, Department of Mechanical and Mechatronics Engineering January 1, 2021 – December 31, 2023.

Adjunct Reappointments

Graduate Supervision, Teaching and Research

TORVI, David, Professor, Department of Mechanical and Mechatronics Engineering, November 1, 2020 – October 31, 2023.

Adjunct Reappointments

Undergraduate and Graduate Teaching, Graduate Supervision

CHRISTIAN, Bev, H., Associate Professor, Department of Mechanical and Mechatronics Engineering, January 1, 2021 – December 31, 2023.

Adjunct Reappointments

Other

SMITH, Larry, Associate Professor, Conrad School of Entrepreneurship and Business, January 1, 2021 – December 31, 2021.

Cross Appointments

ELKAMEL, Ali, Professor, Department of Chemical Engineering to Department of Systems Design Engineering, November 1, 2020 – December 31, 2023.

HANSSON, Carolyn, Professor, Department of Mechanical and Mechatronics Engineering to Department of Civil and Environmental Engineering, November 1, 2020 – October 31, 2023.

CHANGES IN APPOINTMENTS

Probationary Term Extension

CROWLEY, Mark, Assistant Professor, Department of Electrical and Computer Engineering, July 1, 2018 – June 30, 2021. (One year extension from June 30, 2021 to June 30, 2022.)

B. *ADMINISTRATIVE APPOINTMENTS*

ABOUEE MEHRIZI, Hossein, Associate Chair for Graduate Studies, Department of Management Sciences, January 1, 2021 – August 31, 2022.

COLLINS, Michael, Chair, Department of Mechanical and Mechatronics Engineering, January 1, 2021 – December 30, 2024.

SCOTT, Andrea, K., Interim Associate Chair, Undergraduate Studies, Department of Systems Design Engineering, December 1, 2020 – August 31, 2021.

ADMINISTRATIVE REAPPOINTMENTS

GOLAB, Lukasz, Director, Management of Technology Distance Master's Program,
Department
of Management Sciences, January 1, 2021 – April 30, 2021.

Mary Wells

Mary A Wells
Dean, Faculty of Engineering

University of Waterloo
REPORT OF THE DEAN OF ENVIRONMENT TO SENATE
January 18, 2021

FOR INFORMATION

A. APPOINTMENTS

Adjunct Appointments

Graduate Supervision

BULLOCK, Ryan, Associate Professor, School of Environment, Resources and Sustainability, November 1, 2020 to October 31, 2023.

DOHERTY, Kevin, Assistant Professor, School of Environment, Resources and Sustainability, January 1, 2021 to December 31, 2023.

KISH, Kaitlin, Assistant Professor, School of Environment, Resources and Sustainability, November 1, 2020 to October 31, 2023.

MARSCHKE, Melissa, Associate Professor, School of Environment, Resources and Sustainability, January 1, 2021 to December 31, 2021.

SILVER, Jennifer, Associate Professor, Faculty of Environment, December 1, 2020 to December 31, 2023.

Graduate Supervision and Research

AMARAL, Valter, Assistant Professor, School of Environment, Resources and Sustainability, January 1, 2021 to December 31, 2023.

Special Appointments

Instruction

ALTON, Christopher, Lecturer, School of Planning, September 1, 2020 to December 31, 2020.

CURTIS, Kevin, Lecturer, School of Planning, January 1, 2021 to April 30, 2021.

FLEIFEL, Eliana, Lecturer, School of Environment, Enterprise and Development, January 1, 2021 to April 30, 2021.

JACKSON, John, Lecturer, School of Environment, Resources and Sustainability, January 1, 2021 to April 30, 2021.

KNAFELC, Paul, Lecturer, School of Environment, Enterprise and Development, January 1, 2021 to April 30, 2021.

NG, Garrick, Lecturer, School of Environment, Enterprise and Development, January 1, 2021 to April 30, 2021.

SARKANY, Laszlo, Lecturer, School of Environment, Enterprise and Development, January 1, 2021 to April 30, 2021.

SCHULER, Peter, Lecturer, Indigenous Elder, School of Environment, Resources and Sustainability, January 1, 2021 to April 30, 2021.

SMITH, Nancy, Lecturer, School of Planning, January 1, 2021 to April 30, 2021.

WYLIE-TOAL, Brendan, Lecturer, School of Environment, Enterprise and Development, January 1, 2021 to April 30, 2021.

Graduate Student appointed as Part-Time Lecturer

TAN, Weikai, Lecturer, Department of Geography and Environmental Management, January 1, 2021 to April 30, 2021.

Cross Appointments

BROWER, Roy, Professor, Department of Economics to School of Environment, Resources and Sustainability, May 1, 2020 to December 31, 2023.

DOBERSTEIN, Brent, Associate Professor, Department of Geography and Environmental Management to School of Environment, Resources and Sustainability, September 1, 2020 to August 31, 2023.

DRESCHER, Michael, Associate Professor, School of Planning to School of Environment, Resources and Sustainability, January 1, 2021 to December 31, 2023.

FEICK, Rob, Associate Professor, School of Planning to Department of Geography and Environmental Management, September 1, 2020 to August 31, 2023.

HOMER-DIXON, Thomas, Professor, Faculty of Environment to School of Environment, Resources and Sustainability, January 1, 2021 to December 31, 2023.

SCOTT, Steffanie, Professor, Department of Geography and Environmental Management to School of Environment, Resources and Sustainability, January 1, 2020 to December 31, 2023.

WANDEL, Johanna, Associate Professor, Department of Geography and Environmental Management to School of Environment, Resources and Sustainability, December 1, 2020 to December 31, 2023.

B. ADMINISTRATIVE APPOINTMENTS

CRAIK, Neil, Acting Associate Dean, Research, January 1, 2021 to August 31, 2021.

DE LOE, Rob, Associate Director, Undergraduate Studies, School of Environment, Resources and Sustainability, January 1, 2021 to December 31, 2023.

ADMINISTRATIVE REAPPOINTMENTS

CLARKE, Amelia, Associate Dean, Research, September 1, 2021 to August 31, 2024.

DEADMAN, Peter, Interim Associate Dean, Graduate Studies, January 1, 2021 to August 31, 2021.

FRAYNE, Bruce, Director, School of Environment, Enterprise and Development, July 1, 2021 to June 30, 2024.

C. SABBATICAL LEAVES

For Approval by the Board of Governors

DRESCHER, Michael, Associate Professor, School of Planning, March 1, 2021 to August 31, 2021 at 100% salary.

HABIB, Komal, Assistant Professor, School of Environment, Enterprise and Development, March 1, 2021 to August 31, 2021 at 100% salary.

OELBERMANN, Maren, Professor, School of Environment, Resources and Sustainability, July 1, 2021 to December 31, 2021 at 100% salary.

SCOTT, Daniel, Professor, Department of Geography and Environmental Management, September 21, 2021 to August 31, 2022 at 98.9% salary.

Approved by the Board of Governors

BURCH, Sarah, Associate Professor, Department of Geography and Environmental Management, January 1, 2021 to June 30, 2021 at 85% salary.

CLARKE, Amelia, Associate Professor, School of Environment, Enterprise and Development, January 1, 2021 to August 31, 2021 at 100% salary.

HALL, Heather, Assistant Professor, School of Environment, Enterprise and Development, January 1, 2021 to June 30, 2021 at 100% salary.

NEPAL, Sanjay, Professor, Department of Geography and Environmental Management, January 1, 2021 to June 30, 2021 at 85% salary.

A handwritten signature in black ink that reads "Jean Andrey". The signature is written in a cursive, flowing style.

Jean Andrey
Dean

University of Waterloo
REPORT OF THE DEAN OF FACULTY OF HEALTH TO SENATE
January 18, 2021

FOR INFORMATION

A. APPOINTMENTS

Definite Term Appointment

BEACH, Tyson, Lecturer, Department of Kinesiology, May 1, 2021 – April 29, 2023. [PhD, University of Waterloo, 2012, MSc, University of Waterloo, 2005, BSc, University of Guelph, 2002]. Dr. Beach will help support the department's teaching capacity in the area of Biomechanics. Dr. Beach also brings added skills and expertise as a Knowledge Broker in the areas of exercise, fitness and performance that fits well with the department's strategic plan for the Centre for Community, Clinical and Applied Research Excellence (CCCARE).

Change to Definite Term Research Appointment

DAUM, Christine, Research Assistant Professor, Faculty of Health, November 1, 2020 – March 31, 2022, 1.0 FTE.

Adjunct Appointments

Graduate Supervision

KAASALAINEN, Sharon, Professor, School of Public Health and Health Systems, December 1, 2020 – December 31, 2021.

MORIN, Suzanne, Associate Professor, Department of Kinesiology, November 1, 2020 – December 31, 2023.

NAYLOR, Patti-Jean, Professor, School of Public Health and Health Systems, November 1, 2020 – October 31, 2023.

Graduate Supervision and Research

BOGER, Jennifer, Assistant Professor, School of Public Health and Health Systems, January 1, 2021 – December 31, 2024.

Adjunct Reappointments

ANDERSON, Kelly, Associate Professor, School of Public Health and Health Systems, December 1, 2020 – December 31, 2023.

BABIAK, Kathy, Associate Professor, Department of Recreation and Leisure Studies, January 1, 2021 – December 31, 2022.

CRIZZLE, Alex, Associate Professor, School of Public Health and Health Systems, January 1, 2021 – December 31, 2023.

D'AVERNAS, Josie, Research Associate Professor, Faculty of Health, January 1, 2021-December 31, 2021.

HALL, Marissa, Assistant Professor, School of Public Health and Health Systems, October 26, 2020- October 31, 2021.

MANNELL, Roger, Distinguished Professor Emeritus, Department of Recreation and Leisure Studies, July 1, 2020-June 30, 2021.

Change in adjunct appointment

RILEY, Barbara, Research Associate Professor, Faculty of Health, start date changed to January 7, 2021 -March 31, 2020.

Special Lecturer Appointments

FERRO, Annalise, Lecturer, School of Public Health and Health Systems, January 1, 2021 – April 30, 2021, second lecturer appointment for Winter term.

MCBEATH, Margaret, Lecturer, Faculty of Health, January 1, 2021 – April 30, 2021.

SHANBHAG, Gitanjali, Lecturer, Faculty of Health, January 1, 2021 – April 30, 2021.

TONG, Catherine, Co-lecturer, School of Public Health and Health Systems, January 1, 2021- April 30, 2021.

Postdoctoral appointments

NEUBAUER, Noelannah, Faculty of Health, November 1, 2020 – October 31, 2021.

NORTHWOOD, Melissa, School of Public Health and Health Systems, August 20, 2020 – October 31, 2020.

ZARABADI, Atefah, School of Public Health and Health Systems, October 1, 2020 – September 30, 2022.

Postdoctoral re-appointment

MARRIOTT, Kendal, Department of Kinesiology, January 1, 2021 – December 31, 2021, one-year extension.

WOOD, Katelyn, Department of Kinesiology, January 1, 2021 – August 31, 2021, 9-month extension.

Research appointment

KALLES, Elizabeth, Research Associate, School of Public Health and Health Systems, November 1, 2020- January 31, 2020.

B. Canada Research Chair appointment

NEUFELD, Hannah, Assistant Professor and Canada Research Chair, Tier 2 in Indigenous Health, Wellbeing and Food Environments, School of Public Health and Health Systems, October 1, 2020 – September 30, 2025.

C. ADMINISTRATIVE REAPPOINTMENTS

HECKMAN, George, Associate Professor and Schlegel Research Chair in Geriatric Medicine, Schlegel-UW Research Institute for Aging, January 1, 2022 - December 31, 2024.

KELLER, Heather, Professor and Schlegel Research Chair in Nutrition and Aging, Schlegel-UW Research Institute for Aging, January 1, 2022 – December 31, 2026.

D. RETIREMENTS

HUGHSON, Richard, Professor, Department of Kinesiology, December 31, 2020.

AROCHA, Frank (Jose), Associate Professor, School of Public Health and Health Systems, January 1, 2022.



Lili Liu
Lili Liu, Dean

Applied Health Sciences

University of Waterloo
REPORT OF THE DEAN OF MATHEMATICS TO SENATE
January 18, 2021

FOR INFORMATION

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

Probationary-Term Appointments

PASHKOVICH, Kanstantsin (Diploma in Mathematics, 2008, Belarusian State University; PhD, 2012, Otto-von-Guericke University), Assistant Professor, Dept. of Combinatorics and Optimization, May 1, 2021 – June 30, 2024. After completing his PhD, Dr. Pashkovich completed several postdoctoral visits in Padua, Italy (2012-13), Brussels, Belgium (2013-14), and at the University of Waterloo (2015-17). Subsequently, Dr. Pashkovich completed a 4-month period as a research fellow at the Simons Institute in Berkeley, USA. In January 2019, he joined the School of Computer Science and Electrical Engineering at University of Ottawa as an assistant professor. Dr. Pashkovich has wide-ranging research interests in optimization spanning convex, integer and combinatorial optimization and the interconnections between these areas. His recent research has fruitfully applied his expertise in these areas to solve problems in cooperative game theory. His research interests complement existing strengths in discrete and continuous optimization in the Department of Combinatorics & Optimization.

Probationary-Term Reappointments

SANG, Peijun, Assistant Professor, Dept. of Statistics and Actuarial Science, July 1, 2021 – June 30, 2024.

Definite-Term Appointments

HACKMAN, Robert (BSc, 2015, University of Alberta; MMath 2020, University of Waterloo), Lecturer, David R. Cheriton School of Computer Science, May 1, 2021 – April 29, 2023. Mr. Hackman will teach six courses per year and perform service duties as required.

Definite-Term Reappointments

PRZEDBORSKI, Michelle, Research Assistant Professor, Dept. of Applied Mathematics, April 1, 2020 – August 31, 2022

Visiting Appointments

CONNELLY, Robert (Cornell University), Professor, Dept. of Combinatorics & Optimization, February 1, 2021 – June 30, 2021.

POURAHMPADI, Vahid, Research Associate, David R. Cheriton School of Computer Science, November 1, 2020 – April 30, 2021.

RENOUF, Elizabeth, Research Associate, Dept. of Statistics and Actuarial Science, January 1, 2021 – December 31, 2021.

Adjunct Appointments

Instructor

de LIMA BARBOSA, Bruno, Lecturer, Office of the Dean, January 1, 2021 - April 30, 2021.

RASHIDI, Sephehr, Lecturer, Office of the Dean, January 1, 2021 – April 30, 2021.

Grad Committee

SAFEY EL DIN, Mohab (Sorbonne Universite), Professor, David R. Cheriton School of Computer Science, November 1, 2020 – June 30, 2024.

ZHI, Lihong (Chinese Academy of Sciences), Professor, David R. Cheriton School of Computer Science, November 1, 2020 – June 30, 2024.

Adjunct Reappointments

Instructor

ALENCAR, Paulo, Lecturer, David R. Cheriton School of Computer Science, January 1, 2021 – April 30, 2021.

ARNASON, Mark, Lecturer, Office of the Dean, January 1, 2021 – April 30, 2021.

COOPER-STACHOWSKY, Mike, Lecturer, Office of the Dean, January 1, 2021 – April 30, 2021.

HACKMAN, Robert, Lecturer, David R. Cheriton School of Computer Science, January 1, 2021 – April 30, 2021.

HARRIS, Matthew, Lecturer, Dept. of Applied Mathematics, January 1, 2021 – April 30, 2021.

KAMAL, Zille Huma, Lecturer, David R. Cheriton School of Computer Science, January 1, 2021 – April 30, 2021.

KOTECHA, Sachin, Lecturer, Office of the Dean, January 1, 2021 – April 30, 2021.

PACEY, Dean, Lecturer, Office of the Dean, January 1, 2021 – April 30, 2021.

SHARMA, Puneet, Lecturer, Dept. of Applied Mathematics, January 1, 2021 – April 30, 2021.

WALKER, Timothy, Lecturer, David R. Cheriton School of Computer Science, January 1, 2021 – April 30, 2021.

Cross Reappointments

DOW, Christine (Assistant Professor, Dept. of Geography & Environmental Management), in the Dept. of Applied Mathematics, July 1, 2020 – June 30, 2023.

Graduate Students appointed as Part-time Lecturers

DUTT, Krishna, Lecturer, Dept. of Applied Mathematics, January 1, 2021 - April 30, 2021.

GRACE, Andrew, Lecturer, Dept. of Applied Mathematics, January 1, 2021 – April 30, 2021.

NOURIAN, Vahid, Lecturer, Dept. of Applied Mathematics, January 1, 2021 – April 30, 2021.

Graduate Students reappointed as Part-time Lecturers

ESFAHANI, Navid, David R. Cheriton School of Computer Science, January 1, 2021 – April 30, 2021.

LAKIER, Matthew, David R. Cheriton School of Computer Science, January 1, 2021 – April 30, 2021.

SIVAS, Abdullah Ali, Dept. of Applied Mathematics, January 1, 2021 – April 30, 2021.

URSU, Dan, Dept. of Pure Mathematics, January 1, 2021 – April 30, 2021.

Postdoctoral Fellows appointed as Part-time Lecturers

EBADI, Mohsen, Dept. of Statistics and Actuarial Science, January 1, 2021 – December 31, 2021.

GHASEMI, Maryam, Dept. of Applied Mathematics, January 1, 2021 – December 31, 2021.

HU, Hao, Lecturer, Dept. of Combinatorics & Optimization, January 1, 2021 – April 30, 2021.

ZHOU, Hong, David R. Cheriton School of Computer Science, January 1, 2021 – December 31, 2021.

B. ADMINISTRATIVE APPOINTMENTS

LYSY, Martin, Associate Dean, Computing, Office of the Dean, January 1, 2021 – June 30, 2024.

VAVASIS, Stephen, Director of Data Science (Graduate), January 1, 2021 – August 31, 2021.

B.1 Change in appointment

LI, Yuying, Director of Data Science (Graduate), David R. Cheriton School of Computer Science (*ref.* Dean's Report to Senate, June 2019)

From: January 1, 2019 – December 31, 2021

To: January 1, 2019 – December 31, 2020

C. SABBATICALS (for approval by the Board of Governors)

WILLMOT, Gord (Professor), Dept. of Statistics and Actuarial Science, September 1, 2021 – August 31, 2022, with 85% salary.



Mark Giesbrecht
Dean

UNIVERSITY OF WATERLOO
REPORT OF THE DEAN OF SCIENCE TO SENATE
January 18, 2021

For information:

A. APPOINTMENTS

Definite Term Reappointment – Full-Time

PHAN, Thai, Assistant Professor, Department of Earth and Environmental Sciences, March 1, 2021 to August 31, 2021. [B. Eng., Ho Chi Minh City – University of Technology, Vietnam (2004); M.Eng., Asian Institute of Technology, Thailand (2007); Ph.D. Trent University (2012).]

Adjunct Appointments
Graduate Supervision

BUTLER, Barbara, Lecturer, Department of Biology, January 1, 2021 to December 31, 2023.

GINDER-VOGEL, Matthew, Associate Professor, Department of Earth and Environmental Sciences, October 1, 2020 to September 30, 2023.

MASHATAN, Atefeh, Assistant Professor, Department of Physics and Astronomy, October 1, 2020 to August 31, 2024.

RODEN, Eric, Professor, Department of Earth and Environmental Sciences, January 1, 2021 to December 31, 2023.

Graduate Supervision and Research

HICKS, Keegan, Assistant Professor, Department of Biology, November 16, 2020 to June 30, 2023.

LEAT, Susan (Professor Emeritus), Professor, School of Optometry and Vision Science, January 1, 2021 to December 31, 2024.

Graduate Supervision and Other

LAVOIE, Isabelle, Assistant Professor, Department of Biology, October 1, 2020 to September 30, 2023.

Graduate Instruction and Graduate Supervision

McCARTHY, Lisa, Associate Professor, School of Pharmacy, November 1, 2020 to October 31, 2023.

PRETTI, Judene, Assistant Professor, School of Pharmacy, December 1, 2020 to November 30, 2023.

Adjunct Reappointments**Other**

LILLIE, Elaine, Assistant Professor, School of Pharmacy, January 1, 2021 to December 31, 2021.

Graduate Supervision

SMITH, Richard W., Associate Professor, Department of Chemistry, August 1, 2020 to August 31, 2023.

Research

MIRKOVIC, Jelena, Associate Professor, Department of Chemistry, September 1, 2020 to August 31, 2023.

Undergraduate Instruction

AHMAD, Jauher, Assistant Clinical Professor, School of Pharmacy, January 1, 2021 to December 31, 2021.

BOWLES-JORDAN, Janie, Assistant Clinical Professor, School of Pharmacy, January 1, 2021 to December 31, 2023.

BROWN, Douglas J., Assistant Clinical Professor, School of Pharmacy, January 1, 2021 to December 31, 2023.

BUTT, Kristi, Assistant Clinical Professor, School of Pharmacy, January 1, 2021 to December 31, 2021.

CHARBONNEAU, Claude, Assistant Clinical Professor, School of Pharmacy, January 1, 2021 to December 31, 2023.

de VILLIERS, Peet, Assistant Clinical Professor, School of Pharmacy, January 1, 2021 to December 31, 2021.

EDWARDS, Donnie, Assistant Clinical Professor, School of Pharmacy, January 1, 2021 to December 31, 2023.

HEINTZMAN, Angela, Assistant Clinical Professor, School of Pharmacy, January 1, 2021 to December 31, 2023.

McCOY, Tracy, Assistant Clinical Professor, School of Pharmacy, January 1, 2021 to December 31, 2021.

PACEY, Dean, Assistant Clinical Professor, School of Pharmacy, January 1, 2021 to December 31, 2021.

PATODIA, Rosemarie, Assistant Clinical Professor, School of Pharmacy, January 1, 2021 to December 31, 2023.

ROBERT-KAPPEL, Noella, Assistant Clinical Professor, School of Pharmacy, January 1, 2021 to December 31, 2023.

SEYMOUR, Nicole, Assistant Clinical Professor, School of Pharmacy, January 1, 2021 to December 31, 2023.

TOLMIE, Bronwyn, Assistant Clinical Professor, School of Pharmacy, January 1, 2021 to December 31, 2023.

WENTZELL, Jason, Assistant Clinical Professor, School of Pharmacy, January 1, 2021 to December 31, 2023.

WONG, Jeffrey, Assistant Clinical Professor, School of Pharmacy, January 1, 2021 to December 31, 2023.

YRIGOYEN-DACRUZ, Lidia, Assistant Clinical Professor, School of Pharmacy, January 1, 2021 to December 31, 2023.

Graduate Supervision and Research

CAMPBELL, Larry, Associate Professor, Department of Chemistry, November 1, 2020 to August 31, 2023.

Undergraduate Instruction, Graduate Instruction, Graduate Supervision

CALLENDER, Murchison, (Professor Emeritus), Professor, School of Optometry and Vision Science, November 1, 2020 to October 31, 2023.

Undergraduate Instruction, Graduate Instruction, Research

PALMAY, Leslie, Assistant Professor, School of Pharmacy, January 1, 2021 to December 31, 2023.

Cross-Appointment

WU, Yimin, Assistant Professor, Department of Mechanical and Mechatronics Engineering, cross-appointed to Department of Chemistry, November 1, 2020 to August 31, 2023.

Cross-Reappointment

BEAZELY, Michael A., Associate Professor, School of Pharmacy, cross-appointed to Department of Biology, October 1, 2020 to June 30, 2023.

BROWN, Daniel G., Professor, David R. Cheriton School of Computer Science, cross-appointed to Department of Biology, October 1, 2020 to June 30, 2023.

CHOH, Vivian, Associate Professor, School of Optometry and Vision Science, cross-appointed to Department of Biology, June 1, 2020 to June 30, 2023.

CHOU, C. Perry, Professor, Department of Chemical Engineering, cross-appointed to Department of Biology, October 1, 2020 to June 30, 2023.

IGBOELI, Okechukwu (Okey), Lecturer, Dean of Science Office, cross-appointed to Department of Biology, October 1, 2020 to June 30, 2023.

NEKKAR RAO, Praveen, Associate Professor, School of Pharmacy, cross-appointed to Department of Biology, November 1, 2020 to June 30, 2023.

SANDERSON, Joe, Associate Professor, Department of Physics and Astronomy, cross-appointed to Department of Chemistry, September 1, 2020 to August 31, 2023.

SCHIFF, Sherry, Professor, Department of Earth and Environmental Sciences, cross-appointed to Department of Biology, September 1, 2020 to June 30, 2023.

SLAVCEV, Roderick, Associate Professor, School of Pharmacy, cross-appointed to Department of Biology, October 1, 2020 to June 30, 2023.

WETTIG, Shawn, Professor, School of Pharmacy, cross-appointed to Department of Chemistry, November 1, 2020 to August 31, 2023.

Change in Appointment

EDGINTON, Andrea, Associate Director, Grad and Research, School of Pharmacy, end date changed from August 31, 2021 to December 31, 2020.

Special Appointment

Undergraduate Instruction

BRAY, Chelsea, Lecturer, School of Optometry and Vision Science, September 1, 2020 to December 31, 2020.

BRETZ, Kim, Lecturer, School of Pharmacy, January 1, 2021 to April 30, 2021.

DALIDOVICH, David, Lecturer, Department of Physics and Astronomy, January 1, 2021 to April 30, 2021.

RICCI, Olivia, Lecturer, School of Optometry and Vision Science, October 1, 2020 to January 31, 2021.

WRIGHT, Catherine, Lecturer, School of Optometry and Vision Science, September 1, 2020 to December 31, 2020.

Graduate Student Appointed as Part-Time Lecturer

RINAS, Karsten, Lecturer, Department of Biology, January 1, 2021 to April 30, 2021.

Special Reappointment

Undergraduate Instruction

CHAUDET, Marcia, Lecturer, Department of Biology, January 1, 2021 to April 30, 2021.

GURSKA, Jola, Department of Biology, January 1, 2021 to April 30, 2021.

HRYCYSHYN, Matthew, Lecturer, Department of Biology, January 1, 2021 to April 30, 2021.

MICHAUD, Wendy, Lecturer, Department of Biology, January 1, 2021 to April 30, 2021.

OFFMAN, Elliot, Lecturer, School of Pharmacy, January 1, 2021 to April 30, 2021.

Postdoctoral Fellow Reappointed as Lecturer

COUGHLAN, Neville, Lecturer, Department of Chemistry, January 1, 2021 to April 30, 2021.

Research Associate Reappointed as Lecturer

LYNCH, Michael D.J., Lecturer, Department of Biology, January 1, 2021 to April 30, 2021.

B. ADMINISTRATIVE APPOINTMENTS

GAMBLE, J-M., Associate Director, Graduate and Research, School of Pharmacy, January 1, 2021 to December 31, 2023.

C. RETIREMENTS

BUTLER, Barbara, Lecturer, Department of Biology, effective January 1, 2021.

LEAT, Susan, Professor, School of Optometry and Vision Sciences, effective January 1, 2021.

FOR APPROVAL BY THE BOARD OF GOVERNORS

D. SABBATICAL

ROONEY, Rebecca, Associate Professor, Department of Biology, May 1, 2021 to April 30, 2022, 100% salary arrangements.



R.P. Lemieux
Dean of Science

University of Waterloo
SENATE EXECUTIVE COMMITTEE
18 January 2021

The Senate Executive Committee met on 4 January 2021 and agreed to forward the following item to Senate.

FOR APPROVAL

Appointment of Chancellor Nominating Committee

Dominic Barton's first term as chancellor ends 20 June 2021 and, as provided by the *University of Waterloo Act, 1972* [excerpt (section 30, subsections 1-3) reproduced below], he is eligible to serve for a second three-year term. It has been the practice for the Senate Executive Committee to serve as the nominating committee. The Executive Committee is agreeable to again serve as the nominating committee and forwards this recommendation to Senate for approval.

Motion:

That Senate appoint its Executive Committee as the Chancellor Nominating Committee.

CHANCELLOR

Chancellor, Election of	30	1. There shall be a Chancellor of the University who shall be elected by the Senate in such manner as the Senate shall determine.
Term of Office		2. The term of office of the Chancellor shall be three years, provided that he shall be eligible for re-election for one additional term.
Duties		3. The Chancellor shall preside at all Convocations and shall admit to degrees, diplomas and certificates such candidates including the recipients of honorary degrees, as may be designated by the Senate.

Feridun Hamdullahpur
Chair

University of Waterloo
SENATE GRADUATE & RESEARCH COUNCIL
Report to Senate
18 January 2021

Senate Graduate & Research Council met on 9 November 2020 and 14 December 2020 and agreed to forward the following item to Senate for approval as part of the regular agenda.

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

FOR APPROVAL

NEW PROGRAM

Faculty of Arts

- 1. Motion:** To approve a new Doctor of Philosophy (PhD) in Political Science, including optional experiential stream, effective 1 September 2021, as presented at Attachment 1.

Rationale: The PhD in Political Science is a new research program within the Faculty of Arts that will integrate rigorous requirements and training consistent with disciplinary norms while offering innovative features, flexibility, and professional development designed to prepare students for both traditional academic careers and non-academic career paths.

The research-based program will require the completion of 3.0 units of courses in the first year of study (one course is 0.5 units), a comprehensive examination, mandatory professional development milestones, a thesis proposal and oral defence, and a thesis (in a traditional format or an alternative format, such as a publication model consisting of at least three sole-authored published [or in press] works) and oral thesis defence. There will be a regular and co-op option. The regular, full-time program is designed to be completed as a four-year degree. It will be available to both full-time and part-time students.

PROGRAM CHANGES

Faculty of Applied Health Sciences

- 1. Motion:** To approve the discontinuation of the collaborative doctoral program in Work and Health in (a) Kinesiology, (b) Recreation and Leisure Studies, and (c) School of Public Health and Health Systems, effective 1 January 2021, as presented at Attachment 2.

Rationale: The AHS collaborative program in Work and Health has had low enrolment in the past five years and Faculty whose research interests center around Work and Health feel that the student's interests are fully accommodated within the Department-specific program.

Faculty of Engineering

- 1. Motion:** To approve the discontinuation of the (type 2) Graduate Diploma (GDip) in Software Engineering within the Department of Electrical and Computer Engineering (ECE), effective 1 January 2021, as presented at Attachment 3.

Rationale: The MEng in ECE program will be offering "Graduate Specializations" in a given area, in place of the currently offered Graduate Diplomas. The change from Graduate Diplomas to Graduate Specializations is to better reflect the nature of the course packaging and also to bring the credentialization of focused course selection into line with Faculty of Engineering objectives.

GRADUATE STUDIES - ACADEMIC CALENDAR CHANGES

- 1. Motion:** To approve updates to the [Enrolment and Time Limits](#) regulation, effective 1 January 2021, as presented at Attachment 4.

Rationale: The wording in the Graduate Studies Academic Calendar (GSAC) sections that relate to time limits and program extensions is being updated to: reflect current practices and increase clarity. The changes noted here in the GSAC are being made in concert with changes to the GSPA webpage outlining the program extension process wherein the rationale for this process is highlighted.

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

Charmaine Dean
Vice President, Research & International

**UNIVERSITY OF
WATERLOO**



**GRADUATE PROGRAM PROPOSAL
OF
DOCTOR OF PHILOSOPHY (PHD)
IN
POLITICAL SCIENCE**
Submitted to the
Ontario Universities Council on Quality Assurance

VOLUME I - PROPOSED BRIEF

FEBRUARY 2020

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1. INTRODUCTION

1.1 Brief Listing of the Program

The PhD in Political Science is a new research program that will integrate rigorous requirements and training consistent with disciplinary norms while offering innovative features, flexibility, and professional development designed to prepare students for both traditional academic careers and non-academic career paths.

The research-based program will require the completion of 3.0 units of courses in the first year of study (one course is 0.5 units), a comprehensive examination, mandatory professional development milestones, a thesis proposal and oral defence, and a thesis (in a traditional format or an alternative format, such as a publication model consisting of at least three sole-authored published [or in press] works) and oral thesis defence. There will be a regular and co-op option. The regular, full-time program is designed to be completed as a four-year degree. It will be available to both full-time and part-time students.

Consistent with disciplinary norms, students will be expected to gain expertise in a primary graduate research fields of study and a secondary field or concentration. Major graduate research fields, based on departmental strengths and capacity to offer multiple core courses, will be Canadian Politics, International Relations, and Political Economy. For their secondary field, students may complete either a 2nd major field or a ‘custom concentration’ based on coursework in a designated area of the discipline (comparative politics, democratic theory, public policy, gender and politics, etc.) or a subfield of their major field (security, rights, etc.). Students will be required to take six courses. These include two ‘core’ courses in one of the program’s major graduate research fields (see section 1.6 – Program Content, Core Courses), two courses in the student’s second graduate research field or concentration, a required methods course, and one elective. The methods course will be team-taught by three faculty members, covering quantitative and qualitative approaches to political science as well as the epistemology of social science. Students will have the opportunity to take additional methods training as part of their mandatory professional development modules.

The most distinctive element of the program will be its emphasis on professional development and streams designed to accommodate both students seeking academic careers and those who are not. Students will also have the option to take an experiential stream (featuring co-op, a Mitacs placement, or other experiential training, and additional professional development modules) or a teaching stream (featuring additional professional development modules, including a mentored teaching experience). Students in the co-op program will complete 12 months of placement. These options are, to our knowledge, unique in Canada among political science PhD programs. The Political Science Department is well placed to launch what would be the first PhD program at the University of Waterloo with a centrally-administered formal co-op option. Our Master of Public Service program is the largest graduate-level co-op program at the university and the last several years has enjoyed a 100 percent employment rate for cohorts ranging from 37 to 55 students. Students in our MA program who have opted for the co-op option have also seen significant success. For example, in the

Proposed Program – PhD in Political Science

2017-18 academic year, in a cohort of 15 MA students eight applied for co-op and all eight received attractive work term employment, including positions at the federal Treasury Board Secretariat, the Ontario Ministry of Economic Development, Job Creation and Trade, and the Financial Intelligence Unit at the Bank of Montreal.

Professional development modules will be offered as a mandatory component of the program and recorded on the students' records as a degree milestone (titled the PhD Professional Development Seminar). Many of these modules, usually consisting of half-day seminars, will be offered by the department in-house. Others are available through the Centre for Teaching Excellence (CTE), Mitacs, or will be developed in collaboration with the Writing and Communications Centre or the Centre for Career Action (CCA). All students will be required to complete a set of six mandatory workshops on topics like research design, communicating research to a broader audience, translating skills for the non-academic job market, and conferencing best practices. Students in the regular program will also complete three additional elective professional development modules. Students who opt to take the experiential or teaching program streams will be expected to complete additional professional development activities (milestones called the PhD Experiential Seminar and the PhD Teaching Seminar -- see section 1.6 for more detail). These options are laid out in the Table below.

Proposed Program – PhD in Political Science

	PhD, Political Science, Regular Program	PhD, Political Science, Teaching Stream	PhD, Political Science, Experiential Stream (internship)	PhD, Political Science, Experiential Stream (Co-op)
YEAR 1	<p>Fall & Winter:</p> <ul style="list-style-type: none"> 6 graduate-level courses (consisting of two courses in the student’s major field, two in their second field/concentration, a mandatory methods course, and an elective). <p>Spring:</p> <ul style="list-style-type: none"> comprehensive exam prep 			
YEAR 2	<p>Fall:</p> <ul style="list-style-type: none"> Comprehensive Examination (September) mandatory professional development workshops counted toward PhD Professional Development Seminar: <ul style="list-style-type: none"> <i>Research design and methods workshop</i> <i>Conducting literature reviews</i> <p>Winter:</p> <ul style="list-style-type: none"> Thesis Proposal defence (by end of April) mandatory professional development workshops counted toward PhD Professional Development Seminar: <ul style="list-style-type: none"> <i>Planning and best practices in fieldwork</i> <i>Conferencing best practices (completed after proposal defence)</i> <p>Spring:</p> <ul style="list-style-type: none"> mandatory professional development workshops counted toward PhD Professional Development Seminar: <ul style="list-style-type: none"> <i>Careers in political science and translating skills for a non-academic job market</i> <i>Communicating research to a broader audience</i> 			
			<ul style="list-style-type: none"> Spring term Year 2 is earliest term a student may start internship placement (normally a minimum of 4 months of internship experience will be required). <p>Internship students must complete certain mandatory professional development workshops counted toward the <u>PhD Experiential Seminar</u> prior to their internship placement (See section 4.4 for details.)</p>	<ul style="list-style-type: none"> Spring term Year 2 is earliest term a student may start work-terms (12 months of work-term placement is required). <p>Co-op students must complete certain mandatory professional development workshops counted toward the <u>PhD Experiential Seminar</u> prior to their work-term. (See section 4.4 for details.)</p>

Proposed Program – PhD in Political Science

	PhD, Political Science, Regular Program	PhD, Political Science, Teaching Stream	PhD, Political Science, Experiential Stream (internship)	PhD, Political Science, Experiential Stream (Co-op)
YEAR 3	<p>All terms:</p> <ul style="list-style-type: none"> research and writing of dissertation 3 elective professional development modules for completion of <u>PhD Professional Development Seminar</u> (See section 4.4 for a list of options). 	<p>All terms:</p> <ul style="list-style-type: none"> completion of mandatory professional development modules counted toward <u>PhD Teaching Seminar</u>: <ul style="list-style-type: none"> Centre for Teaching Excellence Fundamentals of University Teaching program. 2 Guest Lectures in Political Science (students will receive automatic credit if they have the opportunity to teach their own course as a sessional instructor). Develop a syllabus for a (real or prospective) political science course. 	<p>All terms:</p> <ul style="list-style-type: none"> completion of mandatory professional development workshops counted toward <u>PhD Experiential Seminar</u>: <ul style="list-style-type: none"> Reflective practices in experiential learning Writing resumes Workshop on parallel career planning One or more modules offered by MITACS or other campus partners (see section 4.4 for details). 	<p>Fall:</p> <ul style="list-style-type: none"> completion of mandatory professional development workshops counted toward <u>PhD Experiential Seminar</u>: <ul style="list-style-type: none"> Reflective practices in experiential learning Writing resumes Workshop on parallel career planning One or more modules offered by MITACS or other campus partners (see section 4.4 for details). <p>Winter:</p> <ul style="list-style-type: none"> research and writing of dissertation <p>Spring:</p> <ul style="list-style-type: none"> work-term
YEAR 4	<p>Fall:</p> <ul style="list-style-type: none"> research and writing of dissertation <p>Winter:</p> <ul style="list-style-type: none"> research and writing of dissertation <p>Spring:</p> <ul style="list-style-type: none"> <u>Thesis Defence</u> 	<p>Fall:</p> <ul style="list-style-type: none"> research and writing of dissertation <p>Winter:</p> <ul style="list-style-type: none"> research and writing of dissertation <p>Spring:</p> <ul style="list-style-type: none"> <u>Thesis Defence</u> 	<p>Fall:</p> <ul style="list-style-type: none"> <u>Internship Report</u> (to be submitted one month after end of placement) research and writing of dissertation <p>Winter:</p> <ul style="list-style-type: none"> research and writing of dissertation <p>Spring:</p> <ul style="list-style-type: none"> <u>Thesis Defence</u> 	<p>Fall:</p> <ul style="list-style-type: none"> work-term <p>Winter:</p> <ul style="list-style-type: none"> work-term <p>Spring:</p> <ul style="list-style-type: none"> return to academic programming <u>Work-term Report</u> (to be submitted one month after return from work-term)

Proposed Program – PhD in Political Science

	PhD, Political Science, Regular Program	PhD, Political Science, Teaching Stream	PhD, Political Science, Experiential Stream (internship)	PhD, Political Science, Experiential Stream (Co-op)
YEAR 5	N/A	N/A	N/A	Fall: <ul style="list-style-type: none"> • research and writing of dissertation Winter/Spring: <ul style="list-style-type: none"> • research and writing of dissertation • <u>Thesis Defence</u>

1.2 Method Used for Preparation of the Brief

The Political Science Department initiated a discussion about establishing a PhD program in December, 2016. A Department-wide consultation process canvassed every faculty member and several MA students and concluded that there was virtually unanimous and enthusiastic support for examining what a prospective program would look like. The consensus was that the Department stood out among political science departments across Canada of similar size and research stature for lacking a PhD program. Moreover, the Department consensus was that it was well positioned to account for and train students who will enter into traditional academic job markets as well as students who pursue non-academic careers. A survey of PhD-granting Political Science departments in Ontario was also conducted. The findings suggested that those programs provide little explicit attention to non-academic career training, and the Department came to the opinion that flexibility, innovation, and a focus on professional development and opportunities for experiential learning would make a new PhD program distinctive.

In April, 2017, the Department struck a PhD Design Committee of faculty members (Emmett Macfarlane, Jasmin Habib, Veronica Kitchen, and Heather Whiteside) tasked with designing a PhD program that was innovative and unique relative to those at other, comparable universities, and; two, conducting a feasibility study that assessed the impact on our undergraduate program and MA program. The report was delivered to the Department in September, 2017. The design and components for the proposed PhD program reflected those described above (see Section 1.1), and the report was unanimously and enthusiastically approved by the Department.

On October 23, 2017, the Chair of the Department, Anna Esselment, and Emmett Macfarlane met with Doug Peers, Dean of Arts, and Linda Warley, Associate Dean, Graduate Studies, to discuss the proposal and received support to proceed with the formal approval process.

On May 7, 2018 a formal Statement of Interest was sent to the Director of Quality Assurance (Academic Programs) and the Department was advised to proceed with the production of the Volume 1 draft proposal.

Over the summer and fall of 2018, members of the Department's Graduate Committee met and consulted with various units and stakeholders in preparing the draft proposal, including the Centre for Teaching Excellence (CTE), Librarian Jane Forgay, Co-operative Education, and the campus representative for Mitacs (Mike McCleary).

1.3 Objectives of the Program

The objective of the program is to train highly qualified persons in the discipline of political science with the ability to apply the knowledge and skills acquired to myriad political and policy problems. The training will prepare graduates for a diversity of career pathways. Outside of the academic setting there is a longstanding need for the enhanced research skills, developed academic knowledge, methods and tools that can be brought to bear on a range of problems routinely faced by governments, the private sector, local, national, and international organizations, and the non-profit sector. Within academia, there is increasing recognition of the need for professional development to prepare PhD students for non-academic careers paths, as well as additional training

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in areas like teaching for doctoral candidates intent on academic careers. This new program is being launched in response to that reality as well as student demand for an innovative and flexible program that provides these opportunities.

The proposed PhD program aligns fully with the Faculty of Arts goals of increasing graduate enrollment and the University's Strategic Plan (2013-2018), which emphasizes "focusing energy and allocating resources into areas that will set this institution apart, ensure the best experience for students and serve as a model for the future of higher education." This means offering experiential education as well as continuing to foster conditions under which "faculty and students engage in transformational research."¹ As envisioned, the proposed PhD program will explicitly reinforce these goals to enhance the University of Waterloo's reputation as an academic institution that focuses on innovative, integrated, and experiential learning, co-operative education, and research of the highest quality, all while delivering a political science education that meets the recognized standards of the discipline. The proposed PhD program similarly fits well within University of Waterloo's current Strategic Mandate Agreement (SMA) with the provincial Ministry. For example, one of the initiatives articulated in SMA2 is the expansion of formal co-op options specifically geared toward graduate students.²

In consultation with the CTE, the Department refined a specific list of program learning outcomes, taking into account the Graduate Degree Level Expectations (GDLEs). The chart below shows how the program learning outcomes relate to the GDLEs. On completion of the PhD Program in Political Science, graduates will be intellectual leaders in the field of political science who create knowledge, engage in critical analysis, and demonstrate professionalism. Throughout the degree, our goal is to help students maintain an awareness of how meeting each of these objectives affects their own health and wellness.

GDLES are as follows:

1. **Depth and Breadth of Knowledge** - A thorough understanding of a substantial body of knowledge that is at the forefront of their academic discipline or area of professional practice including, where appropriate, relevant knowledge outside the field and/or discipline.
2. **Research and Scholarship** - a) The ability to conceptualize, design, and implement research for the generation of new knowledge, applications, or understanding at the forefront of the discipline, and to adjust the research design or methodology in the light of unforeseen problems; b) The ability to make informed judgments on complex issues in specialist fields, sometimes requiring new methods; and c) The ability to produce original research, or other advanced scholarship, of a quality to satisfy peer review, and to merit publication.

¹ University of Waterloo, Strategic Plan 2013. *A Distinguished Past – A Distinctive Future*, p. 7.

² *Strategic Mandate Agreement2* – University of Waterloo, Ministry of Advanced Education and Skills Development 2017-20. P. 10.

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3. **Level of Application of Knowledge** - The capacity to a) Undertake pure and/or applied research at an advanced level; and b) Contribute to the development of academic or professional skills, techniques, tools, practices, ideas, theories, approaches, and/or materials.
4. **Professional Capacity/Autonomy** - a) The qualities and transferable skills necessary for employment requiring the exercise of personal responsibility and largely autonomous initiative in complex situations; b) The intellectual independence to be academically and professionally engaged and current; c) The ethical behavior consistent with academic integrity and the use of appropriate guidelines and procedures for responsible conduct of research; and d) The ability to evaluate the broader implications of applying knowledge to particular contexts.
5. **Level of Communication Skills** - The ability to communicate complex and/or ambiguous ideas, issues and conclusions clearly and effectively
6. **Awareness of Limits of Knowledge** - An appreciation of the limitations of one’s own work and discipline, of the complexity of knowledge, and of the potential contributions of other interpretations, methods, and disciplines.

<p>Program Learning Outcomes and Graduate Degree Level Expectations</p> <p>At the end of the program, students will:</p>
<p>1. Produce original research of the highest quality by combining a broad knowledge of the concepts, theories, and methods used in the study of political science, and their connections to the empirical world of government, politics, and policy-making, with expert knowledge of their own subject area;</p>
<p>2. Develop research questions and designs through a practice of epistemological and methodological reflection and critical analysis while recognizing the limits of their research;</p>
<p>3. Communicate scholarly knowledge in various forms to disparate audiences using appropriate writing, speaking, or other communication skills;</p>
<p>4. Make informed choices about their career as a political scientist;</p>
<p>5. Recognize diverse voices and experiences in research, teaching, professional development, and community engagement</p>
<p>6. Adhere to the highest professional standards of ethics and academic integrity in all aspects of research, teaching, professional development, and community engagement, and cultivate an awareness of how power relationships affect the attainment of those standards.</p>
<p>Teaching Stream – Additional Learning Outcome</p>
<p>Demonstrate knowledge of pedagogical theories and skills applicable to political science, and implement them in all aspects of teaching including curriculum design, course delivery, supervision, and mentorship.</p>
<p>Experiential Stream - Additional Learning Outcome</p>
<p>Use the knowledge and skills developed through course work, research, and professional development milestones in a paid or volunteer work experience, and reflect on how that work experience relates to their own advanced political science research.</p>

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This chart maps how the program learning outcomes relate to the Graduate Degree Level Expectations, where 'X' indicates the strongest correlation, 'X' a significant correlation, and 'x' a minor correlation.

GDLES	Learning Outcomes							
	1	2	3	4	5	6	Teaching	Experiential
Depth and breadth of knowledge	X	X	X	X	X			X
Research and scholarship	X	X	X	x	X	X		X
Level of application of knowledge	X	X	X	X	X	X	X	x
Professional capacity/autonomy	x	X	X	X	X	X	X	X
Level of communication skills	X		X		x	x	X	X
Awareness of limits of knowledge	X	X		x	X			

1.4 Admission Requirements

The PhD program in Political Science will have a Fall admit term. Students applying to study part-time may be eligible for a Winter start date, though this would be handled on an individual basis. Admissions requirements are in line with admissions standards for comparable PhD programs in political science, and are designed to ensure that incoming students are prepared to undertake advanced research and knowledge creation work. This means that before entering the program, students should have some advanced knowledge of political science or a related discipline, strong marks, and competency in English, as it is the working language of the program.

Successful applicants must hold a master's degree in Political Science, or a related discipline, with a minimum average of 80% (A-) or equivalent.

Required application documents include:

- [Transcript\(s\)](#)
- Three academic letters of reference
- Supplementary information form;
 - Question 1: Please provide a statement of research (maximum 500 words)
 - Question 2: List up to three potential supervisors
- Résumé
- Writing sample (maximum 25 pages double-spaced)
- If applicable, proof of English language proficiency (ELP) through one of the following accepted examinations:
 - TOEFL (iBT): minimum overall score 100; writing 26; speaking 26

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- IELTS (Academic): minimum overall score 7.5; writing 7.0; speaking 7.0
- Or an equivalent score on an accepted examination as per the [Graduate Studies Academic Calendar – English language proficiency](#) guidelines

Applicants with extensive and related professional experience who do not meet the minimum academic admission requirements for the program may be considered for admission, however, additional coursework may be required.

The program will be offered full-time and part-time. Students who are admitted to the program full-time and who remain in good standing will be provided with four years (12 terms) of funding at or above the University minimum. Funding beyond four years is not guaranteed but may be available. Part-time students will not be eligible for department-level funding.

Note: Applicants who have completed their MA in Political Science at the University of Waterloo are subject to the same admission requirements.

1.5 Structure

The proposed PhD program is designed so that it can be completed in four years by a full-time student completing the regular stream. Students choosing an experiential option (co-op or another experiential-based option) should anticipate extending that time by the length of their co-op work term or internship (in the case of co-op, the completion time would be five years). The structure of the program is designed to accommodate both of these streams. Four years to completion also tracks with anticipated funding provisions. Part-time students will not normally be considered eligible for the co-op option.

Students in the co-op stream would have their funding paused while on their work-terms (12 months). Their funding would resume when they return to the program as a full-time student.

A student in the co-op stream may have a funding package that looks as follows:

Year 1: funded

Year 2: funded

Year 3: work-terms – not funded

Year 4: funded

Year 5: funded

Full time students are expected to be actively engaged with program activities including courses and Departmental offerings during the first four semesters of the program. The goals of this engagement include consistent academic progression and the development of a community of political science scholars. This will allow students to complete their coursework and comprehensive exams, and begin their mandatory professional development modules. Experiential learning students (co-op work terms or other placements) may begin their placements as early as the Winter term of Year 2, and if

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they have not defended a proposal before their placement begins, they should defend their proposal reasonably promptly on their return.

The general structure of the program as it relates to meeting the degree level expectations is as follows (the specific structure of the program is further elaborated in Section 4):

Year 1: Six required courses.

Year 2: Comprehensive exams (September) and mandatory professional development modules. Students may begin experiential placements (co-op or otherwise) no earlier than Spring of Year 2. Students on a full-time schedule will defend their thesis proposals in the Winter term.

Year 3 & 4: Students will complete remaining mandatory and optional professional development modules, any required field work for their dissertations, and complete and defend their thesis.

The proposed structure is designed to allow students to lay the foundations for their own independent research through coursework, comprehensive exams, and professional development related to the thesis in the first five semesters of the program. In the remaining semesters, the program becomes even more flexible, allowing students to construct the appropriate path for their research and career goals. Students completing the program part-time will complete courses and professional development at their own pace. This may naturally lead to longer completion times as there are some courses and professional development modules that will only be offered once per year.

The chart below shows how the various components of the degree map onto the program learning outcomes.

Degree Outcome	Major Program Components
1. Produce original research of the highest quality by combining a broad knowledge of the concepts, theories, and methods used in the study of political science, and their connections to the empirical world of government, politics, and policy-making, with expert knowledge of their own subject area;	<ul style="list-style-type: none"> • Coursework • Comprehensive Exams • Thesis Proposal • Thesis & Thesis Defence
2. Develop research questions and designs through a practice of epistemological and methodological reflection and critical analysis while recognizing the limits of their research;	<ul style="list-style-type: none"> • Thesis Proposal • Mandatory Professional Development Modules • Thesis & Thesis Defence
3. Communicate scholarly knowledge in various forms to various audiences using appropriate writing, speaking, or other communication skills;	<ul style="list-style-type: none"> • Coursework • Thesis Proposal • Thesis & Thesis Defence • Teaching Assistantship
4. Make informed choices about their career as a political scientist;	<ul style="list-style-type: none"> • Experiential Learning Placements

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	<ul style="list-style-type: none"> • Optional Professional Development Modules • Supervisory Relationship • Teaching Assistantship
7. Recognize diverse voices and experiences in research, teaching, professional development, and community engagement	<ul style="list-style-type: none"> • Coursework • Teaching Stream Professional Development Modules • Supervisory Relationship
8. Adhere to the highest professional standards of ethics and academic integrity in all aspects of research, teaching, professional development, and community engagement, and cultivate an awareness of how power relationships affect the attainment of those standards.	<ul style="list-style-type: none"> • Academic Integrity Module • Teaching Stream Professional Development Modules • Experiential Learning Stream Professional Development Modules • Thesis & Thesis Defence • Supervisory Relationship • Teaching Assistantship
Teaching Stream	
Demonstrate knowledge of pedagogical theories and skills applicable to political science, and implement them in all aspects of teaching including curriculum design, course delivery, supervision, and mentorship.	<ul style="list-style-type: none"> • Teaching Stream Professional Development Modules • Teaching Assistantship
Experiential Stream	
Use the knowledge and skills developed through course work, research, and professional development milestones in a paid or volunteer work experience, and reflect on how that work experience relates to their own advanced political science research.	<ul style="list-style-type: none"> • Experiential Learning Work Terms • Reflection exercises

1.6 Program Content

The proposed PhD program provides rigorous training in political science while offering flexibility to students and an innovative array of features designed explicitly for both academic and non-academic career paths. On top of the core requirements of the regular program, students will have the option to take the experiential stream (consisting of the co-op option or another EL-based option), or the teaching stream.

As explored in more detail in Section 4, all students will take six graduate courses in their first year. All courses offered by the Department will be ‘graduate only’ (limited to MA and PhD students). These include two ‘core’ courses in one of the program’s major fields, two courses in the student’s second area (which may be another of the three graduate research fields or a custom concentration), a mandatory team-taught methodology course, and an elective.

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Core courses: Core courses are designed to help prepare students for comprehensive field examinations in their major field by instilling the advanced theoretical and empirical foundations of Canadian Politics (PSCI 661 – Canadian Political Institutions, PSCI 662 Canadian Political Process), International Relations (PSCI 611 – International Relations Theory, PSCI 612 – Current Issues in International Relations) or Political Economy (PSCI 690 – Theories of Political Economy, PSCI 691 – Developments in Political Economy).

Research Methods: PSCI 600 will be a team-taught course covering units on quantitative and qualitative methods in political science and epistemological issues in the social sciences. Students will be exposed to instruction from three different faculty members, and will receive a foundational basis for understanding a diverse array of methodological approaches in the discipline.

Elective courses: A suite of electives will be offered each year. These courses will enable students choosing to do their second field as a custom concentration to tailor the content based on coursework. Electives will also help students to fill background gaps for proposed research, provide more detailed understanding of an important area of study, or broaden students' base of advanced understanding. Examples of elective courses that students will have the opportunity to take might include PSCI 624 – Justice and Gender, PSCI 633 – Canadian Public Policy, PSCI 650 – Approaches to the Study of Comparative Politics, PSCI 666 – Rights and Public Policy, and PSCI 680 – Critical Security Studies.

Comprehensive examination: each student will complete a written comprehensive field examination in their first (major) field, followed by a mandatory oral exam. The written exam will be based on coursework as well as a reading list determined by relevant faculty. For students on a standard full-time schedule, this comprehensive exam will normally be written early in the fall semester of the 2nd year of the program. Students will also complete an exam on their second field or concentration, consisting of a review essay broadly addressing the major theoretical debates, methodological hurdles, or substantive problems posed by existing scholarship in the field (students taking a 2nd major field may opt to take the written exam in the format described above).

Professional Development milestones: a cohesive program of research design and professional development milestones will be a feature that distinguishes the proposed program from others in Ontario and elsewhere. A core set of modules/seminars will be mandatory for all students. A certain number of elective modules will also be completed according to the goals and objectives of the student, in order to complete the PhD Professional Development Seminar. Students who opt for the experiential or teaching streams will also do additional professional development modules on top of these requirements, comprising the PhD Experiential Seminar and the PhD Teaching Seminar.

Mandatory modules will include research-oriented half-day seminars on 1) research design and methods, 2) conducting literature reviews, 3) best practices in fieldwork, and 4) conferencing best practices. Two additional mandatory professional development modules will focus on 5) careers in political science and translating skills for a non-academic job market, and 6) communicating research to a broader audience. Additional elective modules are listed in more detail in section 4. Students in the experiential stream will take additional modules in reflective practices in experiential learning,

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and Centre for Career Action (CCA) workshops on preparing resumes and parallel career planning. Students in the teaching stream will complete the Centre for Teaching Excellence (CTE) [Fundamentals of University Teaching Program](#), conduct two guest lectures in political science, and develop a syllabus for a (real or prospective) political science course.

The Department's proposal for these professional development modules has received strong support from the support units it will collaborate with to develop them. The CCA and the Writing and Communications Centre contributed the following statements for this proposal:

"The Centre for Career Action (CCA) provides career development support and resources for PhD students, including career planning related to work in industry, government, academia, alt-ac, and other workplaces. Two full-time career advisors dedicated to serving graduate students offer workshops, drop-ins and individual appointments for career planning, work search strategies, résumés, cover letters, academic CV preparation and interview practice, in addition to delivering programming for the exploration of alt-ac careers such as the Professional Skills Conference and Exploring Diverse Careers in Academia, a job shadow program for PhD students. We also sponsor and use resources such as [Imagine PhD](#) and [CareerHub](#)."

"The Writing and Communication Centre (WCC) is pleased to express our support of the Department of Political Science in its development of a new PhD program, and particularly with its inclusion of professional development components on communicating research to a general or non-academic audience. Producing public scholarship and engaging public audiences are critical skillsets for academics and for researchers working in public and private sectors. The WCC looks forward to collaborating with the Department of Political Science in developing a custom workshop that supports PhD students in becoming flexible communicators who can adapt to a range of contexts, modes and audiences in order to share their work with precision and clarity. In addition to this specific program, the WCC provides a range of services for graduate students, including appointments and various interactive programs on such topics as writing research proposals, planning and writing papers and theses, and academic public speaking."

Thesis Proposal: students will write a thesis proposal situating their research question(s) in the extant literature, outlining their approach, theory, scope, and research methodology, and explaining the original nature of their contribution, along with a timeline and proposed chapter outline. The proposal will be subject to an oral defence before a committee including the student's supervisor and two other faculty members.

Thesis: students will have choice in the format of their thesis. Students may choose a traditional dissertation (ranging from 200 to 350 pages in length), or a 'publication model' consisting of at least three sole-authored (submitted, in press, or published) works, at least one of which is in a traditional, peer-reviewed outlet (other publications might include research reports for think tanks, etc.), and including an original introduction, conclusion and any necessary bridging chapters to reflect a coherent project. In rare cases, and with the approval of the student's supervisor and the Department's Graduate Committee, students may opt for a non-traditional thesis format that meets the standards of an original doctoral-level contribution to knowledge, but in a different form (for

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example, a documentary). The Department is especially cognizant of the potential for alternative approaches to knowledge-generation and dissemination, such as Indigenous approaches to knowledge, as something to be accommodated on a case-by-case basis.

Regardless of format, the thesis will be subject to an oral defence before a committee, including the supervisor(s), two other political science faculty members, an internal-external examiner from another department/program at the University of Waterloo, and an external examiner.

1.7 Mode of Delivery

The proposed PhD program is primarily aimed at full-time students on campus, and we do not anticipate an online component. The program can also be completed part-time, an option that may be attractive to professionals who want to continue to work. Part-time students will have the same requirements for completion as full-time students, over a longer period of time. See sections 1.3, 1.5, and 1.6 above for a description of how the program meets Degree Level Expectations and the core components of delivery.

1.8 Assessment of Teaching and Learning

Students will be evaluated in various ways over the course of the program.

Coursework: Evaluated according to the instructor’s course design, but likely to include formal assessment of papers, presentations, and seminar participation

Comprehensive Examinations: Formal evaluation by committee.

Professional Development: These will be tracked as for milestones required for program completion, but each may have other modes of evaluation built in (particularly in the case of workshops offered by campus partners).

Thesis: The thesis will be evaluated first by the supervisor and the committee, and ultimately in a defence featuring an internal-external examiner and an external examiner.

Below, we provide more detail on how modes of assessment relate to the various program outcomes.

Program Outcome	Mode of Assessment
1. Produce original research of the highest quality by combining a broad knowledge of the concepts, theories, and methods used in the study of political science, and their connections to the empirical world of government, politics, and policy-making, with expert knowledge of their own subject area;	<ul style="list-style-type: none"> • Coursework – various modes of assessment including papers of various lengths, seminar discussion, presentations, etc. • Comprehensive Examinations • Thesis Proposal and Thesis Defence
2. Develop research questions and designs through a practice of epistemological and	<ul style="list-style-type: none"> • Thesis Proposal and Thesis Defence • Mandatory Professional Development Modules – milestones but also includes

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methodological reflection and critical analysis while recognizing the limits of their research;	presentations and written work (see section 4.4)
3. Communicate scholarly knowledge in various forms to various audiences using appropriate writing, speaking, or other communication skills;	<ul style="list-style-type: none"> • Coursework - various modes of assessment including papers of various lengths, seminar discussion, presentations, etc. • Thesis Proposal, Thesis, and Thesis Defence • Teaching Assistantship – formal evaluation by course instructor
4. Make informed choices about their career as a political scientist;	<ul style="list-style-type: none"> • Experiential Learning Placements – evaluation of reflective work or outputs of placement • Optional Professional Development Modules – milestones (see section 4.4) • Supervisory Relationship – ongoing assessment coupled with formal annual progress reporting • Teaching Assistantship – formal evaluation by course instructor
9. Recognize diverse voices and experiences in research, teaching, professional development, and community engagement	<ul style="list-style-type: none"> • Coursework – assessment of citation practices in written and other work in the course of formal course assessments • Teaching Stream Professional Development Modules – evaluation of citation practices in syllabus • Supervisory Relationship – ongoing coaching and evaluation • Experiential Learning Placements – evaluation by employer; evaluation of reflective work or outputs
10. Adhere to the highest professional standards of ethics and academic integrity in all aspects of research, teaching, professional development, and community engagement, and cultivate an awareness of how power relationships affect the attainment of those standards.	<ul style="list-style-type: none"> • Academic Integrity Module • Teaching Stream Professional Development Modules • Experiential Learning Stream Professional Development Modules: evaluation of reflective work and other outputs of placement • Thesis & Thesis Defence • Supervisory Relationship • Teaching Assistantship
Teaching Stream	

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<p>1. Demonstrate knowledge of pedagogical theories and skills applicable to political science, and implement them in all aspects of teaching including curriculum design, course delivery, supervision, and mentorship.</p>	<ul style="list-style-type: none"> • Teaching Stream Professional Development Modules: successful completion of Fundamentals of University Teaching and Certificate of University Teaching • Observation & evaluation of Guest Lectures • Evaluation of syllabus
Experiential Stream	
<p>1. Use the knowledge and skills developed through course work, research, and professional development milestones in a paid or volunteer work experience, and reflect on how that work experience relates to their own advanced political science research.</p>	<ul style="list-style-type: none"> • Evaluation of reflective work • Evaluation of any outputs of the placement (reports, etc. that have been commissioned as part of the placement, and that can be evaluated)

1.9 Fields in a Graduate Program [optional]

The PhD program includes the following as its primary graduate research fields:

- Canadian Politics
- International Relations
- Political Economy

2. HUMAN RESOURCES

Table 1 lists the full-time, regular faculty members that will be involved in course instruction and supervision, 20 FTE faculty members in total (19 appointed to Political Science and one cross-appointed with Economics). The faculty complement is extraordinarily well-balanced in terms of gender (10 men, 10 women) and rank/seniority (six assistant professors, eight associate professors, six full professors). As Table 1 indicates, each of the major fields is well covered by faculty members who have primary or secondary expertise (10 in Canadian Politics, nine in International Relations, and ten in Political Economy).

2.1 Resources for Graduate Programs Only

The Political Science faculty boasts a number of nationally and internationally-renowned scholars of their respective fields. Together, the 20 faculty members listed in **Table 1** have produced 42 authored books, 48 edited books, 397 refereed journal articles, and 379 book chapters.

Tables 2 and 2A list research grant award totals for the past seven years. During this time period the faculty have brought in over \$1.5 million in various awards, mostly from Tri-Council agencies like the Social Sciences and Humanities Research Council and other public sector and non-profit sector funding.

The Department also boasts faculty members who have been awarded various distinctions, including two Trudeau Fellows, two Fulbright scholars, a member of the Royal Society of Canada, a member of the Academy of Social Science of Australia, a Killam Foundation award winner, and three winners of

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various book awards, including the Donner Prize for best book in Canadian public policy, the Donald Smiley Prize for best book in Canadian Politics, and the International Studies Associate ISSS Book Award. Seven faculty members have received Faculty-level awards for outstanding contributions to research, teaching, or service. And 13 faculty members have served on editorial boards for scholarly journals or research centres.

Table 3 outlines faculty graduate supervision experience. Although the Department has not had a PhD program, eight of the faculty members have experience supervising PhD students (mostly through the Global Governance PhD program at the Balsillie School of International Affairs). All faculty members have experience supervising at the MA level. Variance in numbers of students supervised tends to relate to experience/seniority. All but one faculty member currently enjoys full supervisory privileges (the outstanding faculty member is a new hire who has not yet achieved [ADDS](#) status).

Although core courses in the three major fields will be taught by faculty with primary specializations in those fields (see Table 1), the custom concentration option and general design of the proposed program will ensure that all faculty members will contribute to teaching courses and supervising students on a wide range of topics of study.

2.2 List of Faculty by Field

Table 1 lists the faculty members involved in the graduate program and identifies their rank, gender, home unit, supervisory privileges, and field(s) of study.

TABLE 1 Faculty Members Involved in Proposed Program							
Faculty Name	Rank (Professor, Assistant, etc.)	Gender (M/F/U)	Home Unit ¹	Supervisory Privileges ²	Approved Field of Study ³		
					Canadian Politics	International Relations	Political Economy
Boychuk, Gerard	Professor	M	Political Science	Full	X		x
Carter, Angela	Assistant	F	Political Science	Full	x		X
Cattapan, Alana	Assistant	F	Political Science	Master's only	X		
Cooper, Andrew	Professor	M	Political Science	Full		X	x
Drake, Anna	Assistant	F	Political Science	Full	x		
Esselment, Anna	Associate	F	Political Science	Full	X		
Habib, Jasmin	Associate	F	Political Science	Full	X	X	
Helleiner, Eric	Professor	M	Political Science	Full	x	x	X
Henstra, Daniel	Associate	M	Political Science	Full	X		
Huo, Jingjing	Associate	M	Political Science	Full			X
Kitchen, Veronica	Associate	F	Political Science	Full		X	
Lanoszka, Alexander	Assistant	M	Political Science	Full		X	
Macfarlane, Emmett	Associate	M	Political Science	Full	X		
Momani, Bessma	Professor	F	Political Science	Full		X	x
Mufti, Mariam	Assistant	F	Political Science	Full			
Ravenhill, John	Professor	M	Political Science	Full		x	X
Rus, Horatiu	Associate	M	Economics	Full			X
Wang, Hongying	Associate	F	Political Science	Full		X	x
Welch, David	Professor	M	Political Science	Full		X	
Whiteside, Heather	Assistant	F	Political Science	Full	x		X

Notes:

1. This is the home department of the faculty member associated with the program under review.
2. The level of supervisory privileges held by each faculty member, e.g. full, masters only, co-supervision only, etc.
3. The particular fields of study for the program that have been Quality Council approved. If single faculty member is active in more than one approved field of study, a capital X indicates the faculty's primary field of study, and a lower case x represents secondary field(s) of study.

2.3 External Operating Research Funding

Table 2 presents the external research funding by source received by the core faculty for the past seven years. Table 2A presents the external operating funding by field received by the core faculty members combined for the past seven years.

TABLE 2						
Operating Research Funding (\$) by Source and Fiscal Year¹						
Fiscal Year²	Tri-Agency Awards³	Public Sector and Non-Profit Funding⁴	Private Sector Funding⁵	Internal Awards⁶	Equipment Awards⁷	Total
2011/12	\$39,931	\$66,096	\$0	\$15,400	\$0	\$121,427
2012/13	\$53,220	\$89,471	\$0	\$8,000	\$0	\$150,691
2013/14	\$14,610	\$75,769	\$0	\$48,000	\$0	\$138,379
2014/15	\$30,275	\$53,406	\$0	\$16,000	\$0	\$99,681
2015/16	\$178,840	\$96,351	\$0	\$8,000	\$0	\$283,191
2016/17	\$306,481	\$75,000	\$0	\$0	\$0	\$381,481
2017/18	\$236,841	\$95,000	\$0	\$10,000	\$0	\$341,841
Totals	\$860,198	\$551,093	\$0	\$105,400	\$0	\$1,516,691

Notes:

1. Data is reported on the primary investigator only. Table includes research awards for primary investigators included in Table 1.
2. Data is reported on the fiscal year. Waterloo's fiscal year runs from May 1st in one year until April 30th in the subsequent year, and includes three consecutive terms – Spring, Fall, and Winter. Please update the seven year window as appropriate.
3. Excludes equipment grants (e.g. NSERC RTI).
4. Excludes equipment grants and internal awards (e.g. CFI, UW-RIF, UW-SSHRC).
5. Includes funding received from Industry partners.
6. Includes UW-RIF and UW-SSHRC.
7. Includes NSERC-RTI and CFI.

TABLE 2A					
Total External Operating Funding (Combined Over the Seven Most Recent Fiscal Years¹)					
by Primary Field of Study²					
Field³	Tri-Agency Awards⁴	Public Sector and Non-Profit Funding⁵	Private Sector Funding⁶	Equipment Awards⁷	Total
Canadian Politics	\$134,628	\$47,594	\$0	\$0	\$182,222
International Relations	\$319,490	\$416,597	\$0	\$0	\$736,087
Political Economy	\$200,078	\$70,000	\$0	\$0	\$270,078
Unassigned	\$206,002	\$16,901	\$0	\$0	\$222,903
Total	\$860,198	\$551,092	\$0	\$0	\$1,411,290

Notes:

1. Data is reported as the combined funding over the seven most recent fiscal years by approved field of study.
2. Data is reported on the primary investigator only. Table includes research awards for primary investigators included in Table 1.
3. Faculty members' primary field of study is specified in Table 1.
4. Excludes equipment grants (e.g. NSERC RTI).
5. Excludes equipment grants and internal awards (e.g. CFI, UW-RIF, UW-SSHRC).

6. Includes funding received from Industry partners.

7. Includes NSERC-RTI and CFI.

2.4 Graduate Supervision

Table 3 presents the number of completed thesis supervisions for each of the core faculty members over the course of their career, and the number of thesis supervisions currently underway.

TABLE 3 Completed and Current Numbers of Thesis Supervisions by Faculty Member						
Faculty Name and Rank ¹	Total Completed Over Career ²			Current ³		
	Master's	PhD	PDF	Master's	PhD	PDF
Boychuk, Gerard	19	2		3		
Carter, Angela	1				1	
Cattapan, Alana				2		
Cooper, Andrew	62	4	2			
Drake, Anna	8			1		
Esselment, Anna	6			2		
Habib, Jasmin	32			3	3	
Helleiner, Eric	34	7	1	1	3	
Henstra, Daniel	18					
Huo, Jingjing	8			1		
Kitchen, Veronica	29			2	1	
Lanoszka, Alexander	5					
Macfarlane, Emmett	7					1
Momani, Bessma	16	3	4			
Mufti, Mariam	3			2		
Ravenhill, John	30	17			1	
Rus, Horatiu	8	1				
Wang, Hongying	14	18	2			
Welch, David	21	11	3	2	2	
Whiteside, Heather	7			2	2	

Notes:

1. Faculty members and ranks as specified in Table 1.
2. Number of thesis supervisions completed thus far over the faculty member's career.
3. Number of current thesis supervisions underway for each faculty member.

2.5 Commitment of Faculty from Other Graduate Programs/Other Institutions

N/A

2.6 Quality of Faculty

See section 2.1.

3. PHYSICAL AND FINANCIAL RESOURCES

3.1 Library Resources

Level of support

The University of Waterloo Library currently provides a high level of support for the Political Science department's undergraduate and master's programs. The addition of a PhD program, with a focus on fields already taught and researched in the department (Canadian Politics, International Relations, and Political Economy), can be easily covered by the Library's Political Science fund and by other subject funds intersect with these fields. With respect to the proposed experiential and teaching streams, the Library acquires a broad array of literature through its general funds that would support field/co-op work term reports and research projects in these areas as well.

Collection strengths

The Library provides access to full text journals, monographs, government information, and various databases that facilitate research within these fields. Databases particularly relevant to researchers in these fields are: ProQuest Politics (includes Political Science, Worldwide Political Science Abstracts, Public Affairs Information Service, and Policy File), Canadian Business and Current Affairs, Scopus, Web of Science, EconLit, LexisNexis Academic, and HeinOnline. Numeric and geospatial data sets are available through platforms and services including ODESI (Ontario Data Documentation, Extraction Service and Infrastructure), Inter-university Consortium for Political and Social Research, and Scholars GeoPortal.

To complement the experiential/teaching streams, the Library acquires materials of interest to the practitioner undertaking various types of fieldwork.

The University of Waterloo Library partners with other Ontario and Canadian universities to further expand access to resources. Consortial purchases are regularly arranged through our membership in the Ontario Council of University Libraries (OCUL) and the Canadian Research Knowledge Network (CRKN).

Library Services

The Liaison Librarian is available to provide research, teaching and learning support for graduate students and faculty. Instructional support can take the form of modules (for example: screencasts, videos, activities in LEARN), research guides, and classroom sessions. The Liaison Librarian also offers research consultations with individuals and teams to support coursework and research publications. Additional ways that the Library can assist PhD students in this program include information and advice relating to scholarly communication, open access publishing options; copyright; research data management; and bibliometrics and research impact.

More information

The Library would be happy to be meet with the program reviewers to discuss this report and answer their questions.

For additional information about University of Waterloo Library and the support it provides for programs, please visit <https://uwaterloo.ca/library/about/policies-and-guidelines/support-academic-programs>.

Report written by Jane Forgay, Liaison Librarian for Political Science, jdforgay@uwaterloo.ca.

Reviewed by Kathy MacDonald, Department Head, Information Services and Resources, Dana Porter Library, kamacdonald@uwaterloo.ca.

Approved by Victoria Chu, Associate University Librarian, victoria.chu@uwaterloo.ca and Beth Sandore Namachchivaya, University Librarian, bsnamachchivaya@uwaterloo.ca.

3.2 Laboratory Resources

Not applicable.

3.3 Computer Facilities

All students are provided a University of Waterloo email address, and University of Waterloo Identity Access Management account (WatIAM), giving them access to the student information system Quest, and the online learning management tool LEARN. Students will also be able to access the University of Waterloo's wireless network eduroam, which can be used in their graduate office space, in the Department more broadly, and across campus.

PhD and MA students in the Department of Political Science will share access to an OKI C363dn Multifunction Colour Laser Printer (which includes scanning and copying capabilities). Students will be responsible for ink cartridge replacements through their Graduate Student Association funding.

Students in the Faculty of Arts have access to computer lab space managed by the Arts Computing Office, including a 24 hour lab. These labs offer software (including STATA, and SPSS) and other resources that, if applicable, can supplement students' research and coursework needs.

3.4 Space

The Political Science Department is located on the third floor of Hagey Hall. There are 18 faculty offices, each of about 133 sq. ft. (Professor Horatiu Rus has an office in the Department of Economics). There is also an office for the Department Chair, of approximately 266 sq. ft. The department currently houses four additional offices for sessional instructors, visiting professors, postdoctoral fellows, and contract faculty, and three offices for each of its staff members.

The Department has a common room (HH 341 – approx. 400 sq. ft.) used for meetings, speaking events and as an undergraduate study space, and the graduate students have their own lounge space (HH 346 – approx. 400 sq. ft.). HH 346 is equipped with 15 carrel desks, a kitchenette (sink, coffee maker, microwave), a smart TV, and a printer.

A couple of offices within the departmental space were recently re-allocated to other units by the Faculty of Arts. Ideally, the Department will be able to offer PhD students their own office space, at four to five students per office, consistent with other Faculty of Arts departments in Hagey Hall (for example, the Department of Philosophy). Two of the existing offices may be converted for this purpose, but as the new PhD program grows, more space will be necessary. Shared office and common space for graduate students currently totals approximately 1,066 sq. ft.

3.5 Financial Support

Full-time PhD students in good academic standing in year 1-4 of the program would be guaranteed the [Faculty of Arts minimum funding rates](#). Currently, for 2019, this is \$100,000 over four years (\$25,000/year, \$8,333/term).

** see co-op report in appendix

External funding:

PhD students in the Department of Political Science would be eligible, and encouraged, to apply for external funding, including but not limited to the following awards/scholarships:

- Social Sciences and Humanities Research Council
 - Joseph-Armand Bombardier Canada Graduate Scholarships Doctoral (\$35,000 per year for up to three years)
 - SSHRC Doctoral Fellowship (\$20,000 per year for up to four years)
- Ontario Graduate Scholarship (\$15,000 for one year)
- Trudeau Foundation Scholarship (\$60,000 per year for a maximum of three years)
- Vanier Canada Graduate Scholarship (\$50,000 per year for up to three years)

The University of Waterloo also provides additional funding for recipients of major federally and provincially funded competition-based scholarships through the [President's Graduate Scholarship \(PGS\)](#). The PGS is awarded each year a student holds one of the eligible graduate scholarships, and is valued at \$10,000/year. Students receiving a PGS for the first year of their doctoral program are eligible to receive \$15,000.

Students in good academic standing will also be eligible to apply for funding opportunities through Graduate Studies Postdoctoral Affairs, including the Graduate Studies Research Travel Assistantship for attending and presenting research at a professional conference, and the International Student Experience Award for students taking part in an international co-op work term with a limited salary, international volunteer work, or overseas academic exchanges.

4. CURRICULUM

4.1 The Intellectual Development and the Educational Experience of the Student

Professional and Intellectual Development

The goal of the program is to produce graduates who are intellectual leaders in their fields, no matter what kind of career students choose to pursue after graduation. As such, we have integrated directly into the curriculum modes of intellectual development that many other programs leave to the discretion of students. The program is structured so that students can choose their own pathways according to their preferences, needs, and goals. Further, we are conscious of the immense pressures on graduate students, so we have built the program in order to accommodate part-time students,

and to incorporate modules on practical skills as well as mental health and wellness that may help students to manage various stressors.

There are a number of mandatory professional development modules (comprising the PhD Professional Development Seminar milestone) that we believe are integral to any student's success in the program and as a graduate, and that contribute directly to achieving degree outcomes. These include workshops on research design, literature reviews, best practices for conferences and fieldwork, communicating research to non-academic audiences, and career planning and translating skills for a non-academic job market. Beyond that, students will be required to complete additional professional development modules from a set of electives (see section 4.4) that will support their intellectual development and career goals. Students may choose to complete a set of optional module as part of the regular stream of the program, or complete specific sets of optional modules in order to complete the teaching (PhD Teaching Seminar) or experiential (PhD Experiential Seminar) stream milestones. The optional modules are milestones in the degree in order to ensure that students take advantage of these co-curricular opportunities that are essential to meeting the degree outcomes.

Experiential Learning

For their milestones, Teaching Stream students complete the Fundamentals of University Teaching Program offered by the University of Waterloo's Centre for Teaching Excellence, and will be given the opportunity to deliver guest lectures in the Political Science department, as well to develop a syllabus for a hypothetical course. Where the opportunity exists, students may also have the opportunity to teach as sessional instructors in the department.

Students in the Experiential Stream will complete 8 months (non-co-op experiential option) or 12 months (co-op option) of work experience as part of their degrees. This will give them valuable connections, experience, and potential job opportunities over the course of their degree, while also potentially enhancing their research through related job experience. Further details on this option are below in section 4.2. Co-curricular modules that focus on career-related skills will prepare students for this experience, and in any given year, we can identify several appropriate workshops from Centre for Career Action and MITACS that students can take to fulfill their requirements. Examples of these are workshops on parallel career planning, networking, or project management.

Students in the regular program may receive credit for completing modules that are part of the Teaching or Experiential Streams, but also for completing workshops offered by Counselling Services, the Writing Centre, or developed in-house by the Political Science Department. Examples of these are workshops on public speaking and publication, reducing anxiety, and writing grant proposals (see section 4.4).

Other Factors Related to Educational Experience

The Political Science Department participates in four existing graduate programs (MA in Political Science, Master of Public Service, MA in Global Governance, PhD in Global Governance), and so we are well placed to provide an excellent graduate experience. Students in our program may easily take courses in the Global Governance and Public Service programs, providing further opportunities for them to tailor their education according to their needs. Our MA students run a research conference

and a journal each year, and we anticipate that PhD students would participate in the planning and execution of these as well. The Faculty of Arts provides opportunities for graduate students to apply for conference funding through various initiatives.

At the Department level, we provide a comprehensive orientation to the program, and new students are required to participate in orientations provided by the Faculty of Arts and the University, and to complete the module on academic integrity. Faculty members also have an excellent track record of winning competitive grants, and are often able to hire students as researchers on their projects.

4.2 Program Regulations

Admissions

As part of the admission requirements for the program, successful applicants must hold a master's degree in Political Science, or a related discipline, with a minimum average of 80% (A-) or equivalent. Please see section 1.4 for more details on admission requirements.

Course requirements

In order to be considered in good academic standing, students must obtain a minimum average of 80% in the set of courses which they present in fulfilment of the course requirements for the PhD in Political Science. Please see sections 1.6 and 4.4 for more details on course requirements.

Comprehensive examinations

As outlined in section 1.6, students will complete a written comprehensive field examination in their first (major) field, followed by a mandatory oral exam before a committee of three faculty members. The written exam will be based on coursework as well as a reading list determined by relevant faculty. For students on a standard full-time schedule, this comprehensive exam will normally be written early in the fall semester of the 2nd year of the program. Students will also complete an exam on their second field (or custom concentration), consisting of a review essay broadly addressing the major theoretical debates, methodological hurdles, or substantive problems posed by existing scholarship in the field. The review essay will be assessed by two faculty members.

Professional development requirements

Required professional development milestones are credit/no credit based on attendance and participation in workshops and completion of any necessary work, tests or assignments associated with them. Students will be required to provide written confirmation for completion of any milestones in conjunction with campus partners (i.e. those not offered in-house by the Department). Please see sections 1.6 and 4.4 for more details on professional development milestones.

Thesis Proposal Defence

As outlined in section 1.6, students will write a thesis proposal situating their research question(s) in the extant literature, outlining their approach, theory, scope, and research methodology, and explaining the original nature of their contribution, along with a timeline and proposed chapter outline. The proposal will be subject to an oral defence before a committee including the student's supervisor and two other faculty members.

Thesis Examinations

The structure of the PhD program's thesis examination process is well within the University's guidelines for thesis examination regulations: <https://uwaterloo.ca/graduate-studies-postdoctoral-affairs/current-students/phd-thesis-examination-regulations> - please see section 1.6 for more details.

Co-op

Students in the experiential stream have the option of completing their PhD as a co-op program where students combine their academic studies with practical work experience in positions related to their professional interests. Co-op will be available to students in all PhD fields (Canadian Politics, International Relations, Political Economy)). Students in the co-op program will complete 12 total months of work experience. Students would not be eligible to do a co-op term until after the completion of coursework and comprehensive examinations.

Drawing on existing strengths at the University of Waterloo through services provided by Co-operative Education & Career Action (CECA), students will be able to complete three co-op work terms (12 months) as part of their PhD. [Note: the requirement for 12 months of placement in co-op reflects, in part, the fact that students will get formal recognition of the co-op option on their degree, something not available for other experiential options]. The Department of Political Science has a proven track record of co-op work terms at the undergraduate and MA level.

Co-op will allow PhD students to apply their knowledge gained through academic course work and professional development modules to real-world scenarios, workplaces, and problems. Employment opportunities in public, private, and non-profit organizations that range from research and planning positions to public relations and organizational functions such as staffing, training, and supervisory activities are anticipated.

The purpose and benefits of co-op are as follows.

Students will:

- Combine academic study with paid work experience
- Refine their application package and interview skills
- Build a professional network

The procedures for evaluation will follow work term report guidelines already in place at the MA level, requiring a 15-20 page report investigating an aspect of the co-op experience from an academic perspective.

Co-operative Education has produced a feasibility report (see Appendix) noting the potential administrative and resource challenges as it prepares to expand graduate-level co-op opportunities and launch what would be the first centrally-administered co-op option at the PhD level. We are happy to note that the feasibility report indicates that Co-op is eager to work with the department to develop the program, and that the office is confident it can deliver high quality work terms and the resources, services, and supports to facilitate them.

Mitacs and other placements

Students in the experiential stream also have the option of undertaking an internship through Mitacs or finding an alternative placement. Mitacs' internships differ from co-op experiences in that Mitacs internships are designed to support collaborative research projects (i.e., research projects that are of interest to for-profit or eligible not-for-profit organizations and of benefit to the researcher, and mutually agreed upon by the two parties). Students will be eligible to complete internships for periods ranging from four months to one year.

As with co-op, the placements will allow PhD students to apply their knowledge gained through academic course work and professional development modules to real-world scenarios, workplaces, and problems. Employment opportunities in private, and non-profit organizations range from research and planning positions to public relations and organizational functions such as staffing, training, and supervisory activities.

As with co-op, students will be expected to complete a work term report following existing guidelines, requiring a 15-20 page report investigating an aspect of the collaborative research experience from an academic perspective.

4.3 Part-time Studies

The program will be offered full-time and part-time, students will have the option to select their enrolment status at the time of application.

Admitted full-time students in the program may switch to part-time status at the approval and discretion of the Graduate Officer. Students switching to part-time status will no longer be eligible for departmental funding.

4.4 Curriculum

Core course descriptions

The required Methods course and core courses for the three Major Fields are indicated below. These courses are new and will be developed to coincide with the start of the new program. Elective courses are pre-existing and included in the Graduate Calendar.

PSCI 600 – Political Science Methods: This is a team-taught course examining different approaches to the study of political science, with units focusing on quantitative methods, qualitative methods, and an exploration of the epistemology of social science.

PSCI 611: International Relations Theory: This course examines the major theories of International Relations (IR) and the current state of the field. It addresses the major IR theories, how they inform advanced research, and how they relate to the conduct of world politics.

PSCI 612: Current Issues in International Relations: This course examines recent trends in world politics, their origins, and their policy implications.

PSCI 661 - Canadian Political Institutions: This course examines the structure and operation of central institutions in government, including dominant theories and approaches to their study. Topics may include the constitution, Parliament, the executive, courts, federalism and intergovernmental relations, political parties, provincial and municipal governance, and the bureaucracy.

PSCI 662 - Canadian Political Process: This course examines the political process and societal cleavages in Canada, with a focus on new directions and debates in research. Topics may include elections and voting behaviour, social policy, gender, regionalism and nationalism, Indigenous politics, political culture, interest groups and social movements, and rights.

PSCI 690: Theories of Political Economy: An advanced examination of theoretical approaches to the study of political economy. The course explores both historical and contemporary approaches and how they inform political economy research.

PSCI 691: Developments in Political Economy: A survey of recent developments in the field of political economy that combines local, national, comparative, and international perspectives on states and markets, politics and business, wealth and power.

Professional Development Milestones

As noted in section 1.6 (Program Content) all students will be required to complete six mandatory modules in professional development:

- 1) Research design and methods (half-day seminar, in the department, including peer presentations, normally completed in the Fall of Year 2)
- 2) Conducting literature reviews (presentation in co-operation with the Writing Centre, normally completed in the Fall of Year 2)
- 3) Planning and best practices in fieldwork (half-day seminar, in the department, normally completed in the Winter of Year 2)
- 4) Conferencing best practices (half-day seminar, in the department, including writing abstracts, preparing conference presentations, being a good discussant. Normally completed after completion of dissertation proposal defence)
- 5) Careers in political science and translating skills for a non-academic job market (half-day seminar, in the department, normally completed after completion of dissertation proposal defence)
- 6) Communicating research to a broader audience (half-day seminar, in the department, normally completed after completion of dissertation proposal defence)

Students in the regular program will complete 3 additional elective modules from the following list in order to complete the **PhD Professional Development Seminar** milestone:

- Practice job talk / job interview (offered by the department)
- Workshops or courses providing additional training in social science methods (with approval by the associate chair, graduate studies)
- Completion of CTE workshop aimed at graduate students (with approval by the associate chair, graduate studies)
- Completion of a relevant MITACS Edge workshop/course (with approval by the associate chair, graduate studies)

- Completion of a relevant Writing and Communications Centre workshop (with approval by the associate chair, graduate studies)
- Completion of a relevant Centre for Career Action workshop (with approval by the associate chair, graduate studies)
- Completion of a Counselling Services workshop on mindfulness, cognitive therapy, or practical skills to reduce anxiety
- Completion of any course or workshop relevant to professional development offered by a campus partner (with approval by the associate chair, graduate studies)

Students in the experiential stream will complete the **PhD Experiential Seminar** milestone, composed of the following modules:

- 1) Reflective practices in experiential learning (half-day seminar, in the department, to be completed prior to the co-op term or internship/placement)
- 2) Writing resumes (workshop offered by the Career Centre or in the department, to be completed prior to the co-op term or internship/placement)
- 3) Workshop on parallel career planning (offered by the Career Centre or in the department)
- 4) One or more modules offered by MITACS or other campus partners, such as those featuring networking skills, foundations of project management, writing strategic business reports, or any seminar or workshop with the approval of the associate chair, graduate studies.

Students in the teaching stream will complete the **PhD Teaching Seminar** milestone, composed of the following modules:

- 1) Complete the Centre for Teaching Excellence Fundamentals of University Teaching Program.
- 2) 2 Guest Lectures in Political [students will receive automatic credit if they have the opportunity to teach their own course].
- 3) Develop a syllabus for a (real or prospective) political science course.

Comprehensive Examination Requirements

PhD Comprehensive Examination

Students are required to meet the University-level PhD Comprehensive Examination minimum requirements outlined in the “[Minimum requirements for the PhD degree](#)” section of the Graduate Studies Academic Calendar (GSAC), with certain noted exceptions that are specific to the Faculty of Arts Comprehensive Examination minimum requirements:

- Comprehensive examination purpose: Consistent with University-level minimum requirements.
- Timing: Consistent with University-level minimum requirements.
- Committee: Consistent with University-level minimum requirements with the exception that in the Faculty of Arts, the Graduate Chair can approve the committee for comprehensive examinations.
- Who Chairs an examination: Consistent with University-level minimum requirements
- Format / Content: Consistent with University-level minimum requirements.
- Academic integrity: Consistent with University-level minimum requirements.

4.5 Collateral and Supporting Departments

N/A

4.6 Organizational Structure

The PhD program in Political Science will be housed within the Faculty of Arts as part of the Department of Political Science. The program will be overseen by Associate Chair, Graduate Studies, in the Department of Political Science, with administrative and advising assistance from the Graduate Program Coordinator. Admission and program decisions will be made in consultation with the Graduate Committee (the faculty composition of the Graduate Committee is reviewed and assigned yearly).

5. PROJECTED ENROLMENT

The proposed start date for the program is Fall 2021. It is anticipated to start with approximately 4 full-time domestic students and admit 4 full-time domestic students per year for the first 7 years.

Table 4 shows the projected student intake and total enrolment in the proposed program over the next seven academic years.

Table 4

Projected Student Intake and Enrolment				
Fiscal Year	FULL-TIME			
	Year One Intake		Total Fiscal Year Enrolment	
	Domestic	International	Domestic	International
2021/22	4	--	7.85	--
2022/23	4	--	18.66	--
2023/24	4	--	28.83	--
2024/25	4	--	37.84	--
2025/26	4	--	40.96	--
2026/27	4	--	41.01	--
2027/28	4	--	41.01	--

Notes:

Enrolment transitions estimated based on Arts PhD transitions; assuming all domestic students, all full-time

6. FINANCIAL PLAN

A financial viability analysis (FVA) investigating the financial parameters and assumptions of this proposed program was constructed by Institutional Analysis and Planning (IAP) and discussed in detail with the Faculty of Arts. IAP has not identified significant financial challenges to this proposal moving forward with the proposed enrolment, tuition rates, and costs as outlined in the FVA. The Faculty of Arts has acknowledged that this program will require additional financial resources in excess of what is generated by the program to operate, and that these will be the responsibility of the Faculty of Arts. The financial viability analysis was approved by the Provost on April 17th, 2020.

PHD IN POLITICAL SCIENCE CO-OPERATIVE PROGRAM

Co-operative Education Feasibility Report

Prepared by:

Rachel Jenson, Faculty Relations Manager, CO-operative Education

Contributions by:

Beth McLay, Market Research Manager, CO-operative Education

Executive Summary

The proposed Political Science PhD program is being developed with the inclusion of experiential learning elements through both an experiential learning option and a teaching option, in an effort to adequately prepare students for future careers in both traditional academic and educational roles, as well as across various industries. The Co-operative plan will be optional to fulltime doctoral students and administered by the Co-operative Education (CE) department.

The Department of Political Science has a strong relationship with CE and currently has co-op plans available at both the undergraduate and graduate level. Political Science graduate students albeit small in number, obtain high levels employment through the employment process or jobs arranged on their own. Analysis of recent co-op work term records suggest that there are existing employers who may have work opportunities for PhD students however, these are primarily four-month work terms.

Although the number of students expected to pursue the co-op option is small, CE cautions that this will be the first PhD co-op plan centrally supported at UWaterloo. Processes, student support, messaging, and job development activities are currently primarily geared for an undergraduate student population and a standard four-month work term, creating a potential gap in the type of employment opportunities that will be more relevant and suitable for doctoral students. Student expectations will need to be managed with respect to the level of competition they may face in the employment process, particularly if they have limited work experience. CE

has launched an initiative to assess and scope a work-integrated learning framework along with the supports and resources suitable for graduate students. Until that work is completed and properly funded, new Master's and PhD Co-op plans will operate within current CE processes and policies.

CE is eager to work with the Political Science department to implement a PhD-level co-op program. With additional resources, we are confident we will be able to provide Political Science doctoral students with high quality co-op work terms and the resources, services, and supports that are hallmarks of Waterloo's co-op programs. The following items will need to be developed with the Political Science department and CE upon program approval:

1. Articulation of a co-op requirement framework for the Political Science PhD program in the Academic Calendar and student handbooks (as appropriate) that includes details such as admission to a co-op program and relevant deadlines, sequence and length of work term(s), mid-term evaluation and site visit, employer evaluation, work report, full-time registration status, co-op fee, granting co-op credit, and other co-op guidelines, policy, and process as required.
2. Work term details. The length and composition of the work term will require clarification and in our view should be driven by the pedagogy of work-integrated learning and the program. Completing two or three work terms back-to-back may create restrictions in the job search process (e.g., campus interviews) and operationally, a 12-month work term will require process modification.
3. Development of resources and supports for students including preparation for the application process and job search support/resources, communications appropriate for graduate students, admission to the co-op plan (including a co-op plan code), recruitment term support requirements (on- or off-campus), work-term support staff training, and return to campus. Both the Centre for Career Action and WatPD will be involved in this step, along with the department. Additional funding resources may be required from the Political Science department to cover shortfall not covered by the existing fee structure.
4. Advise CE of any future changes to curriculum, program enrollment, and/or ratio of international students participating in the program. In the event of an increase in enrollment, Political Science will assist CE with any business development necessary to ensure adequate employment opportunities for the size of the program.

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Proposed Program

New Co-op Program: PhD in Political Science, Co-op

Faculty/Department Sponsor: Heather Whiteside and Emmett Macfarlane, Department of Political Science

Co-operative Education Representative: Rachel Jenson, Faculty Relations Manager

Anticipated Effective Date: Fall 2020

1.0 Proposal Overview

1.1 Proposal objective and rationale

The Department of Political Science has proposed a new PhD program with an effective date of Fall 2020, with the first work term sequence starting in Winter 2022. In an effort to provide experiential learning opportunities for their students, the program is seeking to include a co-op option, as part of their experiential education stream. Additional options also include Mitacs, individual experiential learning terms, and a teaching stream, with the intention of preparing students for future work in academia or industry.

The proposed Co-op plan would have PhD candidates participating in the Co-operative Education (CE) employment process using the WaterlooWorks system. Co-op is designed to mimic real-world employment practices, and as such can be highly competitive and resource intensive for students during that particular time. Work experiences are not guaranteed placements, meaning students are accountable for engaging in co-op preparation and recruitment activities in order to secure employment. Students drive their experiential learning by applying to job postings that are of interest to them, and align with their career goals.

The proposed PhD in Political Science will include three areas of study for students to choose: Canadian politics, international relations and political economy, and all will have the option of co-op. CE and the Department of Political Science expect overlap with existing co-op programs, particularly other Master of Arts co-op plans such as Public Service, Economics and Political Science.

1.2 Context/competition

The University of Waterloo currently has 120 Undergraduate co-op programs and approximately 10 Master's co-op programs that operate under the accountability of Co-operative and Experiential Education (CEE). Political Science would be the first centrally supported Co-op plan at the doctorate level.

The University of Waterloo established an alternating work-study framework for undergraduate co-op programs with expectation that students would progress throughout their studies continuously building upon their knowledge and skills to be increasingly more competent in their area of study and impactful to their employers in the workplace. Master's Co-op plans are structured differently, with one or two work terms held consecutively due to the shorter program lengths (typically two or three academic terms). Graduate co-op programs have been created to fit-in with the undergraduate co-op model, and as such, there is a lack of differentiation between the two groups and how they are supported in co-op.

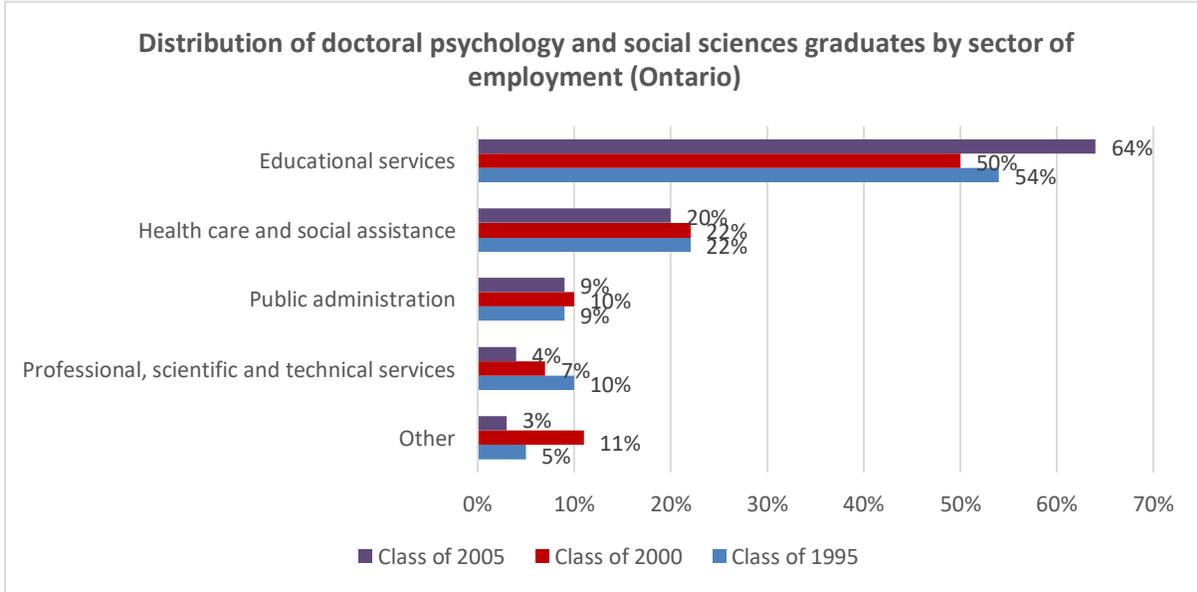
Across campus, there is strong desire in growing enrollment and strengthening the co-op programs that exist at the graduate level. At the same time, there are concerns within Co-operative and Experiential Education (CEE) that gaps exist in our structure and support model, which need to be addressed holistically in order to create stronger and more sustainable graduate co-op programs.

1.3 Societal goals/employability expectations

An analysis of Labour Force Survey and National Graduates Survey data indicates that the employment rate for graduates of above bachelor's degrees (graduate programs) has remained fairly stable at above 86% and that over a third of doctoral graduates in the field of study that includes Political Science (Psychology and Social Sciences) are currently being employed outside of academia.

The Ontario job market forecast for the employment sectors where these graduates are employed indicates only slight growth over the next four years, largely through job attrition. Coupled with the number of Canadian universities that currently offer PhD in Political Science programs, and the relatively few external job postings for PhD

education level jobs in social sciences, graduates may encounter some initial challenges finding relevant work in Ontario. Job experience, through the co-op stream, may provide a competitive advantage for graduates of the PhD in Political Science program at UWaterloo.



Source: Profile and Labour Market Outcomes of Doctoral Graduates from Ontario Universities, Statistics Canada 2012 (Catalogue no.81-595-M No. 098)

The employment outlook for the main sectors of employment for graduates with a doctorate degree in Psychology and Social Sciences in Ontario indicates slight employment growth rates between 4% and 10% over the next four years. Job openings in these sectors are expected to come predominately from replacement (retirement, death and emigration) jobs.

See Appendix A for the forecasted employment outlook for three areas of potential graduate employment: University professors and lecturers, Health care and social assistance - Government managers and Public Administration - Government managers.

2.0 Proposal Data and Logistics

2.1 Enrollment and admission

The PhD in Political Science Co-op plan is expected to attract a small number of students annually, likely only one to two students per cohort year. Students will apply for entry into co-op following the completion of year-one, by the Fall term of second year. Composition of students in the program will primarily be Canadian students.

2.2 Co-op sequence

Students pursuing the co-op option would begin work in year-two of the program, following the completion of six required courses, field exams and professional development modules. During the fall of second year, co-op students would participate in the co-op employment process with access to co-op job postings in WaterlooWorks. Only students pursuing their studies full-time will be eligible for the co-op option.

The co-op work experience will be 12 months in length, and students may choose to work with a single employer for the duration of their work term, or may choose/become matched with four or eight month work terms. Political Science Co-op students must complete 12 months of work in order to graduate with the co-op designation.

Proposed Co-op Internship Study-Work Sequence:

Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter
Study	Study	Study	Study	Work	Work	Work	Study	Study	Study	Study

Following the work experience(s), students will spend the remainder of their doctorate program completing professional development modules, fieldwork for their dissertations and completion of their capstone research projects.

CE currently does not have a 12-month work term option, and as such, jobs are developed and advertised for only four or eight month periods. Political Science students matched with a four or eight-month job may extend their work term length, provided the

employer is willing to accommodate a longer term student, or will need to participate in WaterlooWorks recruitment activities a second or even a third time to complete the 12-month work requirement. Students will receive CE off-campus support as required, allowing full participation in the co-op employment process while working elsewhere.

Additionally, jobs posted in WaterlooWorks may or may not be applicable for graduate students. CE suggests that Political Science and/or a graduate Career Advisor within the Centre for Career Action meet with co-op students individually to evaluate job postings before they apply to jobs in WaterlooWorks. This time-sensitive activity during open application periods will maximize the opportunity for connection to curriculum and students' longer-term career goals.

Co-op students also have the option of arranging their own co-op employment for co-op credit, which may be a preferred route for doctoral students. At the graduate level, and with shorter durations in a workplace setting as part of the degree, the importance of job alignment with the program and students' career goals is greater. Therefore, CE will evaluate job opportunities for their validity and basic co-op requirements, and will collaborate with Political Science for assessment of the job quality and relevance to the program for students at the doctoral level. This will require a creative approach to job approvals, which is not the case for other programs, but is intended to ensure students' connection between their area of study/research and the workplace.

At the graduate level the co-op fee is assessed during the work term, and only once the student secures employment for that particular term. Political Science PhD Co-op students will be required to pay three co-op fees as determined by the co-op fee assessment schedule.

The proposed work-study sequence will comply with Co-operative Education and Work-Integrated Learning Canada (CEWIL) accreditation standards as a Co-op Internship, which states the ratio of work terms to academic terms is 30%, so co-op programs with eight (8) academic terms require three (3) work terms.

2.3 Current employment data for students in a similar program/plan

Internal Competition

It is expected that Political Science co-op students will find employment from existing co-op employers for similar programs and that no job development will be required. PhD students will compete for jobs alongside Master's and Undergraduate students. In fact, third, fourth and/or fifth work term undergraduate students may be as equally or even more employable with employers depending on their needs and the amount of relevant experience they bring.

An analysis of existing UWaterloo Arts graduate student co-op placements, particularly from the Master of Public Service and Master of Arts in Political Science programs provides some insight into the potential co-op job market for the PhD in Political Science co-op program. See Appendix B for a listing of job titles and Appendix C for a listing of employer organizations for MA Political Science and MA Public Service students over the past three years.

A total of 463 graduate students from the Faculty of Arts were scheduled for co-op over the nine terms in 2016 to 2018. Just under 70% (311) of all these students were from the Master of Public Service program. The Master of Arts in Political Science program had a small, but growing number of students scheduled for co-op work terms.

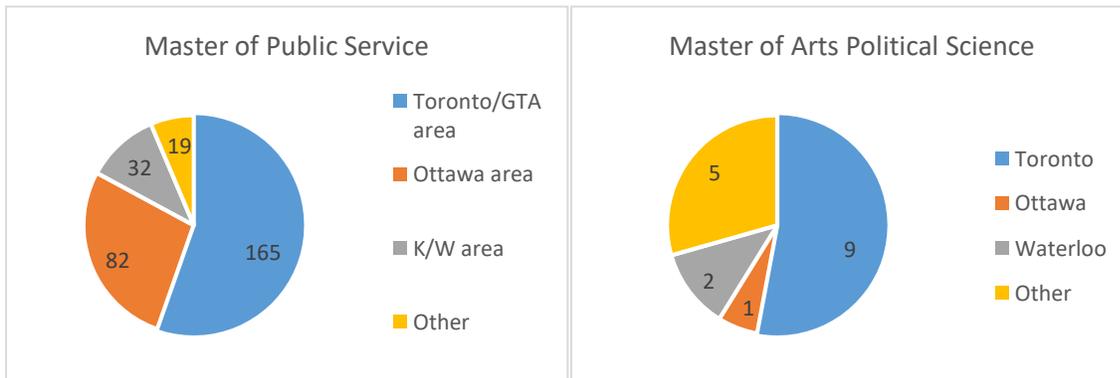
Number of Arts Graduate Students Scheduled for Co-op Work Terms by Program 2016-2018:

	W16	S16	F16	W17	S17	F17	W18	S18	F18	Grand Total
Master of Public Service	2	48	48	1	53	53	0	53	53	311
Master of Arts Political Science	0	5	3	0	0	0	2	9	9	28
Master of Arts English	0	8	8	0	1	1	0	7	7	32
Master of Arts Economics	1	12	12	1	14	14	0	15	14	83
Master of Arts Sociology	0	1	1	0	1	1	1	3	3	9
Total	3	74	72	2	69	68	2	87	86	463

CE analysis of current co-op employers of Arts graduate students indicates that there are co-op employers who may be relevant for PhD in Political Science students. However, it is important to note that co-op positions at these employers have not been developed specifically for the doctorate level and therefore, student expectations for the type of work and level of responsibility may have to be managed, especially if the student has limited previous job experience.

Co-op jobs for Master of Public Service and Master of Arts in Political Science are predominately located in the GTA and Ottawa areas indicating that PhD Political Science students will likely need to relocate outside of the Kitchener/Waterloo area for their co-op work term.

Number of co-op hires by location for Master of Public Service and Master of Arts in Political Science 2016-2018:



The employment rate for Master of Arts in Political Science co-op students for the nine work terms in 2016 to 2018 is 100%. The Master of Public Service co-op employment rate for the same period is a strong 98.7%. The department of Political Science has been actively involved in the job search efforts of their Master's students, including utilizing their own professional networks to connect students to co-op opportunities. It is important to note the only graduate program that is mandatory co-op is Master of Public Service. Students from all other programs may elect to drop co-op if they are unable to

secure a job for a particular work term, thus inflating the employment rates as those students are not reflected in the data.

Total Arts Graduate Students Employment Rates by Program 2016-2018:

	W16	S16	F16	W17	S17	F17	W18	S18	F18	Total
Master Public Service	100.0%	95.8%	100.0%	100.0%	100.0%	100.0%	n/a	96.2%	100.0%	98.7%
Master of Arts Political Science	n/a	100.0%	100.0%	n/a	n/a	n/a	100.0%	100.0%	100.0%	100.0%
Master of Arts English	n/a	100.0%	100.0%	n/a	100.0%	100.0%	n/a	100.0%	100.0%	100.0%
Master of Arts Economics	100.0%	91.7%	100.0%	100.0%	100.0%	100.0%	n/a	100.0%	100.0%	98.8%
Master of Arts Sociology	n/a	100.0%	100.0%	n/a	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total	100.0%	95.9%	100.0%	100.0%	100.0%	100.0%	100.0%	97.7%	100.0%	98.9%

External Competition

University of Victoria is the only CEWIL accredited university in Canada that offers co-op for PhD in Political Science program. It is a three-year degree with three 16-week work terms. Several Canadian universities offer doctorate degrees in Political Science:

- | | |
|-----------------------|--------------------------------|
| Carleton University | Concordia University |
| McMaster University | Dalhousie University |
| Queen's University | McGill University |
| University of Guelph | Simon Fraser University |
| University of Ottawa | University of Alberta |
| University of Toronto | University of British Columbia |
| Western University | University of Calgary |
| York University | University of Montreal |
| | University of Victoria |

In recognition that many PhD students will be pursuing careers outside of academia, and the intention of co-op to adequately prepare individuals for work in various industries, an environmental scan of current employment opportunities for graduates was

undertaken. See Appendix D for list of recent job postings for applicable social sciences/political science positions that require a graduate degree.

3.0 Timelines/Resources

Due to the proposed enrollment in Political Science Co-op (one to two students annually), it is not feasible for CE to do any targeted job development for this program. CE will absorb the small number of students into existing support, operating processes, job development and work term check-ins that already exist at the undergraduate level.

Collaborative work needs to be done with CCA and the department to build stronger alignment of co-op preparations resources and messaging. While co-op preparation resources and one-to-one interactions are offered by CCA, students must individually seek them out; as such, a more systematic approach is required to ensure high quality support for graduate students.

Further discussions with the Department of Political Science and CE will be required over the next year to further clarify aspects of a Political Science Co-op degree and address conditions previously stated.

4.0 Recommendation

- Supportable as proposed
- Supportable with conditions
- Not supportable

5.0 Endorsements

Emmett Macfarlane, Associate Chair, Graduate Studies,
Department of Political Science

Date

Anna Esselment, Chair,
Department of Political Science

Date

Robert Park, Associate Dean Co-op and Planning,
Faculty of Arts

Date

Rachel Jenson, Faculty Relations Manager,
Co-operative Education

Date

Richard Wikkerink, Director, Student and Faculty Relations,
Co-operative Education

Date

Ross Johnson, Executive Director,
Co-operative Education

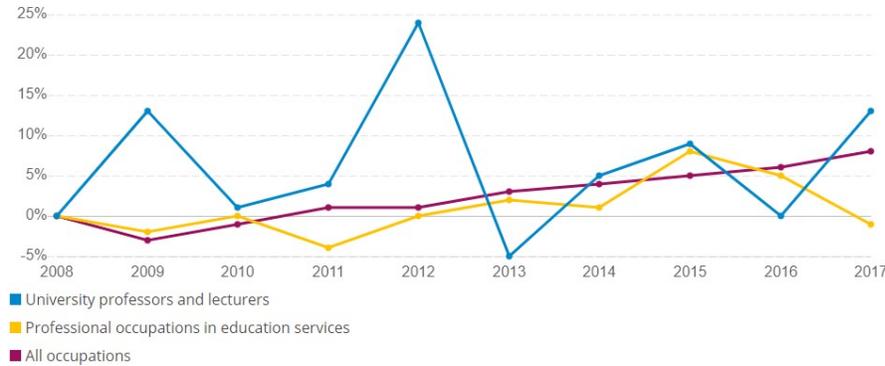
Date

Appendix A

Educational Services - University professors and lecturers, NOC 4011

Job growth

Projected change in employment levels from 2017 - 2021: 9.1% - 10%



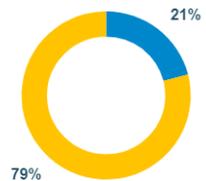
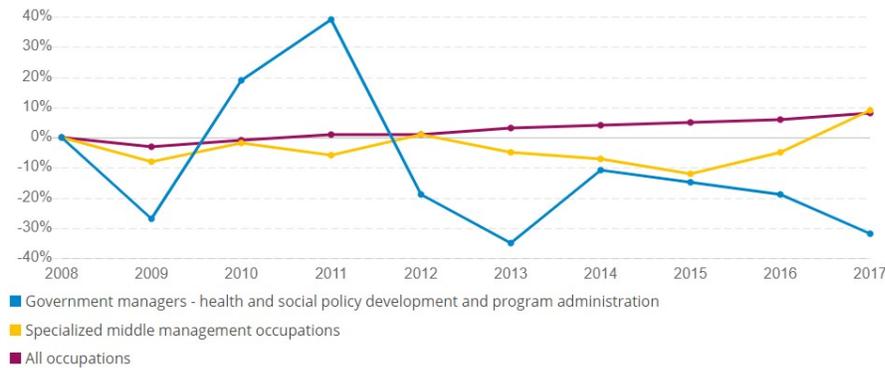
University professors and lecturers

■ New jobs (2017-2021)
■ Replacement jobs (2017-2021)

Health care and social assistance – Government managers – health and social policy development and program administration, NOC 0411

Job growth

Projected change in employment levels from 2017 - 2021: 5.1% - 6%

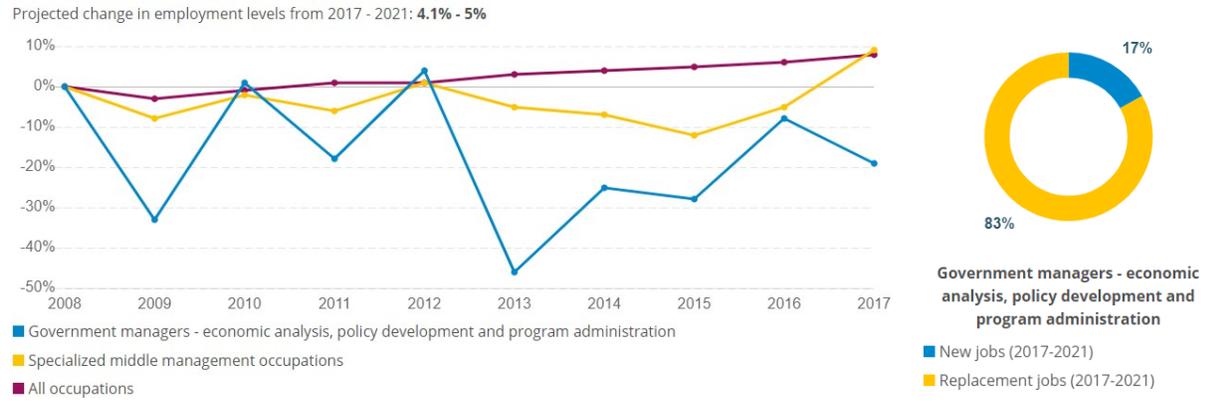


Government managers - health and social policy development and program administration

■ New jobs (2017-2021)
■ Replacement jobs (2017-2021)

Public Administration - Government managers - economic analysis, policy development and program administration, NOC 0412

Job growth



Source: Ontario Labour Market Reports using Statistics Canada data <https://www.ontario.ca/page/labour-market>

Appendix B

Top Co-op Job Titles and Number of Jobs for Master of Public Service and Master of Arts in Political Science 2016-2018:

Co-op Job Titles and # of Positions			
Master of Public Service		Master of Arts Political Science	
Research Analyst	33	Summer Student	2
Analyst	18	Business Process Review and Compliance	2
Policy Co-op	16	Special Projects & Reception Assistant	2
Policy/Junior Policy Analyst	14	Anti-Money Laundering Investigator	2
Research Assistant	8	Planning Analyst	2
PERL Policy Co-op	11	Senior Researcher	1
Junior Business Analyst	6	Trade Policy Advisor	1
Junior Project Analyst	5	Junior Program Advisor	1
Industry Analyst	4	Policy Intern	1
Change, Release and Deployment Mgmt Assistant	4	Research Assistant - Analytics & Intelligent Systems Group (Banking Analytics Research, Regulatory)	1
Strategic Planning and Performance Management Analyst	4	Advisor	1
Project Coordinator	3	Policy Assistant	1
Health Performance & Accountability Analyst	3		
Solution Architect Trainee	3		
Advisor, Clean Tech & Advanced Manufacturing Branch	3		
Problem Resolution/Service Complaints Officer	3		
Advisor, Advanced Manufacturing Branch	3		

Appendix C

Top Co-op Hires by Organization for Master of Public Service and Master of Arts in Political Science 2016-2018:

# of Hires by Organization			
Master of Public Service		Master of Arts Political Science	
Ontario Ministry of Infrastructure	20	Toronto Transit Commission	2
Treasury Board Secretariat	19	Randstad Canada	2
Employment and Social Development Canada	19	Ontario Ministry of Trade	2
Regional Municipality of Peel	12	Environment and Climate Change Canada	2
Ontario Ministry of Economic Development and Growth	11	Government of Alberta	2
Innovation Science and Economic Development Canada	11	University of Waterloo	2
Environment and Climate Change Canada	9	Ontario Ministry of Community and Social Services	1
University of Waterloo	9	Canadian Feed the Children	1
Toronto Transit Commission	8	National Research Council Canada	1
Statistics Canada	7	National University of Singapore	1
The Regional Municipality of York	7	Northern Policy Institute	1
Ontario Ministry of Finance	7		
Ontario Min of Econ Dev, Employment & Infrastructure	7		
Ontario Ministry of Community and Social Services	6		
Office of the Premier and Cabinet Office	6		
Ontario Ministry of Education	5		
Ontario Ministry of Transportation	5		
Health Canada	4		
City of Waterloo	4		
Agriculture and Agri-Food Canada	4		

Ontario Ministry of Municipal Affairs	4		
Ontario Ministry of Health and Long-Term Care	4		
Public Services and Procurement Canada (PSPC)	4		
Ericsson Canada Inc	4		
Ontario Lottery & Gaming Corporation	4		
Canada Revenue Agency	4		
Federal Economic Development Agency	4		
Ontario Ministry of Agriculture, Food and Rural Affairs	4		
Ontario Ministry of Advanced Education and Skills Development	4		

Appendix D

Company	Location	Job Title	Summary	Qualifications	Degree
Government of Canada – Fisheries and Oceans Canada	Ottawa, ON	Policy Analyst/ Senior Policy Analyst	<ul style="list-style-type: none"> No summary given 	<ul style="list-style-type: none"> Significant experience with decision-making for senior management Policy research or analysis to support development of policies, plans or legislative frameworks Experience in preparing position papers Experience in economic and/or policy research and analysis in areas related to fisheries, oceans, natural resources or sustainable development 	<ul style="list-style-type: none"> Postgraduate Degree from a recognized university
Bank of Canada	Ottawa, ON	PhD Internship	<ul style="list-style-type: none"> Spend two to four months pursuing dissertation and presenting and promoting research May have access to Bank's data sets 	<ul style="list-style-type: none"> Must submit cover letter which states how research is relevant to the Bank of Canada Letter of recommendation supporting writing, research, and empirical and/or modelling skills 	<ul style="list-style-type: none"> Working toward PhD
Government of Canada – Statistics Canada	Ottawa, ON	Statistics Canada Analytical Studies Research Fellowship	<ul style="list-style-type: none"> Allows students in a doctoral programme who are working on theses to access data available only at Statistics Canada Economic Analysis, Health Analysis, Social Analysis and Modelling databases 	<ul style="list-style-type: none"> Provide research proposal and cover letter References 	<ul style="list-style-type: none"> Working toward PhD

Company	Location	Job Title	Summary	Qualifications	Degree
Mitacs	Ottawa, ON	Policy Analyst	<ul style="list-style-type: none"> • Conduct policy research and prepare materials including briefings, presentations, proposals, submissions and other policy documents • Monitor trends in innovation policy, PhD education, research funding and others 	<ul style="list-style-type: none"> • Demonstrate report/proposal writing • Project management • Experience in leading complex projects, working effectively with multiple projects 	<ul style="list-style-type: none"> • Master's Degree in Economics, Public Policy, Political Science, or related field
The YMCA of Greater Toronto	Toronto, ON	Manager, Program Research and Development	<ul style="list-style-type: none"> • Monitoring community well-being, impact measurement and evaluation • Lead primary survey research and secondary data collection to maintain and develop YMCA of greater Toronto • Sustainability and Revenue Generation • Designing and executing and interpreting quantitative and qualitative research methodologies to understand needs and behaviours and customer trends 	<ul style="list-style-type: none"> • Strong qualitative and quantitative research skills and appropriate univariate and multivariate statistical methods • Proficiency with statistical software such as SPSS or SAS • Demonstrate analytical and report creation skills 	<ul style="list-style-type: none"> • A level of education and experience equivalent to a PhD or a Master's degree in social or health sciences • 3 years' experience in a social or health science setting

Company	Location	Job Title	Summary	Qualifications	Degree
Baxter	Mississauga, ON	Senior Manager, Government Policy & Reimbursement	<ul style="list-style-type: none"> • Develop and execute market access strategies that align with franchise strategy • Engage externally as needed with key influencers around policy, pricing and advocacy issues • Assist with the development and implementation of public relations and government affairs strategy 	<ul style="list-style-type: none"> • 5-7+ years of combined Market Access, Medical Affairs and/or Marketing experience required • Medical device and/or pharmaceutical industry experience • Project management skills and experience 	<ul style="list-style-type: none"> • Bachelor's Degree required • Master's or advanced degree, preferred • Preferred: Health administration, public affairs/political science, public health, • Marketing, HEOR, science
Government of Canada	Saint-Jean-sur-Richelieu, QC	Lecturer/Assistant/ Associate/Professor Inventory	<ul style="list-style-type: none"> • The Royal Military College is offering post-secondary education in humanities, sciences and engineering 	<ul style="list-style-type: none"> • High level of scholarly productivity as demonstrated by the publication of research in peer-reviewed and scholarly journals • Experience with university administration and academic service • Experience teaching at a military university 	<ul style="list-style-type: none"> • Some positions will require a PhD from a recognized post-secondary institution within the specified areas of expertise • Areas of expertise: Humanities and social sciences, Physical Sciences, Engineering

Company	Location	Job Title	Summary	Qualifications	Degree
Women's College Hospital	Toronto, ON	Evaluation Scientist	<ul style="list-style-type: none"> • Design and develop a theory-based program evaluation model for the University of Toronto MD program and WCH • Mentor, collaborate and consult with other education scientists and graduate students regarding research programs 	<ul style="list-style-type: none"> • 3 - 5 years experience in research environment and/or academic hospital • Experience as a research lead demonstrated by a record of prior publications in peer-reviewed education journals <p>Knowledge and skills in educational design, program evaluation approaches, models and methodologies</p>	<ul style="list-style-type: none"> • PhD degree with a focus on Behavioral or Social Sciences
Canadian Nurses Association	Ottawa, ON	Lead Government Relations	<ul style="list-style-type: none"> • Responsible for overall management of CNA's government portfolio • Leads strategies to optimize CNA's interface with Canada's elected officials at federal, provincial and territorial levels • Collaborates with CNA's internal teams to develop CNA's position on policy issues 	<ul style="list-style-type: none"> • 5 - 7 years experience in government or parliamentary relations, ideally at federal level • Strong understanding of political and governmental processes; the federal policy cycle, structures, and current priorities • Knowledge and strong insight into nursing and health policy issues and how they relate at the federal, provincial and territorial governments 	<ul style="list-style-type: none"> • Master's degree in Political Science, Health Policy, Public Administration, Communications or other relevant field of study

Company	Location	Job Title	Summary	Qualifications	Degree
Canadian Wildlife Federation	Ottawa, ON	National Aquatic Habitat Conservation Partnership Manager	<ul style="list-style-type: none"> • 6 month contract • Strategize direction for the development of national aquatic habitat conservation partnership • Approach potential stakeholders from government, industry, Indigenous organizations, academia • Liaise with scientists, government officials, Indigenous organizations and other NGOs to share information, develop contacts, and promote ongoing engagement in the partnership 	<ul style="list-style-type: none"> • Experience reviewing and synthesizing scientific literature, as well as laws, regulations, and government policy • Project management experience, including planning meetings and chairing teleconferences 	<ul style="list-style-type: none"> • Requires minimum Master's degree or Bachelor's degree with relevant 3-5 years of work experience in related fields (Biology, Environmental Science, Studies, Law, or Policy)
ITK	Ottawa, ON	Inuit Health Survey National Lead	<ul style="list-style-type: none"> • Responsible for the overall coordination and implementation of a permanent Inuit Health Survey (IHS) across Inuit Nunangat as well as in a number of urban centres in southern Canada • Collaboratively develop and implement national and regional work plans and budgets • Liaise with all Federal, Territorial, and Provincial Government departments, Inuit organizations and non-government organizations on 	<ul style="list-style-type: none"> • Experience in project management and program delivery • Must have excellent oral and written communication skills (English required, Inuktitut a definite asset) • Experience in public relations, speaking with media, speaking to the public and other diverse audiences, and negotiation skills • 3-8 years of work experience in similar positions 	<ul style="list-style-type: none"> • A Masters degree in a relevant discipline, such as public health, health sciences, epidemiology, public policy and political or social science with a minimum of 3 years of related work experience; a PhD would be a definite asset

			<p>planning and implementing the HIS</p> <ul style="list-style-type: none"> • Coordinate and provide guidance on survey design, questionnaire development, rationale for clinical tests, data storage and management, and data analysis • Monitor and analyse developing external trends, policies, programs and issues with actual or potential impact on Inuit health and wellness 		
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Sources: Indeed and Google Jobs

APPENDIX E

Appendix E contains the following curricular submissions:

Calendar submissions

PhD, Political Science, regular, teaching, and experiential streams
PhD, Political Science, Co-op

Course submissions

Course Revisions

PSCI 600
PSCI 661
PSCI 662

New courses

PSCI 610
PSCI 611
PSCI 690
PSCI 691

Milestone submissions

Academic Integrity Workshop
PhD Professional Development Seminar
PhD Experiential Seminar
PhD Teaching Seminar
PhD Comprehensive Examination
PhD Internship
Internship Report
Graduate Studies Work Report
PhD Thesis Proposal
PhD Thesis

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

Faculty: Arts

Program: Doctor of Philosophy (PhD) in Political Science

Program contact name(s): Shelby Davies, Emmett Macfarlane

Form completed by: Shelby Davies

Note: new courses and milestones also require the completion/submission of the SGRC Course/Milestone-New/Revision/Inactivation form ([PC docx version](#)).

Proposed effective date: Term: Fall Year: 2021

[Graduate Studies Academic Calendar \(GSAC\)](#) section (include the link to the section (web page) where the new program will be located):

<https://uwaterloo.ca/graduate-studies-academic-calendar/arts/department-political-science>

Proposed Graduate Studies Academic Calendar content:

DOCTOR OF PHILOSOPHY (PHD) IN POLITICAL SCIENCE

Graduate research fields

- Canadian Politics
- International Relations
- Political Economy

Program information

- **Admit term(s)**
 - Fall
 - **Delivery mode**
 - On-campus
 - **Program type**
 - Doctoral
 - Research
 - **Registration option(s)**
 - Full-time
 - Part-time
 - **Study option(s)**
-

Proposed Graduate Studies Academic Calendar content:

- Thesis

Admission requirements

- **Minimum requirements**
 - Students must hold a Master's degree with a minimum 80% average or equivalent in political science, or a related discipline.
 - Experienced professionals in the private or public sectors will be considered for admission, but additional course work may be required.
- **Application materials**
 - Résumé
 - Supplementary information form
 - Transcript(s)
 - Writing sample
- **References**
 - Number of references: 3
 - Type of references: normally from academic sources
- **[English language proficiency \(ELP\)](#) (if applicable)**

Degree requirements

In addition to the regular stream of the program, students have the option of taking the teaching stream (featuring additional professional development modules, including a mentored teaching experience) and the experiential stream (which may include entry into the co-op program - described separately - or another placement and other experiential training, including additional professional development modules).

Thesis option:

Regular stream:

- **[Graduate Academic Integrity Module \(Graduate AIM\)](#)**
- **Courses**
 - Students must complete 6 (0.50 unit weight) graduate-level courses:
 - PSCI 600 Political Science Methods
 - 2 core courses in one of the program's three graduate research fields
 - 2 courses in the student's second area (which may be another of the three graduate research fields or a custom concentration)
 - 1 elective (may be taken outside the Department of Political Science at the approval of the Associate Chair, Graduate Studies)
 - If selecting the Canadian Politics research field, students must complete the following core courses:
 - PSCI 661 Canadian Political Institutions
 - PSCI 662 Canadian Political Process
 - If selecting the International Relations research field, students must complete the following core courses:
 - PSCI 610 International Relations Theory
 - PSCI 611 Current Issues in International Relations
 - If selecting the Political Economy research field, students must complete the following core courses:

Proposed Graduate Studies Academic Calendar content:

- PSCI 690 Theories of Political Economy
- PSCI 691 Developments in Political Economy
- Students entering the PhD program from the University of Waterloo's Master of Arts (MA) in Political Science program may have already completed some of the required core courses for their chosen research fields. To meet formal course requirements for the PhD degree, these students must complete 6 new (0.50 unit weight) graduate-level courses that satisfy their comprehensive examination preparation.
- Reading courses may supplement regular offerings in the program, although it is understood that they will be approved at the discretion of the Department. Students will normally be permitted to take 1 reading course as part of their degree.
- Students are required to maintain an overall average of 80% in their graduate-level coursework.

- **Link(s) to courses**
 - Political Science (PSCI) courses
 - Graduate course search

- **Academic Integrity Workshop**

- **PhD Professional Development Seminar**
 - Students must complete the following mandatory professional development workshops (typically in Year 2 and 3 of the program). The six mandatory workshops are offered by the Department:
 - Research design and methods
 - Conducting literature review
 - Planning and best practices in fieldwork
 - Conferencing best practices (completed after proposal defence)
 - Careers in political science and translating skills for a non-academic job market
 - Communicating research to a broader audience
 - Students must also complete 3 additional professional development workshops to satisfy the requirements of the PhD Professional Development Seminar. Workshops must be approved by the Associate Chair, Graduate Studies, but may include the following:
 - Practice job talk / job interview
 - Workshops or courses providing additional training in social science methods
 - CTE workshop aimed at graduate students
 - MITACS Edge workshop/course
 - Writing Centre workshop
 - Career Centre workshop
 - Counselling Services workshop on mindfulness, cognitive therapy, or practical skills to reduce anxiety
 - Completion of any course or workshop relevant to professional development offered by a campus partner

- **PhD Comprehensive Examination**
 - Students are required to meet the University-level PhD Comprehensive Examination minimum requirements outlined in the "Minimum requirements for the PhD degree" section of the Graduate Studies Academic Calendar (GSAC), with certain noted exceptions that are specific to the Faculty of Arts Comprehensive Examination minimum requirements:
 - Comprehensive examination purpose: Consistent with University-level minimum requirements.
 - Timing: Consistent with University-level minimum requirements.
 - Committee: Consistent with University-level minimum requirements with the exception that in the Faculty of Arts, the Graduate Chair can approve the committee for comprehensive examinations.

Proposed Graduate Studies Academic Calendar content:

- Who Chairs an examination: Consistent with University-level minimum requirements.
- Format / Content: Consistent with University-level minimum requirements.
- Academic integrity: Consistent with University-level minimum requirements.
- In addition to the University-level and Faculty-level PhD Comprehensive Examination minimum requirements, students in the PhD in Political Science program are also required to meet the following requirements:
 - At the end of their coursework, typically in September of Year 2, students are required to sit two exams.
 - The first exam will be from one of the three graduate research fields of the program the student has selected to study in. It will be comprised of a written exam, followed by an oral exam.
 - The second exam may follow the same format as the first if the student's second field is also one of the three graduate research fields of the program. Alternatively, the student may elect to submit a review essay broadly addressing the major theoretical debates, methodological hurdles, or substantive problems posed by existing scholarship in the field.
 - If the second area of study is a custom concentration, the comprehensive exam will consist of a review essay broadly addressing the major theoretical debates, methodological hurdles, or substantive problems posed by existing scholarship in the field.

• PhD Thesis Proposal

- Students will write a thesis proposal situating their research question(s) in the extant literature, outlining their approach, theory, scope, and research methodology, and explaining the original nature of their contribution, along with a timeline and proposed chapter outline. The proposal will be subject to an oral defence, normally by the end of the sixth term, before a committee including the student's supervisor and two other faculty members.

• PhD Thesis

- Students will have choice in the format of their thesis. Students may choose a traditional dissertation (ranging from 200 to 350 pages in length), or a 'publication model' consisting of at least three sole-authored published (or in press) works, at least one of which is in a traditional, peer-reviewed outlet (other publications might include research reports for think tanks, etc.), and including an original introduction, conclusion and any necessary bridging chapters to reflect a coherent project. In rare cases, and with the approval of the student's supervisor and the Department's Graduate Committee, students may opt for a non-traditional thesis that meets the standards of an original doctoral-level contribution to knowledge, but in a different form (for example, a documentary). The Department is especially cognizant of the potential for alternative approaches to knowledge-generation and dissemination, such as Indigenous approaches to knowledge, as something to be accommodated on a case-by-case basis.
- Normally, students should complete and defend the dissertation within four years of starting the program. Regardless of format, the thesis will be subject to an oral defence before a committee, including the supervisor, two other Political Science faculty members, an internal-external examiner from another department/program at the University of Waterloo, and an external examiner.

Teaching stream:

• [Graduate Academic Integrity Module \(Graduate AIM\)](#)

• Courses

- Students must complete 6 (0.50 unit weight) graduate-level courses:
 - PSCI 600 Political Science Methods

Proposed Graduate Studies Academic Calendar content:

- 2 core courses in one of the program's three graduate research fields
 - 2 courses in the student's second area (which may be another of the three graduate research fields or a custom concentration)
 - 1 elective (may be taken outside the Department of Political Science at the approval of the Associate Chair, Graduate Studies)
 - If selecting the Canadian Politics research field, students must complete the following core courses:
 - PSCI 661 Canadian Political Institutions
 - PSCI 662 Canadian Political Process
 - If selecting the International Relations research field, students must complete the following core courses:
 - PSCI 610 International Relations Theory
 - PSCI 611 Current Issues in International Relations
 - If selecting the Political Economy research field, students must complete the following core courses:
 - PSCI 690 Theories of Political Economy
 - PSCI 691 Developments in Political Economy
 - Students entering the PhD program from the University of Waterloo's Master of Arts (MA) in Political Science program may have already completed some of the required core courses for their chosen research fields. To meet formal course requirements for the PhD degree, these students must complete 6 new (0.50 unit weight) graduate-level courses that satisfy their comprehensive examination preparation.
 - Reading courses may supplement regular offerings in the program, although it is understood that they will be approved at the discretion of the Department. Students will normally be permitted to take 1 reading course as part of their degree.
 - Students are required to maintain an overall average of 80% in their graduate-level coursework.
- **Link(s) to courses**
 - Political Science (PSCI) courses
 - Graduate course search
 - **Academic Integrity Workshop**
 - **PhD Professional Development Seminar**
 - Students must complete the following mandatory professional development workshops (typically in Year 2 and 3 of the program). The six mandatory workshops are offered by the Department:
 - Research design and methods
 - Conducting literature review
 - Planning and best practices in fieldwork
 - Conferencing best practices (completed after proposal defence)
 - Careers in political science and translating skills for a non-academic job market
 - Communicating research to a broader audience
 - **PhD Teaching Seminar**
 - Students who participate in the teaching stream of the program will be required to complete the PhD Teaching Seminar. The following mandatory professional development workshops must be completed:
 - Centre for Teaching Excellence Fundamentals of University Teaching program (student may begin this program as early as Year 1)
 - 2 Guest Lectures in Political Science (students will receive automatic credit if they have the opportunity to teach their own course as a sessional instructor)

Proposed Graduate Studies Academic Calendar content:

- Develop a syllabus for a real or prospective Political Science course
- **PhD Comprehensive Examination**
 - Students are required to meet the University-level PhD Comprehensive Examination minimum requirements outlined in the "Minimum requirements for the PhD degree" section of the Graduate Studies Academic Calendar (GSAC), with certain noted exceptions that are specific to the Faculty of Arts Comprehensive Examination minimum requirements:
 - Comprehensive examination purpose: Consistent with University-level minimum requirements.
 - Timing: Consistent with University-level minimum requirements.
 - Committee: Consistent with University-level minimum requirements with the exception that in the Faculty of Arts, the Graduate Chair can approve the committee for comprehensive examinations.
 - Who Chairs an examination: Consistent with University-level minimum requirements.
 - Format / Content: Consistent with University-level minimum requirements.
 - Academic integrity: Consistent with University-level minimum requirements.
 - In addition to the University-level and Faculty-level PhD Comprehensive Examination minimum requirements, students in the PhD in Political Science program are also required to meet the following requirements:
 - At the end of their coursework, typically in September of Year 2, students are required to sit two exams.
 - The first exam will be from one of the three graduate research fields of the program the student has selected to study in. It will be comprised of a written exam, followed by an oral exam.
 - The second exam may follow the same format as the first if the student's second field is also one of the three graduate research fields of the program. Alternatively, the student may elect to submit a review essay broadly addressing the major theoretical debates, methodological hurdles, or substantive problems posed by existing scholarship in the field.
 - If the second area of study is a custom concentration, the comprehensive exam will consist of a review essay broadly addressing the major theoretical debates, methodological hurdles, or substantive problems posed by existing scholarship in the field.
- **PhD Thesis Proposal**
 - Students will write a thesis proposal situating their research question(s) in the extant literature, outlining their approach, theory, scope, and research methodology, and explaining the original nature of their contribution, along with a timeline and proposed chapter outline. The proposal will be subject to an oral defence, normally by the end of the sixth term, before a committee including the student's supervisor and two other faculty members.
- **PhD Thesis**
 - Students will have choice in the format of their thesis. Students may choose a traditional dissertation (ranging from 200 to 350 pages in length), or a 'publication model' consisting of at least three sole-authored published (or in press) works, at least one of which is in a traditional, peer-reviewed outlet (other publications might include research reports for think tanks, etc.), and including an original introduction, conclusion and any necessary bridging chapters to reflect a coherent project. In rare cases, and with the approval of the student's supervisor and the Department's Graduate Committee, students may opt for a non-traditional thesis that meets the standards of an original doctoral-level contribution to knowledge, but in a different form (for example, a documentary). The Department is especially cognizant of the potential for alternative approaches to knowledge-generation and dissemination, such as Indigenous approaches to knowledge, as something to be accommodated on a case-by-case basis.

Proposed Graduate Studies Academic Calendar content:

- Normally, students should complete and defend the dissertation within four years of starting the program. Regardless of format, the thesis will be subject to an oral defence before a committee, including the supervisor, two other Political Science faculty members, an internal-external examiner from another department/program at the University of Waterloo, and an external examiner.

Experiential stream:

- [Graduate Academic Integrity Module \(Graduate AIM\)](#)

- **Courses**

- Students must complete 6 (0.50 unit weight) graduate-level courses:
 - PSCI 600 Political Science Methods
 - 2 core courses in one of the program's three graduate research fields
 - 2 courses in the student's second area (which may be another of the three graduate research fields or a custom concentration)
 - 1 elective (may be taken outside the Department of Political Science at the approval of the Associate Chair, Graduate Studies)
- If selecting the Canadian Politics research field, students must complete the following core courses:
 - PSCI 661 Canadian Political Institutions
 - PSCI 662 Canadian Political Process
- If selecting the International Relations research field, students must complete the following core courses:
 - PSCI 610 International Relations Theory
 - PSCI 611 Current Issues in International Relations
- If selecting the Political Economy research field, students must complete the following core courses:
 - PSCI 690 Theories of Political Economy
 - PSCI 691 Developments in Political Economy
- Students entering the PhD program from the University of Waterloo's Master of Arts (MA) in Political Science program may have already completed some of the required core courses for their chosen research fields. To meet formal course requirements for the PhD degree, these students must complete 6 new (0.50 unit weight) graduate-level courses that satisfy their comprehensive examination preparation.
- Reading courses may supplement regular offerings in the program, although it is understood that they will be approved at the discretion of the Department. Students will normally be permitted to take 1 reading course as part of their degree.
- Students are required to maintain an overall average of 80% in their graduate-level coursework.

- **Link(s) to courses**

- Political Science (PSCI) courses
- Graduate course search

- **Academic Integrity Workshop**

- **PhD Professional Development Seminar**

- Students must complete the following mandatory professional development workshops (typically in Year 2 and 3 of the program). The six mandatory workshops are offered by the Department:
 - Research design and methods
 - Conducting literature review
 - Planning and best practices in fieldwork

Proposed Graduate Studies Academic Calendar content:

- Conferencing best practices (completed after proposal defence)
- Careers in political science and translating skills for a non-academic job market
- Communicating research to a broader audience

- **PhD Experiential Seminar**
 - Students who participate in the experiential stream of the program will be required to complete the PhD Experiential Seminar. The following mandatory professional development workshops must be completed:
 - Reflective practices in experiential learning (must be completed prior to internship placement) (offered by the Department)
 - Writing resumes (must be completed prior to internship placement) (Centre for Career Action)
 - Parallel career planning (Centre for Career Action)
 - MITACS or other campus partner module(s) (as approved by the Associate Chair, Graduate Studies)

- **PhD Comprehensive Examination**
 - Students are required to meet the University-level PhD Comprehensive Examination minimum requirements outlined in the "Minimum requirements for the PhD degree" section of the Graduate Studies Academic Calendar (GSAC), with certain noted exceptions that are specific to the Faculty of Arts Comprehensive Examination minimum requirements:
 - Comprehensive examination purpose: Consistent with University-level minimum requirements.
 - Timing: Consistent with University-level minimum requirements.
 - Committee: Consistent with University-level minimum requirements with the exception that in the Faculty of Arts, the Graduate Chair can approve the committee for comprehensive examinations.
 - Who Chairs an examination: Consistent with University-level minimum requirements.
 - Format / Content: Consistent with University-level minimum requirements.
 - Academic integrity: Consistent with University-level minimum requirements.
 - In addition to the University-level and Faculty-level PhD Comprehensive Examination minimum requirements, students in the PhD in Political Science program are also required to meet the following requirements:
 - At the end of their coursework, typically in September of Year 2, students are required to sit two exams.
 - The first exam will be from one of the three graduate research fields of the program the student has selected to study in. It will be comprised of a written exam, followed by an oral exam.
 - The second exam may follow the same format as the first if the student's second field is also one of the three graduate research fields of the program. Alternatively, the student may elect to submit a review essay broadly addressing the major theoretical debates, methodological hurdles, or substantive problems posed by existing scholarship in the field.
 - If the second area of study is a custom concentration, the comprehensive exam will consist of a review essay broadly addressing the major theoretical debates, methodological hurdles, or substantive problems posed by existing scholarship in the field.

- **PhD Internship**
 - Students in the experiential stream have the option of undertaking an internship through Mitacs or finding an alternative placement (at the approval of the student's supervisor and the Associate Chair, Graduate Studies). Students will be eligible to go on placements for periods ranging from four months to one year.

Proposed Graduate Studies Academic Calendar content:

- **PhD Internship Report**
 - Required for students who are participating in the experiential stream. Students must complete and submit a PhD Internship Report within one month of the completion of their placement.

- **PhD Thesis Proposal**
 - Students will write a thesis proposal situating their research question(s) in the extant literature, outlining their approach, theory, scope, and research methodology, and explaining the original nature of their contribution, along with a timeline and proposed chapter outline. The proposal will be subject to an oral defence, normally by the end of the sixth term, before a committee including the student's supervisor and two other faculty members.

- **PhD Thesis**
 - Students will have choice in the format of their thesis. Students may choose a traditional dissertation (ranging from 200 to 350 pages in length), or a 'publication model' consisting of at least three sole-authored published (or in press) works, at least one of which is in a traditional, peer-reviewed outlet (other publications might include research reports for think tanks, etc.), and including an original introduction, conclusion and any necessary bridging chapters to reflect a coherent project. In rare cases, and with the approval of the student's supervisor and the Department's Graduate Committee, students may opt for a non-traditional thesis that meets the standards of an original doctoral-level contribution to knowledge, but in a different form (for example, a documentary). The Department is especially cognizant of the potential for alternative approaches to knowledge-generation and dissemination, such as Indigenous approaches to knowledge, as something to be accommodated on a case-by-case basis.
 - Normally, students should complete and defend the dissertation within four years of starting the program. Regardless of format, the thesis will be subject to an oral defence before a committee, including the supervisor, two other Political Science faculty members, an internal-external examiner from another department/program at the University of Waterloo, and an external examiner.

Department of Political Science website

Departmental approval date (mm/dd/yy): 09/20/2019

Reviewed by GSPA (for GSPA use only) date (mm/dd/yy): 05/04/2020

Faculty approval date (mm/dd/yy):

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

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

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

Faculty: Arts

Program: Doctor of Philosophy (PhD) in Political Science - Co-operative Program

Program contact name(s): Shelby Davies, Emmett Macfarlane

Form completed by: Shelby Davies

Note: new courses and milestones also require the completion/submission of the SGRC Course/Milestone-New/Revision/Inactivation form ([PC docx version](#)).

Proposed effective date: Term: Fall Year: 2021

[Graduate Studies Academic Calendar \(GSAC\)](#) section (include the link to the section (web page) where the new program will be located):

<https://uwaterloo.ca/graduate-studies-academic-calendar/arts/department-political-science>

Proposed Graduate Studies Academic Calendar content:

DOCTOR OF PHILOSOPHY (PHD) IN POLITICAL SCIENCE – CO-OPERATIVE PROGRAM

Graduate research fields

- Canadian Politics
- International Relations
- Political Economy

Program information

- **Admit term(s)**
 - Fall/Winter/Spring
- **Delivery mode**
 - On-campus
- **Program type**
 - Co-operative
 - Doctoral
 - Research
- **Registration option(s)**
 - Full-time
 - Part-time

Proposed Graduate Studies Academic Calendar content:

- **Study option(s)**
 - Thesis

Admission requirements

- **Minimum requirements**
 - Students in the PhD in Political Science program can apply to transfer into the PhD in Political Science Co-operative Program after completing at least one academic term. Admission will be decided based on the student's progress to date, and is subject to approval by the Department Associate Chair, Graduate Studies.

Degree requirements

Thesis option:

- [Graduate Academic Integrity Module \(Graduate AIM\)](#)
- **Courses**
 - Students must complete 6 (0.50 unit weight) graduate-level courses:
 - PSCI 600 Political Science Methods
 - 2 core courses in one of the program's three graduate research fields
 - 2 courses in the student's second area (which may be another of the three graduate research fields or a custom concentration)
 - 1 elective (may be taken outside the Department of Political Science at the approval of the Associate Chair, Graduate Studies)
 - If selecting the Canadian Politics research field, students must complete the following core courses:
 - PSCI 661 Canadian Political Institutions
 - PSCI 662 Canadian Political Process
 - If selecting the International Relations research field, students must complete the following core courses:
 - PSCI 610 International Relations Theory
 - PSCI 611 Current Issues in International Relations
 - If selecting the Political Economy research field, students must complete the following core courses:
 - PSCI 690 Theories of Political Economy
 - PSCI 691 Developments in Political Economy
 - Students entering the PhD program from the University of Waterloo's Master of Arts (MA) in Political Science program may have already completed some of the required core courses for their chosen research fields. To meet formal course requirements for the PhD degree, these students must complete 6 new (0.50 unit weight) graduate-level courses that satisfy their comprehensive examination preparation.
 - Reading courses may supplement regular offerings in the program, although it is understood that they will be approved at the discretion of the Department. Students will normally be permitted to take 1 reading course as part of their degree.
 - Students are required to maintain an overall average of 80% in their graduate-level coursework.
- **Link(s) to courses**
 - Political Science (PSCI) courses
 - Graduate course search

Proposed Graduate Studies Academic Calendar content:

- **Academic Integrity Workshop**

- **PhD Professional Development Seminar**
 - Students must complete the following mandatory professional development workshops (typically in Year 2 and 3 of the program). The six mandatory workshops are offered by the Department:
 - Research design and methods
 - Conducting literature review
 - Planning and best practices in fieldwork
 - Conferencing best practices (completed after proposal defence)
 - Careers in political science and translating skills for a non-academic job market
 - Communicating research to a broader audience

- **PhD Experiential Seminar**
 - The following mandatory professional development workshops must be completed:
 - Reflective practices in experiential learning (must be completed prior to internship placement) (offered by the Department)
 - Writing resumes (must be completed prior to internship placement) (Centre for Career Action)
 - Parallel career planning (Centre for Career Action)
 - MITACS or other campus partner module(s) (as approved by the Associate Chair, Graduate Studies)

- **PhD Comprehensive Examination**
 - Students are required to meet the University-level PhD Comprehensive Examination minimum requirements outlined in the "Minimum requirements for the PhD degree" section of the Graduate Studies Academic Calendar (GSAC), with certain noted exceptions that are specific to the Faculty of Arts Comprehensive Examination minimum requirements:
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 - Who Chairs an examination: Consistent with University-level minimum requirements.
 - Format / Content: Consistent with University-level minimum requirements.
 - Academic integrity: Consistent with University-level minimum requirements.
 - In addition to the University-level and Faculty-level PhD Comprehensive Examination minimum requirements, students in the PhD in Political Science program are also required to meet the following requirements:
 - At the end of their coursework, typically in September of Year 2, students are required to sit two exams.
 - The first exam will be from one of the three graduate research fields of the program the student has selected to study in. It will be comprised of a written exam, followed by an oral exam.
 - The second exam may follow the same format as the first if the student's second field is also one of the three graduate research fields of the program. Alternatively, the student may elect to submit a review essay broadly addressing the major theoretical debates, methodological hurdles, or substantive problems posed by existing scholarship in the field.
 - If the second area of study is a custom concentration, the comprehensive exam will consist of a review essay broadly addressing the major theoretical debates, methodological hurdles, or substantive problems posed by existing scholarship in the

Proposed Graduate Studies Academic Calendar content:

field.

- **Graduate Studies Work Report**
 - Students must complete and submit a work-term report within one month of the completion of the work-term(s).
- **PhD Thesis Proposal**
 - Students will write a thesis proposal situating their research question(s) in the extant literature, outlining their approach, theory, scope, and research methodology, and explaining the original nature of their contribution, along with a timeline and proposed chapter outline. The proposal will be subject to an oral defence, normally by the end of the sixth term, before a committee including the student's supervisor and two other faculty members.
- **PhD Thesis**
 - Students will have choice in the format of their thesis. Students may choose a traditional dissertation (ranging from 200 to 350 pages in length), or a 'publication model' consisting of at least three sole-authored published (or in press) works, at least one of which is in a traditional, peer-reviewed outlet (other publications might include research reports for think tanks, etc.), and including an original introduction, conclusion and any necessary bridging chapters to reflect a coherent project. In rare cases, and with the approval of the student's supervisor and the Department's Graduate Committee, students may opt for a non-traditional thesis that meets the standards of an original doctoral-level contribution to knowledge, but in a different form (for example, a documentary). The Department is especially cognizant of the potential for alternative approaches to knowledge-generation and dissemination, such as Indigenous approaches to knowledge, as something to be accommodated on a case-by-case basis.
 - Normally, students should complete and defend the dissertation within four years of starting the program. Regardless of format, the thesis will be subject to an oral defence before a committee, including the supervisor, two other Political Science faculty members, an internal-external examiner from another department/program at the University of Waterloo, and an external examiner.

Department of Political Science website

Departmental approval date (mm/dd/yy): 09/20/2019

Reviewed by GSPA (for GSPA use only) date (mm/dd/yy): 05/04/2020

Faculty approval date (mm/dd/yy):

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

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

Faculty: Arts

Effective term: Term/Year Spring 2021

Course New Revision Inactivation Milestone New Revision Inactivation

New milestone title: Choose an item.

For course revisions, indicate the type(s) of changes:

Description and title change to better align with PhD in Political Science program.

Course Subject code: PSCI Course number: 600

Course Title (max. 100 characters incl. spaces): Political Science Methods

Course Short Title (max. 30 characters incl. spaces): Political Science Methods

Grading Basis: NUMERICAL

Course Credit Weight: 0.50

Course Consent Required: Choose an item.

Course Description: The course is a critical examination of different approaches to the study of political science. The seminar is intended to accomplish two goals: first, to foster a collegial atmosphere in which students pursue a common course of intensive study; and second, to expose students to the most recent theoretical developments in normative, empirical, analytical or historical approaches to political science.

New course description (for revision only): This team-taught course examines different approaches to the study of political science, with units focusing on quantitative methods, qualitative methods, and an exploration of the epistemology of social science.

Meet Type(s): Seminar Choose an item. Choose an item. Choose an item.

Primary Meet Type: Seminar

[Requisites:](#)Special topics course: Yes No Cross-listed: Yes No

Course Subject(s) to be cross-listed with and approval status:

Sections combined/heldwith:

Rationale for request:

PSCI 600 will be a required course for all PhD and MA Political Science students. The updated course description and title will better serve both programs.

Faculty: Arts

Effective term: Term/Year Spring 2021

Course New Revision Inactivation

Milestone New Revision Inactivation

New milestone title: Choose an item.

For course revisions, indicate the type(s) of changes:

Title and description change to better align with Canadian Politics field of PhD in Political Science program.

Course Subject code: PSCI Course number: 661

Course Title (max. 100 characters incl. spaces): Canadian Political Institutions

Course Short Title (max. 30 characters incl. spaces): Cndn Political Institutions

Grading Basis: NUMERICAL

Course Credit Weight: 0.50

Course Consent Required: Choose an item.

Course Description: Selected aspects of Canadian national politics

New course description (for revision only): This course examines the structure and operation of central institutions in government, including dominant theories and approaches to their study. Topics may include the constitution, Parliament, the executive, courts, federalism and intergovernmental relations, political parties, provincial and municipal governance, and the bureaucracy.

Meet Type(s): Seminar Choose an item. Choose an item. Choose an item.

Primary Meet Type: Seminar

[Requisites:](#)

Special topics course: Yes No

Cross-listed: Yes No

Course Subject(s) to be cross-listed with and approval status:

Sections combined/heldwith:

Rationale for request:

PSCI 661 will be one of two required courses for students enrolled in the Canadian Politics field of the PhD in Political Science program. The updated course description and title will better fit with the field.

Faculty: Arts

Effective term: Term/Year Spring 2021

Course New Revision Inactivation

Milestone New Revision Inactivation

New milestone title: Choose an item.

For course revisions, indicate the type(s) of changes:

Title and description change to better align with Canadian Politics field of PhD in Political Science program.

Course Subject code: PSCI Course number: 662

Course Title (max. 100 characters incl. spaces): Canadian Political Process

Course Short Title (max. 30 characters incl. spaces): Canadian Political Process

Grading Basis: NUMERICAL

Course Credit Weight: 0.50

Course Consent Required: Choose an item.

Course Description: Selected aspects of Canadian provincial politics.

New course description (for revision only): This course examines the political process and societal cleavages in Canada, with a focus on new directions and debates in research. Topics may include elections and voting behaviour, social policy, gender, regionalism and nationalism, Indigenous politics, political culture, interest groups and social movements, and rights

Meet Type(s): Seminar Choose an item. Choose an item. Choose an item.

Primary Meet Type: Seminar

[Requisites:](#)

Special topics course: Yes No

Cross-listed: Yes No

Course Subject(s) to be cross-listed with and approval status:

Sections combined/heldwith:

Rationale for request:

PSCI 662 will be one of two required courses for students enrolled in the Canadian Politics field of the PhD in Political Science program. The updated course description and title will better fit with the field.

Faculty: Arts

Effective term: Term/Year Spring 2021

Course New Revision Inactivation

Milestone New Revision Inactivation

New milestone title: Choose an item.

For course revisions, indicate the type(s) of changes:
(e.g. consent, description, title, requisites)

Course Subject code: PSCI Course number: 610

Course Title (max. 100 characters incl. spaces): International Relations Theory

Course Short Title (max. 30 characters incl. spaces): International Relations Theory

Grading Basis: NUMERICAL

Course Credit Weight: 0.50

Course Consent Required: Choose an item.

Course Description: This course examines the major theories of International Relations (IR) and the current state of the field. It addresses the major IR theories, how they inform advanced research, and how they relate to the conduct of world politics.

New course description (for revision only):

Meet Type(s): Seminar Choose an item. Choose an item. Choose an item.

Primary Meet Type: Seminar

[Requisites:](#)

Special topics course: Yes No

Cross-listed: Yes No

Course Subject(s) to be cross-listed with and approval status:

Sections combined/heldwith:

Rationale for request:

PSCI 610 will be one of two required courses for students enrolled in the International Relations field of the PhD in Political Science program.

Faculty: Arts

Effective term: Term/Year Spring 2021

Course New Revision Inactivation

Milestone New Revision Inactivation

New milestone title: Choose an item.

For course revisions, indicate the type(s) of changes:
(e.g. consent, description, title, requisites)

Course Subject code: PSCI Course number: 611

Course Title (max. 100 characters incl. spaces): Current Issues in International Relations

Course Short Title (max. 30 characters incl. spaces): Curr. Issues in Intl Relations

Grading Basis: NUMERICAL

Course Credit Weight: 0.50

Course Consent Required: Choose an item.

Course Description: This course examines recent trends in world politics, their origins, and their policy implications.

New course description (for revision only):

Meet Type(s): Seminar Choose an item. Choose an item. Choose an item.

Primary Meet Type: Seminar

[Requisites:](#)

Special topics course: Yes No

Cross-listed: Yes No

Course Subject(s) to be cross-listed with and approval status:

Sections combined/heldwith:

Rationale for request:

PSCI 611 will be one of two required courses for students enrolled in the International Relations field of the PhD in Political Science program.

Prepared by: Shelby Davies

Date: 4-May-20

Faculty: Arts

Effective term: Term/Year Spring 2021

Course New Revision Inactivation Milestone New Revision Inactivation

New milestone title: Choose an item.

For course revisions, indicate the type(s) of changes:
(e.g. consent, description, title, requisites)

Course Subject code: PSCI Course number: 690

Course Title (max. 100 characters incl. spaces): Theories of Political Economy

Course Short Title (max. 30 characters incl. spaces): Theories of Political Economy

Grading Basis: NUMERICAL

Course Credit Weight: 0.50

Course Consent Required: Choose an item.

Course Description: An advanced examination of theoretical approaches to the study of political economy. The course explores both historical and contemporary approaches and how they inform political economy research.

New course description (for revision only):

Meet Type(s): Seminar Choose an item. Choose an item. Choose an item.

Primary Meet Type: Seminar

[Requisites:](#)Special topics course: Yes No Cross-listed: Yes No

Course Subject(s) to be cross-listed with and approval status:

Sections combined/heldwith:

Rationale for request:

PSCI 690 will be one of two required courses for students enrolled in the Political Economy field of the PhD in Political Science program.

Faculty: Arts

Effective term: Term/Year Spring 2021

Course New Revision Inactivation

Milestone New Revision Inactivation

New milestone title: Choose an item.

For course revisions, indicate the type(s) of changes:
(e.g. consent, description, title, requisites)

Course Subject code: PSCI Course number: 691

Course Title (max. 100 characters incl. spaces): Developments in Political Economy

Course Short Title (max. 30 characters incl. spaces): Devels. in Political Economy

Grading Basis: NUMERICAL

Course Credit Weight: 0.50

Course Consent Required: Choose an item.

Course Description: A survey of recent developments in the field of political economy that combines local, national, comparative, and international perspectives on states and markets, politics and business, wealth and power.

New course description (for revision only):

Meet Type(s): Seminar Choose an item. Choose an item. Choose an item.

Primary Meet Type: Seminar

[Requisites:](#)

Special topics course: Yes No

Cross-listed: Yes No

Course Subject(s) to be cross-listed with and approval status:

Sections combined/heldwith:

Rationale for request:

PSCI 691 will be one of two required courses for students enrolled in the Political Economy field of the PhD in Political Science program.

Faculty: Arts

Effective term: Term/Year Fall 2021

Course New Revision Inactivation Milestone New Revision Inactivation

New milestone title: Academic Integrity Workshop

For course revisions, indicate the type(s) of changes:
(e.g. consent, description, title, requisites)

Course Subject code: Choose an item. Course number:

Course Title (max. 100 characters incl. spaces):

Course Short Title (max. 30 characters incl. spaces):

Grading Basis: CREDIT/NO CREDIT

Course Credit Weight: Choose an item.

Course Consent Required: Choose an item.

Course Description:

New course description (for revision only):

Meet Type(s): Choose an item. Choose an item. Choose an item. Choose an item.

Primary Meet Type: Choose an item.

[Requisites:](#)Special topics course: Yes No Cross-listed: Yes No

Course Subject(s) to be cross-listed with and approval status:

Sections combined/heldwith:

Rationale for request:

Required milestone for all Faculty of Arts graduate students. Will be required for all students enrolled in the PhD in Political Science and PhD in Political Science – Co-operative programs.

Prepared by: Shelby Davies

Date: 27-Sep-19

Faculty: Arts

Effective term: Term/Year Fall 2021

Course New Revision Inactivation

Milestone New Revision Inactivation

New milestone title: Graduate Studies Work Report

For course revisions, indicate the type(s) of changes:
(e.g. consent, description, title, requisites)

Course Subject code: Choose an item. Course number:

Course Title (max. 100 characters incl. spaces):

Course Short Title (max. 30 characters incl. spaces):

Grading Basis: CREDIT/NO CREDIT

Course Credit Weight: Choose an item.

Course Consent Required: Choose an item.

Course Description:

New course description (for revision only):

Meet Type(s): Choose an item. Choose an item. Choose an item. Choose an item.

Primary Meet Type: Choose an item.

[Requisites:](#)

Special topics course: Yes No

Cross-listed: Yes No

Course Subject(s) to be cross-listed with and approval status:

Sections combined/heldwith:

Rationale for request:

Required milestone for all students enrolled in the PhD in Political Science - Co-operative program. The Work Report will be submitted for Department evaluation (CR/NCR basis) one month after placement ends. The milestone should be added to the following program: Doctor of Philosophy (PhD) in Political Science - Co-operative Program

Prepared by: Shelby Davies

Date: 27-Sep-19

Faculty: Arts

Effective term: Term/Year Fall 2021

Course New Revision Inactivation Milestone New Revision Inactivation

New milestone title: PhD Comprehensive Examination

For course revisions, indicate the type(s) of changes:
(e.g. consent, description, title, requisites)

Course Subject code: Choose an item. Course number:

Course Title (max. 100 characters incl. spaces):

Course Short Title (max. 30 characters incl. spaces):

Grading Basis: CREDIT/NO CREDIT

Course Credit Weight: Choose an item.

Course Consent Required: Choose an item.

Course Description:

New course description (for revision only):

Meet Type(s): Choose an item. Choose an item. Choose an item. Choose an item.

Primary Meet Type: Choose an item.

[Requisites:](#)Special topics course: Yes No Cross-listed: Yes No

Course Subject(s) to be cross-listed with and approval status:

Sections combined/heldwith:

Rationale for request:

Required milestone for all students enrolled in Political Science at the PhD-level. The milestone should be added to the following programs:

- 1) Doctor of Philosophy (PhD) in Political Science
- 2) Doctor of Philosophy (PhD) in Political Science - Co-operative Program

Prepared by: Shelby Davies

Date: 27-Sep-19

Faculty: Arts

Effective term: Term/Year Fall 2021

Course New Revision Inactivation

Milestone New Revision Inactivation

New milestone title: PhD Experiential Seminar

For course revisions, indicate the type(s) of changes:
(e.g. consent, description, title, requisites)

Course Subject code: Choose an item. Course number:

Course Title (max. 100 characters incl. spaces):

Course Short Title (max. 30 characters incl. spaces):

Grading Basis: CREDIT/NO CREDIT

Course Credit Weight: Choose an item.

Course Consent Required: Choose an item.

Course Description:

New course description (for revision only):

Meet Type(s): Choose an item. Choose an item. Choose an item. Choose an item.

Primary Meet Type: Choose an item.

[Requisites:](#)

Special topics course: Yes No

Cross-listed: Yes No

Course Subject(s) to be cross-listed with and approval status:

Sections combined/heldwith:

Rationale for request:

This milestone will be required for all students completing the Experiential Stream of the PhD in Political Science or the PhD in Political Science - Co-operative program. Students will be required to complete the following workshops: *Reflective practices in experiential learning*, *Writing resumes*, *Parallel career planning*, *MITACS* or *other campus partner module(s)* (as approved by Graduate Officer). Workshops will be offered in the Department, or through the support of campus partners (ex. Parallel Career Planning is offered by the Centre for Career Action). Attendance will be tracked in the Department; once all workshops are complete, a milestone completion form will be submitted for students for the PhD Experiential Seminar. The milestone should be added to the following programs:

- 1) Doctor of Philosophy (PhD) in Political Science

2) Doctor of Philosophy (PhD) in Political Science - Co-operative Program

Prepared by: Shelby Davies

Date: 27-Sep-19

Faculty: Arts

Effective term: Term/Year Fall 2021

Course New Revision Inactivation Milestone New Revision Inactivation

New milestone title: PhD Internship

For course revisions, indicate the type(s) of changes:
(e.g. consent, description, title, requisites)

Course Subject code: Choose an item. Course number:

Course Title (max. 100 characters incl. spaces):

Course Short Title (max. 30 characters incl. spaces):

Grading Basis: CREDIT/NO CREDIT

Course Credit Weight: Choose an item.

Course Consent Required: Choose an item.

Course Description:

New course description (for revision only):

Meet Type(s): Choose an item. Choose an item. Choose an item. Choose an item.

Primary Meet Type: Choose an item.

[Requisites:](#)Special topics course: Yes No Cross-listed: Yes No

Course Subject(s) to be cross-listed with and approval status:

Sections combined/heldwith:

Rationale for request:

Required milestone for all students completing the Experiential Stream of the PhD in Political Science program. The Internship will usually be a minimum 4-months in length, and will be completed after the student's PhD Thesis Proposal has been successfully defended. The milestone should be added to the following program: Doctor of Philosophy (PhD) in Political Science

Prepared by: Shelby Davies

Date: 27-Sep-19

Faculty: Arts

Effective term: Term/Year Fall 2021

Course New Revision Inactivation Milestone New Revision Inactivation

New milestone title: PhD Internship Report

For course revisions, indicate the type(s) of changes:
(e.g. consent, description, title, requisites)

Course Subject code: Choose an item. Course number:

Course Title (max. 100 characters incl. spaces):

Course Short Title (max. 30 characters incl. spaces):

Grading Basis: CREDIT/NO CREDIT

Course Credit Weight: Choose an item.

Course Consent Required: Choose an item.

Course Description:

New course description (for revision only):

Meet Type(s): Choose an item. Choose an item. Choose an item. Choose an item.

Primary Meet Type: Choose an item.

[Requisites:](#)Special topics course: Yes No Cross-listed: Yes No

Course Subject(s) to be cross-listed with and approval status:

Sections combined/heldwith:

Rationale for request:

Required milestone for all students completing the Experiential Stream of the PhD in Political Science program. The Internship Report will be submitted for Department evaluation (CR/NCR basis) one month after placement ends. The milestone should be added to the following program: Doctor of Philosophy (PhD) in Political Science

Prepared by: Shelby Davies

Date: 27-Sep-19

Faculty: Arts

Effective term: Term/Year Fall 2021

Course New Revision Inactivation Milestone New Revision Inactivation

New milestone title: PhD Professional Development Seminar

For course revisions, indicate the type(s) of changes:
(e.g. consent, description, title, requisites)

Course Subject code: Choose an item. Course number:

Course Title (max. 100 characters incl. spaces):

Course Short Title (max. 30 characters incl. spaces):

Grading Basis: CREDIT/NO CREDIT

Course Credit Weight: Choose an item.

Course Consent Required: Choose an item.

Course Description:

New course description (for revision only):

Meet Type(s): Choose an item. Choose an item. Choose an item. Choose an item.

Primary Meet Type: Choose an item.

Requisites:Special topics course: Yes No Cross-listed: Yes No

Course Subject(s) to be cross-listed with and approval status:

Sections combined/heldwith:

Rationale for request:

This milestone will be required for all students enrolled in Political Science at the PhD-level. Students will be required to complete the following workshops, offered in the Department of Political Science and administered by faculty members: *Research design and methods*, *Conducting literature review*, *Planning and best practices in fieldwork*, *Conferencing best practices*, *Careers in political science and translating skills for a non-academic job market*, and *Communicating research to a broader audience*. Workshop attendance will be tracked in the Department; once all workshops are complete, a milestone completion form will be submitted for students for the PhD Professional Development Seminar. The milestone should be added to the following programs:

- 1) Doctor of Philosophy (PhD) in Political Science

2) Doctor of Philosophy (PhD) in Political Science - Co-operative Program

Prepared by: Shelby Davies

Date: 27-Sep-19

Faculty: Arts

Effective term: Term/Year Fall 2021

Course New Revision Inactivation Milestone New Revision Inactivation

New milestone title: PhD Teaching Seminar

For course revisions, indicate the type(s) of changes:
(e.g. consent, description, title, requisites)

Course Subject code: Choose an item. Course number:

Course Title (max. 100 characters incl. spaces):

Course Short Title (max. 30 characters incl. spaces):

Grading Basis: CEDIT/NO CREDIT

Course Credit Weight: Choose an item.

Course Consent Required: Choose an item.

Course Description:

New course description (for revision only):

Meet Type(s): Choose an item. Choose an item. Choose an item. Choose an item.

Primary Meet Type: Choose an item.

Requisites:Special topics course: Yes No Cross-listed: Yes No

Course Subject(s) to be cross-listed with and approval status:

Sections combined/heldwith:

Rationale for request:

This milestone will be required for all students completing the Teaching Stream of the PhD in Political Science program. Students will be required to complete the following: *Centre for Teaching Excellence Fundamentals of University Teaching program, 2 Guest Lectures in Political Science (students will receive automatic credit if they have the opportunity to teach their own course as a sessional instructor), Develop a syllabus for a real or prospective Political Science course.* Students will be required to show the Department of Political Science proof of completion for the Fundamentals of University Teaching program. Progress for the other two components will be tracked in the Department. Once complete, a milestone completion form will be submitted for students for the PhD Teaching Seminar. The milestone should be added to the following program: Doctor of Philosophy (PhD) in Political Science

Faculty: Arts

Effective term: Term/Year Fall 2021

Course New Revision Inactivation

Milestone New Revision Inactivation

New milestone title: PhD Thesis

For course revisions, indicate the type(s) of changes:
(e.g. consent, description, title, requisites)

Course Subject code: Choose an item. Course number:

Course Title (max. 100 characters incl. spaces):

Course Short Title (max. 30 characters incl. spaces):

Grading Basis: CREDIT/NO CREDIT

Course Credit Weight: Choose an item.

Course Consent Required: Choose an item.

Course Description:

New course description (for revision only):

Meet Type(s): Choose an item. Choose an item. Choose an item. Choose an item.

Primary Meet Type: Choose an item.

[Requisites:](#)

Special topics course: Yes No

Cross-listed: Yes No

Course Subject(s) to be cross-listed with and approval status:

Sections combined/heldwith:

Rationale for request:

Required milestone for all students enrolled in Political Science at the PhD-level. The milestone should be added to the following programs:

- 1) Doctor of Philosophy (PhD) in Political Science
- 2) Doctor of Philosophy (PhD) in Political Science - Co-operative Program

Prepared by: Shelby Davies

Date: 27-Sep-19

Faculty: Arts

Effective term: Term/Year Fall 2021

Course New Revision Inactivation Milestone New Revision Inactivation

New milestone title: PhD Thesis Proposal

For course revisions, indicate the type(s) of changes:
(e.g. consent, description, title, requisites)

Course Subject code: Choose an item. Course number:

Course Title (max. 100 characters incl. spaces):

Course Short Title (max. 30 characters incl. spaces):

Grading Basis: CREDIT/NO CREDIT

Course Credit Weight: Choose an item.

Course Consent Required: Choose an item.

Course Description:

New course description (for revision only):

Meet Type(s): Choose an item. Choose an item. Choose an item. Choose an item.

Primary Meet Type: Choose an item.

[Requisites:](#)Special topics course: Yes No Cross-listed: Yes No

Course Subject(s) to be cross-listed with and approval status:

Sections combined/heldwith:

Rationale for request:

Required milestone for all students enrolled in Political Science at the PhD-level. The milestone should be added to the following programs:

- 1) Doctor of Philosophy (PhD) in Political Science
- 2) Doctor of Philosophy (PhD) in Political Science - Co-operative Program

Prepared by: Shelby Davies

Date: 27-Sep-19

**UNIVERSITY OF
WATERLOO**



**NEW GRADUATE PROGRAM PROPOSAL
OF
PHD
IN
POLITICAL SCIENCE**

**Submitted to the
Ontario Universities Council on Quality Assurance**

VOLUME II – FACULTY CURRICULA VITAE

February 2019

[Vol II available here](#)



EXTERNAL REVIEWERS' REPORT FOR NEW PROGRAMS

Reviewers' Report on the Proposed PhD Program in Political Science at the University of Waterloo.

Name

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Name

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SUMMARY

Please provide a brief synopsis of your review (2-4 paragraphs) that answers the following questions:

- What is the overall assessment of the quality of the proposed program? *Describe.*
- Provide a summary of your recommendations. *Please include the full list of recommendations in Section 4.*

Our overall assessment is that the quality of the proposed program is high. The admissions criteria and curriculum meet the current state of the discipline for political science. The three sub-discipline areas are appropriate given the faculty research and teaching areas of strength. The program is innovative in its inclusion of an optional experiential learning component. The program also includes explicit professional development training, a much-needed element in political science doctoral training.

Our recommendations focus on simplifying the program and ensuring sufficient student support in terms of office space, opportunity, and funding. We strongly recommend that the department revise the language of the program to recognize "specializations" rather than "streams", and we recommend that the specializations be limited to two. We recommend that students' office space be embedded in the department's main space, that students be allowed maximum flexibility with the timing of their experiential placements, and that students be guaranteed the opportunity to teach or co-teach a full semester class. We encourage the department to find

options to extend the funding period for students completing one or both of the specializations, and to explore options to strengthen methodological training. Finally, we encourage the department to work directly with the co-op and alumni offices as the program develops.

1. DETAILS OF THE SITE VISIT

1.1 Outline of the Visit

- With whom did you meet?

We met with the following individuals:

Gerald Boychuk, Professor, Political Science;

Kirsty Budd, Faculty Relations Manager, Arts, Co-op Education;

Jeff Casello, Associate Vice-President, Graduate Studies and Postdoctoral Affairs;

Alana Cattapan, Assistant Professor, Political Science;

Martin Cook, Acting Dean, Faculty of Arts;

Shelby Davies, Administrative Manager, Political Science;

Anna Drake, Assistant Professor; Political Science;

Maha Eid, Graduate Programs Coordinator, Political Science;

Anna Esselment, Associate Dean, Graduate Studies, Faculty of Arts;

Jane Forgay, Librarian, Information Services and Resources;

Jasmin Habib, Associate Professor, Political Science;

Dan Henstra, Associate Professor, Political Science;

Veronica Kitchen, Associate Professor, Political Science;

Emmett Macfarlane, Associate Chair, Graduate Studies, Political Science;

Amanda McKenzie, Director, Quality Assurance (Academic Programs);

John Ravenhill, Chair, Political Science;

Jim Rush, Vice-President Academic & Provost;

Richard Wikkerink, Director, Student & Faculty Relations, Co-op Education.

- What facilities were seen?

None. Our visit occurred remotely through Microsoft Teams as a result of the COVID-19 Pandemic.

- Discuss any other activities relevant to the appraisal.

None.

1.2 Effectiveness

In order to continuously improve the effectiveness and efficiency of site visits, please comment on the following:

- How effective was the proposal brief in preparing you for the visit?

The brief provided a great overview of the proposed structure of the new program. However, it would have been helpful had the brief provided a clear statement justifying the need, purpose and rationale for the new PhD program in political science. We also found that the brief didn't really give enough details on how the comprehensive exam process would be structured. This latter comment was also something mentioned independently to us by one of the senior members of UW's leadership team. Finally, some indication of departmental and university support would have been helpful, such as the outcomes of departmental votes on motions relating to the new program proposal and the inclusion of the appendices mentioned in the brief would have been helpful.

- How could the logistics of the visit be improved?

It might have been helpful to have the university provide someone who could take minutes for each meeting and to arrange for two meetings with the graduate chair: one at the beginning of the visit and one at the end after and before the first and exit interview with the AVP of GSPA, respectively.

2. EVALUATION CRITERIA

2.1 Objectives

For the following Yes/No questions, if 'No', please explain.

- Is the program consistent with the [University of Waterloo's mission](#) and relevant academic strategic plans?

Yes. The new program builds on the University of Waterloo's "brand" by proposing a potentially innovative experiential PhD program in political science while at the same time leveraging the department's strong and research-oriented faculty members in Canadian politics, International Relations, and International Political Economy to offer a research-oriented PhD.

- Are the program requirements and learning outcomes
 - in alignment with the University of Waterloo's [Undergraduate](#) or [Graduate](#) Degree Level Expectations?

Yes. The program requirements and learning outcomes make sense with some caveats described below.

- clear and appropriately communicated?

Yes.

- How do the program name and credential earned (e.g., BA, MSc, PhD, etc.)
 - reflect the content of the program?

The program name and credential earned make sense and reflect the content of the program. In our recommendations, we suggest the department use the language of “specializations” rather than “streams”; that the number of specializations be limited to two, both of which can be completed by all students; and that the teaching and learning specialization be strengthened to provide better training to the student.

- advance the program’s objectives?

The name and credential indicate the kind of training expected from a PhD political science program in Canada.

2.2 Admission requirements

For the following Yes/No questions, if ‘No’, please explain.

- Are admission requirements appropriately aligned with the learning outcomes established for completion of the program?

Yes, the admission requirements are similar to those used by PhD programs at other Canadian Universities. The logic of the new program is that all PhD students should receive the same base training (e.g. coursework, comprehensive exams, and three professional development modules) before choosing their specialization(s) in year 2. In one of our meetings, however, we raised the question about whether PhD students in the internship or co-op specializations would be disadvantaged when competing for co-op placements against undergrad and MPS/MA students for a number of reasons. The one response we received was that they would expect PhD students interested in the internship or co-op options are likely to be students with previous working experience and so would likely have no problems gaining a co-op placement. If that is a potential target for these options, then perhaps including work experience as part of the admission materials would be useful.

- Is there sufficient explanation of alternative requirements, *if any*, for admission into a graduate, second-entry or undergraduate program, such as minimum grade point average, additional languages or portfolios, along with how the program recognizes prior work or learning experience?

UW rules suggest that students cannot double count courses towards multiple degrees. Therefore, students entering the program will not be able to waive any of the course requirements on the basis of previous experience. Students who complete their MA at UW will have to take other courses, which may include courses they didn’t take during their MA (and the program commits to offering a minimum of 11 PhD/MA courses per year) and courses offered in the MPS and Balsillie programs. These rules seem reasonable.

2.3 Structure

For the following Yes/No questions, if ‘No’, please explain.

- Are the program’s structure and regulations appropriate to meet the specified program learning outcomes and Degree Level Expectations?

Yes, although we recommend that students in the teaching specialization be required and offered the opportunity to teach or team-teach their own course and that their regular funding package be topped up to ensure the TA portion of their funding matches that paid to a sessional instructor.

- For graduate programs, is there a clear rationale for program length that ensures that the program requirements can be reasonably completed within the proposed time period?

Yes, the program length is consistent with how the majority of PhD programs are constructed in Canada. That being said, most political science PhDs in Canada take an average of 6 years to complete and so we would strongly encourage the university to provide 5 years of funding for the new PhD program. As the university knows, the Ontario government provides students with 6 years of graduate funding. To the best of our knowledge, all political science MA programs in Ontario are 1 year programs and so we encourage the university to consider offering UW PhD students five years of funding to reflect this fact and to ensure this new program is competitive within what is already a highly competitive PhD market in Ontario.

2.4 Program Content

For the following Yes/No questions, if 'No', please explain.

- Does the curriculum reflect the current state of the discipline or area of study?

For the most part, yes. The one exception is the methodological training offered, which consists of a 0.5 credit course on epistemology, quantitative methods, and qualitative methods, and two half-day professional development modules on fieldwork and the thesis proposal. While acceptable, this level of doctoral methods training is extremely modest. It would be useful for the program to leverage the department's diverse strengths in qualitative methods to offer a graduate course on that topic, and to inform students of the option of taking other methods courses from nearby universities, such as Guelph, Laurier, McMaster, and Western.

- What evidence is there of any significant innovation, distinctiveness or creativity in the content and/or delivery of the program?

As far as we know, UW's proposed PhD experiential specialization will be the first political science program in Canada to require and offer an internship or co-op placement. This unique specialization is innovative, distinctive, and creative, and we applaud the department for proposing it. It has the potential to build upon the already strong reputation of the department while at the same time attracting students with diverse career goals that are not being served by existing PhD programs. There is an opportunity here as well to be innovative in terms of the teaching specialization by requiring these students to teach or team-teach their own course as part of their formalized teaching training.

- For research-focused graduate programs, is there a clear indication of the nature and suitability of the major research requirements for degree completion?

Yes, the program requirements are conventional: coursework, comprehensive exams, professional development modules, thesis proposal and thesis. Offering additional training in

qualitative methodology within the department and providing opportunities for students to find more advanced quantitative training outside of the department (such as at neighbouring universities or at the ICPSR, the Essex summer school, and LISPOP) would be beneficial.

- For graduate programs, are there sufficient graduate level courses that students will be able to meet the requirement that two-thirds of their course requirements be met through courses at the graduate level?

Yes.

2.5 Mode of Delivery

For the following Yes/No question, if 'No', please explain.

- Is the proposed mode(s) of delivery appropriate to meet the intended program learning outcomes and Degree Level Expectations?

Yes.

2.6 Assessment of Teaching and Learning

For the following Yes/No questions, if 'No', please explain.

All programs are expected to map the courses and related academic elements to the program learning outcomes and Degree Level Expectations ([UDLEs](#) or [GDLEs](#)). This section intends to evaluate these relationships.

- Is there a clear relationship between diverse academic elements: core courses, electives, and other program elements?

Yes.

- Are the proposed assessment methods appropriate to effectively show student achievement of program learning outcomes and Degree Level Expectations?

Yes.

- Is there a clear articulation of the plans for documenting and demonstrating the level of performance of students, consistent with the University of Waterloo's [Undergraduate](#) or [Graduate](#) Degree Level Expectations?

Yes.

2.7 Resources

For the following Yes/No questions, if 'No', please explain.

- Is the academic unit's (or units') planned use of existing resources (e.g., human,

physical) appropriate and effective for delivering the program? (*NOTE: Reviewers are encouraged to articulate and demonstrate the value added of any additional resources - e.g., new academic elements such as offering a new degree, or improved delivery of existing offerings, etc.*)

Yes. The faculty complement within the department is highly committed to the new PhD program. Political science is a research-intensive department and have the expertise and experience to offer a research, teaching, and experiential PhD in political science. Adding the proposed PhD program should attract strong students and increase the already strong research profile and productivity of the professors in the department. The program will also benefit the existing MA program by replacing cross-listed undergraduate-Masters classes with exclusive graduate classes.

We are, however, concerned that the department does not seem to have enough physical space to house all of its graduate students, and especially its PhD students, within the department itself. A necessary condition for this program to succeed is to ensure that the PhD students have office space on the same floor and ideally embedded within the area where faculty have their offices. Not only is this important for cohort building among the students, but it is also important for socializing the students into the norms of the discipline. Students and faculty need to be able to informally and formally meet in offices, hallways, and common spaces. These kinds of interactions allow for informal exchanges of research ideas and the building of research partnerships that may lead to co-authored publications. Our discipline is moving towards a co-authorship model and ensuring that the PhD students have the opportunity to interact with each other and faculty on a daily basis is necessary for the PhD program to succeed in terms of student training and placement.

In terms of other considerations, the staff are well-equipped and ready to administer the new program. We think it is absolutely essential that the department have a full time graduate program coordinator/administrator to manage existing graduate programs and the new PhD program, and we wholeheartedly support the department's request for a full time administrator.

- If necessary, is there sufficient evidence of the plans and commitment to provide the necessary resources in step with the implementation of the program?

The department has made it clear it will devote as many resources as possible to implement the new program. Our meetings with the associate dean of grad studies and the acting dean of the faculty of arts suggest they will support the department's desire for sufficient office space for their graduate students and will provide the necessary funding to ensure teaching stream students are able to teach or team-teach their own course.

On the other hand, there seem to be less enthusiasm from senior level leaders in terms of providing:

1) Fully-funded spots for international students. The Provost stated this is a faculty-level decision while the Dean's office indicated they simply can't address this issue given budgetary constraints. Coordination between the dean's office and upper administration is necessary to solve this issue since the proposed new program would be attractive to international students. Equally important, having international students in the program would benefit domestic students and faculty in numerous ways.

2) Five years of funding. As a new PhD program in a field with many political science PhD programs, one way that the university can ensure this program succeeds is to offer a funding package that is more competitive than the ones offered by the more established PhD programs in Canada. If five years of funding is not possible, then the university should consider providing the program with additional funding that allows it to offer more money beyond the minimum amount of 4 years at \$25,000 per year — at least for the first five years of the program's existence.

- Is there a sufficient number and quality of faculty and staff to achieve the goals of the program?

Absolutely. The faculty complement is strong, research oriented, and public facing. The members are active in producing first rate, policy oriented research and knowledge mobilization, all of which fit with the proposed specializations. The staff are committed, well-organized, and experienced. We have no doubt that the faculty and staff are well-prepared to implement this new program.

- Are the academic support services (e.g., library, co-op, technology, etc.), related to the program being reviewed, appropriate and effective?

Yes. The library is fully committed and able to provide the full range of support necessary for students to engage in and distribute their research. When asked whether the library could make available the reading lists for the comprehensive exam to the students electronically and by subfield/theme, for instance, the librarian agreed it was a good idea and would be happy to assist. She also was enthusiastic about providing support in the form of offering workshops and one-on-one consultations with PhD students and tracking which students took advantage of such services if doing so was helpful to the department in terms of its degree progression tracking.

Our meeting with co-op provided similar assurances that the co-op office was well-equipped and highly committed to helping the PhD program achieve its learning objectives.

For proposed graduate programs,

- Do faculty have adequate and recent research or professional/clinical expertise needed to sustain the program, promote innovation and foster an appropriate intellectual climate?

Yes. The department of political science has a strong mix of junior, mid-career, and senior faculty members to mount a PhD program around the three main subfields identified and to support students interested in research, teaching, and a co-op placement. Members are productive, publishing their research in good venues and winning prestigious awards and memberships in academic societies. They are adept at winning research grants and have experience in supervising graduate students.

- Where appropriate, is there adequate evidence that financial assistance for students will be sufficient to ensure the number and quality of students?

The minimum guaranteed funding package of four years at \$25,000 a year is bit below the average in Ontario. Ideally, the department would be able to offer five years of guaranteed funding for those students who wished to pursue the teaching, co-op or internship specializations and have access to money to top up offers for superior applicants. As a new program in a province in which there are many PhD programs, the success of UW's proposed program will at least partly depend on being able to offer strong financial packages to attract strong students away from more established programs.

While there is some centrally administered university funding for students to travel, it would be ideal if the department or faculty could provide funds for PhD students to cover expenses related to data collection and analysis, such as money to buy datasets or data analysis software, or to visit archives, or purchase equipment for recording and transcribing interviews, and the like.

- Is the quality and availability of graduate supervision sufficient?

Yes. The projected number of students to be admitted into the program annually (4) is modest given the size (20 tenure-stream members) and quality of the faculty members.

2.8 Quality Indicators

With regards to the faculty complement, comment on:

- Their qualifications, research and scholarly record
(NOTE: Reviewers are urged to avoid using references to individuals. Rather, they are asked to assess the ability of the faculty as a whole to deliver the program in view of the expertise and scholarly productivity of the faculty.)

The subfields that are at the core of the proposed PhD program (e.g. Canadian politics, International Political Economy, and International Relations) are excellent choices given the faculty complement. The University of Waterloo has a strong reputation in Canada in these three fields, given their personnel and research output. Faculty members publish with the best scholarly book presses and top journals in these subfields and win major scholarly awards that recognize this expertise.

- Evidence that the program's structure and faculty research will ensure the intellectual quality of the student experience

The proposed PhD program is in many ways conventional and similar to what is offered elsewhere in terms of coursework, comprehensive exams, professional development modules, thesis proposal and dissertation. The program goes beyond these conventional requirements to add additional modules and specific required training related to research, teaching, and non-academic careers as well as offering an experiential option. As a package, the program offers more than the conventional program and should contribute to a rich intellectual student experience.

3. RECOMMENDATIONS

List your recommendations, in priority order.

1. Revise the language of the program to recognize “specializations” rather than “streams”. We recommend two specializations that students can complete on top of the PhD training that all students complete: “Specialization in Teaching and Learning” and “Specialization in Applied Political Science”. The applied political science specialization can be defined to include co-op and internship options.
2. Provide all PhD students with office space on the department floor.
3. Allow students engaging in experiential learning to complete the experiential placement in the term immediately prior to the final oral defence, returning afterwards for one final academic term to defend the dissertation, if this option best meets their individual circumstances.
4. Provide all students engaging in the teaching and learning specialization the opportunity to teach or co-teach a full semester class, with funding stipends for this term increased to match sessional teaching rates to match the workload.
5. Explore options to increase PhD funding packages to five years of guaranteed funding for students who take one or both of the specializations.
6. Explore options to strengthen methodological training, such as encouraging students to complete additional methods training outside of the department and offering a qualitative methods course within the department, given departmental methodological expertise.
7. Work proactively with the co-op office to ensure the success of PhD getting appropriate doctoral-level placements.
8. Work with the alumni office to track all PhD students, including students who do not complete their programs, in order to establish a strong alumni network.

Signature: Loleen Berdahl - email confirmation on file **Date:** _____

Signature: Chris Alcantara - email confirmation on file **Date:** _____

Program Response to External Reviewers' Report Political Science (PhD) September 2020

General Commentary

We are pleased that the reviewers agree that the proposal is of high quality and that the Department is well positioned to mount a strong and innovative program. We thank the reviewers for their thoughtful comments and helpful recommendations. As discussed below, some of the reviewers' financial/funding recommendations are beyond the Department's control and the purview of the proposal itself, as they are subject to budget constraints facing all PhD programs in the Faculty of Arts.

Programs Response to External Reviewers' Recommendations

1. Revise the language of the program to recognize "specializations" rather than "streams". We recommend two specializations that students can complete on top of the PhD training that all students complete: "Specialization in Teaching and Learning" and "Specialization in Applied Political Science". The applied political science specialization can be defined to include co-op and internship options.

Response

We recognize that the language of "streams" seemed to add to the reviewers' perceptions of the program's complexity. As the proposal details, all students admitted to the program will enter the regular program. Students then have the option of adding the 'teaching' and/or 'experiential' streams (the latter of which includes the co-op option, or an internship, etc.). The reviewer's preference for referring to these program options as "specializations," would, however, introduce additional confusion as specializations at the University of Waterloo describe subject-area designations that students in some graduate programs can achieve through specific course-work. The language of streams refers to student program pathway options, as reflected in the proposal. We believe it appropriate to

retain the language of ‘streams,’ although we will work carefully to ensure that its meaning is clear in the program website and relevant student materials.

2. Provide all PhD students with office space on the department floor.

Response

We welcome this recommendation. The physical presence of PhD students within the departmental space is integral to developing a sense of community, culture, and collegiality, and for the marketability of the program. The recommendation also reflects the status quo in other departments of the Faculty of Arts (for example, Philosophy). The Department recently had a number of offices within the physical area of its space re-allocated by the Faculty for other uses, and ideally these offices could be re-allocated back to the Department for use by PhD students. Because this proposal is already outlined in section 3.4 of the Volume 1 document, we simply highlight this for future consideration by the Dean’s office.

3. Allow students engaging in experiential learning to complete the experiential placement in the term immediately prior to the final oral defence, returning afterwards for one final academic term to defend the dissertation, if this option best meets their individual circumstances.

Response

We agree that for many students conducting their placement closer to the end of their program completion will be ideal, and will help to ensure program completion. The existing proposal provides students with some flexibility in terms of the timing of co-op placements or internships, but the Department, via the graduate officer and graduate coordinator, plans to strongly advise students of this consideration when they are making decisions about placements. The Department will establish a system to track individual student progress and the completion of milestones. As part of this system, the timing of placements for students in the experiential stream will be reviewed and adjusted if problems arise.

4. Provide all students engaging in the teaching and learning specialization the opportunity to teach or co-teach a full semester class, with funding stipends for this term increased to match sessional teaching rates to match the workload.

Response

We welcome this recommendation as it matches our intentions. Given contemporary budget uncertainty, the Department did not feel it was in the position to provide a formal

retain the language of ‘streams,’ although we will work carefully to ensure that its meaning is clear in the program website and relevant student materials.

2. Provide all PhD students with office space on the department floor.

Response

We welcome this recommendation. The physical presence of PhD students within the departmental space is integral to developing a sense of community, culture, and collegiality, and for the marketability of the program. The recommendation also reflects the status quo in other departments of the Faculty of Arts (for example, Philosophy). The Department recently had a number of offices within the physical area of its space re-allocated by the Faculty for other uses, and ideally these offices could be re-allocated back to the Department for use by PhD students. Because this proposal is already outlined in section 3.4 of the Volume 1 document, we simply highlight this for future consideration by the Dean’s office.

3. Allow students engaging in experiential learning to complete the experiential placement in the term immediately prior to the final oral defence, returning afterwards for one final academic term to defend the dissertation, if this option best meets their individual circumstances.

Response

We agree that for many students conducting their placement closer to the end of their program completion will be ideal, and will help to ensure program completion. The existing proposal provides students with some flexibility in terms of the timing of co-op placements or internships, but the Department, via the graduate officer and graduate coordinator, plans to strongly advise students of this consideration when they are making decisions about placements. The Department will establish a system to track individual student progress and the completion of milestones. As part of this system, the timing of placements for students in the experiential stream will be reviewed and adjusted if problems arise.

4. Provide all students engaging in the teaching and learning specialization the opportunity to teach or co-teach a full semester class, with funding stipends for this term increased to match sessional teaching rates to match the workload.

Response

We welcome this recommendation as it matches our intentions. Given contemporary budget uncertainty, the Department did not feel it was in the position to provide a formal

guarantee in the proposal or academic calendar that every student will have the opportunity to teach a full course, or regarding increased stipends. However, the Department plans to prioritize PhD students in the allocation of teaching opportunities, and believes that most if not all students in the teaching stream will get the opportunity to teach. Consistent with the university's Strategic Plan, which outlines a commitment "to create more flexible learning pathways aligned with the future of work and learning," the Department believes PhD students can provide novel programming and unique course offerings to student in undergraduate programs.

5. Explore options to increase PhD funding packages to five years of guaranteed funding for students who take one or both of the specializations.

Response

We welcome this recommendation in principle, while recognizing the decision remains at the Faculty and university level. The University and the Faculty of Arts guarantees a minimum of four years of funding to PhD students. In practice, many students are funded beyond four years, largely as a result of faculty research grants, scholarships, etc. The Department's excellent track record in securing external funding suggests that this will be the case with Political Science PhD students as well.

6. Explore options to strengthen methodological training, such as encouraging students to complete additional methods training outside of the department and offering a qualitative methods course within the department, given departmental methodological expertise.

Response

The proposal's course requirements as it relates to methodological training matches the standard at most PhD-granting political science programs in Canada. Political science research entails a wide variety methodological approaches, and the required methods course will give students a grounding in these pluralistic approaches. The proposal notes that we will be encouraging students to gain additional methods training, more specifically tailored to the needs of the individuals, as part of the broader professional development requirements all students in the program will be required to complete. Students will also receive advice about methods training offered outside of the program, such as courses and events in the MPS program, and at neighbouring institutions and programs (like LISPOP at Wilfrid Laurier University). As part of its tracking of student progress and milestone completion, the Department will monitor student satisfaction with established methods instruction and ensure access to the enhanced training opportunities provided by the

professional development requirements. This will also be formally evaluated two years after the first intake within the Two-Year Progress Report.

7. Work proactively with the co-op office to ensure the success of PhD students securing appropriate doctoral-level placements.

Response

We welcome this recommendation and it is reflected in our plans and in the co-op feasibility report attached as an appendix to the Volume 1 report.

8. Work with the alumni office to track all PhD students, including students who do not complete their programs, in order to establish a strong alumni network.

Response

We welcome this recommendation and it is our plan to maintain strong connections to program alumni. We have recently made similar efforts at the MA level, and can replicate those efforts in collaboration with the alumni office at the PhD level.

Recommendations Not Selected for Implementation

For reasons described above, we are not revising the proposal to change the language of 'streams' to 'specializations'. Generally, the recommendations relating to finances/funding are beyond the Department's purview, and thus do not result in revisions either.

Signature of Approval



21 September 2020

Chair/Director
John Ravenhill

Date

Dean's Response to External Reviewers' Report Political Science (PhD) October 2020

General Commentary

This program has the full support and endorsement of the Faculty of Arts.

Dean's Response to External Reviewers' Recommendations

1. Revise the language of the program to recognize "specializations" rather than "streams". We recommend two specializations that students can complete on top of the PhD training that all students complete: "Specialization in Teaching and Learning" and "Specialization in Applied Political Science". The applied political science specialization can be defined to include co-op and internship options.

Response

Terminology can sometimes be confusing when referring to specializations or streams. At the University of Waterloo, specializations usually mean additional designations that come with added or customized course work. "Streams" or "pathways" are more often employed to describe options for students within a degree. I therefore support the original language in this respect.

2. Provide all PhD students with office space on the department floor.

Response

Space in the Faculty of Arts is always at a premium. However, I recognize the need for new doctoral students to feel part of the department culture, to develop networks and support structures, and to be close to faculty instructors, supervisors, and committee members. The Department of Political Science does have office space on the floor that can be dedicated to PhD students for the first two years of the program at least, and I am committed to working with the Department on its space needs after that.

3. Allow students engaging in experiential learning to complete the experiential placement in the term immediately prior to the final oral defence, returning afterwards for one final

academic term to defend the dissertation, if this option best meets their individual circumstances.

Response

I am supportive of this recommendation, but also note that the department will be carefully advising students regarding the timing of any experiential/co-op placements. As per UW regulations, all students must end their degree on a full academic term if they are part of a co-op/experiential stream.

4. Provide all students engaging in the teaching and learning specialization the opportunity to teach or co-teach a full semester class, with funding stipends for this term increased to match sessional teaching rates to match the workload.

Response

I am supportive of the recommendation to have doctoral candidates in the teaching and learning stream to have the opportunity to teach or co-teach a full semester class. This would be managed by the department, according to their teaching needs. Any doctoral candidate who bears responsibility for teaching a full semester class is paid the sessional teaching rate, although the scholarship portion of their funding package from Arts is reduced in the following term. The Department will make this clear to students, so that they can make financial plans accordingly.

5. Explore options to increase PhD funding packages to five years of guaranteed funding for students who take one or both of the specializations.

Response

The University will not agree to a five-year funding package.

6. Explore options to strengthen methodological training, such as encouraging students to complete additional methods training outside of the department and offering a qualitative methods course within the department, given departmental methodological expertise.

Response

The Department has noted that the methods training it will require as part of the curriculum is the norm for many Political Science PhD programs in Canada. I am supportive of the Department encouraging students to complete additional methodological training if instructors/supervisors/committee members suggest that it would be valuable to the student's dissertation project, in particular.

7. Work proactively with the co-op office to ensure the success of PhD getting appropriate doctoral-level placements.

Response

I am supportive of this recommendation. The PSCI department oversees UW's largest graduate co-op program (Master of Public Service), and so these doctoral students will be well-supported by both co-op and the department to be competitively placed for appropriate-level co-op positions.

8. Work with the alumni office to track all PhD students, including students who do not complete their programs, in order to establish a strong alumni network.

Response

I am supportive of this recommendation in part, though any work with alumni must take place within the parameters determined by the University and the Faculty. However, I do not consider it advisable to treat those who do not complete the program (whether voluntarily or involuntarily) as if they were alumni, and I do not support this part of the recommendation.

Recommendations Not Selected for Implementation

- Changing the language from streams to specializations.
- Five year funding package.
- Tracking individuals who leave the program as if they were alumni.

Signature of Approval

11 October 2020

Faculty Dean**Date**

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

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

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

Faculty: Applied Health Sciences

Program: Doctor of Philosophy (PhD) in Kinesiology - Work and Health

Program contact name(s): Andrew Laing

Form completed by:

Description of proposed changes:

Note: changes to courses and milestones also require the completion/submission of the SGRC Course/Milestone-New/Revision/Inactivation form ([PC docx version](#) or [MAC docx version](#)).

Discontinue the collaborative program in Work and Health.

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

Rationale for change(s): The AHS collaborative program in Work and Health has had low enrolment in the past five years and Faculty whose research interests centre around Work and Health feel that the student's interests are fully accommodated within the Department-specific program.

Proposed effective date: Term: Winter Year: 2021

Current [Graduate Studies Academic Calendar \(GSAC\)](#) page (include the link to the web page where the changes are to be made):

<https://uwaterloo.ca/graduate-studies-academic-calendar/applied-health-sciences/department-kinesiology/doctor-philosophy-phd-kinesiology-work-and-health>

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:
<p>DOCTOR OF PHILOSOPHY (PHD) IN KINESIOLOGY - WORK AND HEALTH</p> <p>Program information</p> <ul style="list-style-type: none"> <input type="checkbox"/> Admit term(s) <ul style="list-style-type: none"> <input type="radio"/> Fall <input type="checkbox"/> Delivery mode <ul style="list-style-type: none"> <input type="radio"/> On-campus <input type="checkbox"/> Length of program <ul style="list-style-type: none"> <input type="radio"/> Must be completed within 12 terms (full time) from completion of the Master's degree. <input type="radio"/> Students must have permission of the Department Graduate Committee to continue enrolment beyond term limits. 	

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:
<ul style="list-style-type: none"> o Students are expected to devote as much time as is necessary to complete their thesis within this timeline. o Students must be continuously enrolled at the University to the end of the term in which they complete the degree requirements. □ Program type <ul style="list-style-type: none"> o Collaborative o Doctoral o Research □ Registration option(s) <ul style="list-style-type: none"> o Full-time o Part-time □ Study option(s) <ul style="list-style-type: none"> o Thesis <p>Admission requirements</p> <ul style="list-style-type: none"> □ Minimum requirements <ul style="list-style-type: none"> o A Master's degree with a minimum 75% average in a relevant field (normally Kinesiology, Recreation and Leisure Studies, or Health Studies and Gerontology, but other degrees in Life, Behavioural and Social Sciences could be suitable as well). o Letter stating research interests and why the student wishes to pursue graduate studies. □ Application materials <ul style="list-style-type: none"> o Curriculum vitae o Supplementary information form o Transcript(s) o Writing sample <ul style="list-style-type: none"> □ Submit one copy of a term paper, research project or thesis written during the last year of their master's studies. □ References <ul style="list-style-type: none"> o Number of references: 3 o Type of references: from faculty members who taught the student while in a Master's program. Normally, 1 must be from the Master's supervisor. □ English language proficiency (ELP) (if applicable) <p>Degree requirements</p> <p>Thesis option:</p> <ul style="list-style-type: none"> □ Graduate Academic Integrity Module (Graduate AIM) 	

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:
<ul style="list-style-type: none"> <input type="checkbox"/> Courses <ul style="list-style-type: none"> <input type="checkbox"/> Students will normally complete a minimum of 2.00 units of graduate courses (e.g. 4 courses each at a 0.50-unit weight), that must include the courses listed below. All graduate courses must be assigned a numerical grade. Students must obtain an average of at least 75% in the set of courses which they present in fulfilment of course requirements. A grade below 70% on any individual course or an average below 75% on the set of courses for the degree will result in a review of the student's status by the Department Graduate Committee. If a student receives a grade in any individual course below 60%, the Department Graduate Committee review may result in the requirement to withdraw from the program. If the student is permitted to proceed, any course with a grade below 60% will not be eligible towards the degree requirements, thus requiring the course to be repeated or additional course-work to be completed. <ul style="list-style-type: none"> <input type="checkbox"/> KIN 730 Fundamentals of Work and Health (0.50 units) <input type="checkbox"/> KIN 731 Approaches to Research in Work and Health (0.50 units) <input type="checkbox"/> 0.50 units of graduate level statistics/research methods <input type="checkbox"/> Students must also complete the following CR/NCR graduate seminars: <ul style="list-style-type: none"> <input type="checkbox"/> KIN 732A Work and Health Research Seminar I <input type="checkbox"/> KIN 732B Work and Health Research Seminar II <input type="checkbox"/> Link(s) to courses <ul style="list-style-type: none"> <input type="checkbox"/> Kinesiology (KIN) courses <input type="checkbox"/> Graduate course search <input type="checkbox"/> Academic Integrity Workshop <input type="checkbox"/> PhD Professional Development Seminar <ul style="list-style-type: none"> <input type="checkbox"/> Students are required to complete a series of professional development seminars and workshops throughout their program of study. <input type="checkbox"/> PhD Comprehensive Examination <ul style="list-style-type: none"> <input type="checkbox"/> Students are required to meet the University-level PhD Comprehensive Examination minimum requirements outlined in the "Minimum requirements for the PhD degree" section of the 	

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:
<p>Graduate Studies Academic Calendar (GSAC), with certain noted differences that are specific to the Faculty of Applied Health Sciences</p> <p>Comprehensive Examination minimum requirements:</p> <ul style="list-style-type: none"> ☐ Comprehensive examination purpose: Consistent with University-level minimum requirements. Note: In the Faculty of Applied Health Sciences, the novel research topic is tested through a separate thesis proposal process. ☐ Timing: Consistent with University-level minimum requirements. ☐ Committee: Consistent with University-level minimum requirements with the exception that in the Faculty of Applied Health Sciences, the composition of the comprehensive examining committee will be approved by the Associate Chair or Director, Graduate Studies for the student's Department/School, as delegated by the Associate Dean, Graduate Studies. ☐ Who Chairs an examination: Consistent with University-level minimum requirements. ☐ Format / Content: Consistent with University-level minimum requirements. ☐ Academic integrity: Consistent with University-level minimum requirements. <p>☐ PhD Thesis</p> <ul style="list-style-type: none"> ○ Thesis Proposal: Following successful completion of the comprehensive exam, each student will be required to compete a PhD thesis proposal. The proposal involves a written document related to the student's thesis area. The thesis project and proposal are developed in consultation with the supervisor. Each student must orally defend the thesis proposal to the Advisory Committee, consisting of the supervisor (or co-supervisors), and two other members (one of which must be from a home Department within the 	

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:
<p>collaborative program in Work and Health). A chair to oversee the oral thesis proposal defense will be appointed by the home Department.</p> <ul style="list-style-type: none"> o Thesis Defence: Each student is required to submit a thesis embodying the results of original research carried out under the direction of an Advisory Committee headed by the supervisor. The candidate defends the thesis before an Examining Committee approved by the Department Graduate Committee. The Examining Board should consist of the Advisory Committee (see thesis proposal above), an additional member that is external to the Department (referred to as the internal-external), and finally an additional member that is external to the University (referred to as the external examiner). o The thesis will be in an area relevant to Work and Health. <ul style="list-style-type: none"> <input type="checkbox"/> Other requirements <ul style="list-style-type: none"> o Student evaluation: A review of each student's progress by both the supervisor and Department Graduate Committee takes place each year. Students are evaluated on several criteria, including performance in courses, progress towards course and milestone completion, thesis progress, scholarly activity, and research and teaching assistantship activity. 	

How will students currently registered in the program be impacted by these changes? There are no students currently enrolled in the program.

- Department/School approval date** (06//23/20):
- Reviewed by GSPA** (for GSPA use only) date (mm/dd/yy):
- Faculty approval date** (mm/dd/yy):
- Senate Graduate & Research Council (SGRC) approval date** (mm/dd/yy):
- Senate approval date** (mm/dd/yy) (if applicable):

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

Faculty: Applied Health Sciences

Program: Doctor of Philosophy (PhD) in Recreation and Leisure Studies - Work and Health

Program contact name(s): Bryan Grimwood

Form completed by:

Description of proposed changes:

Note: changes to courses and milestones also require the completion/submission of the SGRC Course/Milestone-New/Revision/Inactivation form ([PC docx version](#) or [MAC docx version](#)).

Discontinue the collaborative program in Work and Health.

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

Rationale for change(s): The AHS collaborative program in Work and Health has had low enrolment in the past five years and Faculty whose research interests centre around Work and Health feel that the student's interests are fully accommodated within the Department-specific program.

Proposed effective date: Term: Winter Year: 2021

Current [Graduate Studies Academic Calendar \(GSAC\)](#) page (include the link to the web page where the changes are to be made):

<https://uwaterloo.ca/graduate-studies-academic-calendar/applied-health-sciences/department-recreation-and-leisure-studies/doctor-philosophy-phd-recreation-and-leisure-studies-work-and-health>

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:
<p>DOCTOR OF PHILOSOPHY (PHD) IN RECREATION AND LEISURE STUDIES - WORK AND HEALTH</p> <p>Program information</p> <ul style="list-style-type: none"> <input type="checkbox"/> Admit term(s) <ul style="list-style-type: none"> <input type="radio"/> Fall <input type="checkbox"/> Delivery mode <ul style="list-style-type: none"> <input type="radio"/> On-campus <input type="checkbox"/> Length of program <ul style="list-style-type: none"> <input type="radio"/> Must be completed within the following time periods from completion of the Master's degree unless an extension has been granted: <ul style="list-style-type: none"> <input type="checkbox"/> Full-time: 12 terms <input type="checkbox"/> Part-time: 18 terms 	

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:
<ul style="list-style-type: none"> <input type="checkbox"/> Program type <ul style="list-style-type: none"> <input type="checkbox"/> Collaborative <input type="checkbox"/> Doctoral <input type="checkbox"/> Research <input type="checkbox"/> Registration option(s) <ul style="list-style-type: none"> <input type="checkbox"/> Full-time <input type="checkbox"/> Part-time <input type="checkbox"/> Study option(s) <ul style="list-style-type: none"> <input type="checkbox"/> Thesis <p>Admission requirements</p> <ul style="list-style-type: none"> <input type="checkbox"/> Minimum requirements <ul style="list-style-type: none"> <input type="checkbox"/> Normally a Master's degree with a minimum 75% average in a field that is relevant to the area of work and health (normally kinesiology, recreation and leisure studies or health studies and gerontology, but other degrees in life and social sciences could be suitable as well). <input type="checkbox"/> Application materials <ul style="list-style-type: none"> <input type="checkbox"/> Résumé/Curriculum vitae <ul style="list-style-type: none"> <input type="checkbox"/> Indicating past academic and professional experience. <input type="checkbox"/> Supplementary information form <input type="checkbox"/> Transcript(s) <input type="checkbox"/> Writing sample <ul style="list-style-type: none"> <input type="checkbox"/> Students must submit a copy of previous academic work, such as a term paper, published manuscript or master's thesis. <input type="checkbox"/> References <ul style="list-style-type: none"> <input type="checkbox"/> Number of references: 3 <input type="checkbox"/> Type of references: academic <input type="checkbox"/> English language proficiency (ELP) (if applicable) <p>Degree requirements</p> <p>Thesis option:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Graduate Academic Integrity Module (Graduate AIM) <input type="checkbox"/> Courses <ul style="list-style-type: none"> <input type="checkbox"/> Students must obtain credit for each of the courses listed below. They will normally complete a minimum of 4 half (0.50 credit) courses, consisting of 2 core/fundamentals course, a graduate-level statistics/research methods course, and an elective which will be related to work and health. In addition, 	

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:
<p>students will participate in the doctoral research seminar in work and health.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Foundational Knowledge on Work and Health <input type="checkbox"/> Approaches to Research in Work and Health <input type="checkbox"/> A Graduate Level Course in Research Methods or Statistics <input type="checkbox"/> 1 elective course (see list of electives below) <input type="checkbox"/> Work and Health Seminar (graded on credit basis) <p>o Elective courses:</p> <ul style="list-style-type: none"> <input type="checkbox"/> REC 601 Theoretical and Methodological Issues in Leisure Research <input type="checkbox"/> REC 603 Leisure and Social Policy <input type="checkbox"/> REC 605 Social and Psychological Analysis of Leisure <input type="checkbox"/> REC 608 Gender, Leisure & the Use of Time <input type="checkbox"/> REC 610 Administrative Practice in Recreational Service <input type="checkbox"/> REC 672 Quantitative Research Data Analysis and Interpretation <input type="checkbox"/> REC 673 Qualitative Research Data Analysis and Interpretation <input type="checkbox"/> REC 792 Advanced Research Methods (PhD only) <input type="checkbox"/> REC 798 Advanced Topics in Leisure Studies (PhD only) <input type="checkbox"/> KIN 601 Muscle Physiology <input type="checkbox"/> KIN 602 Respiratory and Cardiovascular Physiology <input type="checkbox"/> KIN 616 Neural Control of Human Movement <input type="checkbox"/> KIN 620 Ergonomic Aspects of Occupational Musculoskeletal Injuries <input type="checkbox"/> KIN 631A Introduction to Statistics <input type="checkbox"/> KIN 631C Correlation and Regression <input type="checkbox"/> KIN 631E Analysis of Variance I <input type="checkbox"/> KIN 631F Analysis of Variance II <input type="checkbox"/> KIN 631G Biological Deterministic Modeling and Signal Processing <input type="checkbox"/> KIN 651 Motor Learning <input type="checkbox"/> KIN 656 Neurobehavioural Analyses of Perceptual and Motor Deficits 	

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:
<ul style="list-style-type: none"> <input type="checkbox"/> KIN 727 Low Back Disorders: Optimizing Prevention, Rehabilitation and Performance <input type="checkbox"/> HSG 601 Lifespan Approaches to Health Promotion and Disease Prevention <input type="checkbox"/> HSG 604 Evaluation of Health and Human Services Programs <input type="checkbox"/> HSG 605A Introduction to Statistics <input type="checkbox"/> HSG 605C Correlation and Regression <input type="checkbox"/> HSG 605E E Analysis of Variance I <input type="checkbox"/> HSG 605F Analysis of Variance II <input type="checkbox"/> HSG 606 Epidemiological Methods <input type="checkbox"/> PHS 604 Public Health and the Environment (online course) <input type="checkbox"/> Link(s) to courses <ul style="list-style-type: none"> <input type="checkbox"/> Recreation and Leisure Studies (REC) courses <input type="checkbox"/> Graduate course search <input type="checkbox"/> Academic Integrity Workshop <input type="checkbox"/> PhD Research Seminar <ul style="list-style-type: none"> <input type="checkbox"/> Students will participate in the PhD Research Seminar in Work and Health. <input type="checkbox"/> Research Presentation <ul style="list-style-type: none"> <input type="checkbox"/> All PhD students in the Department of Recreation and Leisure Studies in their second year or later must deliver a public research presentation to faculty and students during their doctoral program. Forums at which this milestone can be completed are the PhD Research Seminar or an independently arranged departmental seminar (excludes conferences and symposia). Supervisor approval/confirmation of completion of this milestone is required. <input type="checkbox"/> PhD Comprehensive Examination <ul style="list-style-type: none"> <input type="checkbox"/> Students are required to meet the University-level PhD Comprehensive Examination minimum requirements outlined in the "Minimum requirements for the PhD degree" section of the Graduate Studies Academic Calendar (GSAC), with certain noted differences that are specific to the Faculty of Applied Health Sciences Comprehensive Examination minimum requirements: 	

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:
<ul style="list-style-type: none"> <input type="checkbox"/> Comprehensive examination purpose: Consistent with University-level minimum requirements. Note: In the Faculty of Applied Health Sciences, the novel research topic is tested through a separate thesis proposal process. <input type="checkbox"/> Timing: Consistent with University-level minimum requirements. <input type="checkbox"/> Committee: Consistent with University-level minimum requirements with the exception that in the Faculty of Applied Health Sciences, the composition of the comprehensive examining committee will be approved by the Associate Chair or Director, Graduate Studies for the student's Department/School, as delegated by the Associate Dean, Graduate Studies. <input type="checkbox"/> Who Chairs an examination: Consistent with University-level minimum requirements. <input type="checkbox"/> Format / Content: Consistent with University-level minimum requirements. <input type="checkbox"/> Academic integrity: Consistent with University-level minimum requirements. <input type="checkbox"/> PhD Thesis <ul style="list-style-type: none"> <input type="checkbox"/> A PhD thesis proposal is required of all PhD students after passing the comprehensive examinations, and before proceeding to data collection. The proposal should contain a detailed statement of the research problem and its significance for a body of leisure-related theory, a precise account of the methodology or research techniques to be employed, plus a detailed outline of the proposed data analyzes. The candidate will be required to present and defend this proposal before the thesis committee. The final thesis report based on the completed research must also be successfully defended to satisfy the thesis requirement. The PhD thesis advisory committee is normally comprised of a minimum of three members including 	

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:
<p>the supervisor, one faculty member appointed in the student's department, and one other member from either the student's department or from another department within the University. Normally, any additional members of the advisory committee must have academic appointment. The thesis advisory committee must be approved by the Associate Chair, Graduate Studies. The proposal will be defended before the thesis advisory committee. Upon completion of the thesis, the final document will be defended before a five person Examination Board made up of the supervisor, three other members of the University community (two of whom are normally the advisory committee members and one other individual from outside the home department), and an external examiner.</p> <ul style="list-style-type: none"> ○ The thesis will be on a topic in an area relevant to Work and Health. <input type="checkbox"/> Other requirements <ul style="list-style-type: none"> ○ Student evaluation: a review of each student's progress takes place during the month of May each year. Students are evaluated on several criteria, including performance in courses, progress with regard to the comprehensive examination and thesis work and, where appropriate, reports submitted by the students regarding their research and teaching assistantship activity. A grade average of at least 75% must be maintained. 	

How will students currently registered in the program be impacted by these changes? There are no students currently enrolled in the program.

Department/School approval date (06/30/20):

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

Faculty approval date (mm/dd/yy):

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

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

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

Faculty: Applied Health Sciences

Program: Doctor of Philosophy (PhD) in Public Health and Health Systems - Work and Health

Program contact name(s): Ellen MacEachen

Form completed by:

Description of proposed changes:

Note: changes to courses and milestones also require the completion/submission of the SGRC Course/Milestone-New/Revision/Inactivation form ([PC docx version](#) or [MAC docx version](#)).

Discontinue the collaborative program in Work and Health.

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

Rationale for change(s): The AHS collaborative program in Work and Health has had low enrolment in the past five years and Faculty whose research interests centre around Work and Health feel that the student's interests are fully accommodated within the Department-specific program.

Proposed effective date: Term: Winter Year: 2021

Current [Graduate Studies Academic Calendar \(GSAC\)](#) page (include the link to the web page where the changes are to be made):

<https://uwaterloo.ca/graduate-studies-academic-calendar/applied-health-sciences/school-public-health-and-health-systems/doctor-philosophy-phd-public-health-and-health-systems-work-and-health>

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:
<p>DOCTOR OF PHILOSOPHY (PHD) IN PUBLIC HEALTH AND HEALTH SYSTEMS - WORK AND HEALTH</p> <p>Program information</p> <ul style="list-style-type: none"> <input type="checkbox"/> Admit term(s) <ul style="list-style-type: none"> <input type="radio"/> Fall <input type="checkbox"/> Delivery mode <ul style="list-style-type: none"> <input type="radio"/> On-campus <input type="checkbox"/> Length of program <ul style="list-style-type: none"> <input type="radio"/> Must be completed within the following time periods from completion of the Master's degree unless an extension has been granted: <ul style="list-style-type: none"> <input type="checkbox"/> Full-time: 12 terms 	

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:
<p><input type="checkbox"/> Part-time: 18 terms</p> <p><input type="checkbox"/> Program type</p> <ul style="list-style-type: none"> <input type="radio"/> Collaborative <input type="radio"/> Doctoral <input type="radio"/> Research <p><input type="checkbox"/> Registration option(s)</p> <ul style="list-style-type: none"> <input type="radio"/> Full-time <input type="radio"/> Part-time <p><input type="checkbox"/> Study option(s)</p> <ul style="list-style-type: none"> <input type="radio"/> Thesis <p>Admission requirements</p> <p><input type="checkbox"/> Minimum requirements</p> <ul style="list-style-type: none"> <input type="radio"/> Normally a Master's degree with a minimum 75% average in a field that is relevant to the area of work and health (normally kinesiology, recreation and leisure studies or health studies and gerontology, but other degrees in life, behavioural and social sciences could be suitable as well). <input type="radio"/> Submit a letter indicating reasons for pursuing graduate studies and a written statement outlining research interests. <p><input type="checkbox"/> Application materials</p> <ul style="list-style-type: none"> <input type="radio"/> Résumé/Curriculum vitae <input type="radio"/> Supplementary information form <input type="radio"/> Transcript(s) <input type="radio"/> Writing sample <ul style="list-style-type: none"> <input type="checkbox"/> Students must submit a copy of previous academic work, such as copies of preprints, reprints, or master's thesis, or other evidence of written scholarly work. <p><input type="checkbox"/> References</p> <ul style="list-style-type: none"> <input type="radio"/> Number of references: 3 <input type="radio"/> Type of references: academic <p><input type="checkbox"/> English language proficiency (ELP) (if applicable)</p> <p>Degree requirements</p> <p>Thesis option:</p> <p><input type="checkbox"/> Graduate Academic Integrity Module (Graduate AIM)</p> <p><input type="checkbox"/> Courses</p> <ul style="list-style-type: none"> <input type="radio"/> With the exception of HLTH 701 Interdisciplinary Seminar in Public Health and Health Systems, students must fulfill the minimum requirements of the PhD program in the School of 	

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:
<p>Public Health and Health Systems (SPHHS) and will normally complete a minimum of 9 one-term (0.50 unit) graduate courses beyond an Honours Bachelor degree, including at least 4 courses beyond the Master's degree. Course requirements are as follows:</p> <ul style="list-style-type: none"> □ HLTH 730 Fundamentals of Work and Health □ HSG 731 Approaches to Research in Work and Health □ 1 graduate level statistics/research methods course (1 of HLTH 704, HLTH 705, HLTH 706, or HLTH 719) with assignments and major projects focused on work and health □ 1 additional elective course related to work and health <p>○ Students must also complete the following CR/NCR graduate seminars:</p> <ul style="list-style-type: none"> □ HSG 732A Work and Health Research Seminar I and HLTH 732B Work and Health Research Seminar II <p>○ At a minimum, students must obtain an average of 75% or higher in aggregate on the courses presented in fulfilment of the degree requirements. Grades on all courses presented to fulfill the degree requirements must be 70% or higher. A grade below 70% in any course or failing to maintain an average of 75% will necessitate a review of the student's status by the School and may result in a student being required to complete additional coursework or being required to withdraw from the program. The School reserves the right to stipulate additional coursework if it is necessary for the student's preparation.</p> <ul style="list-style-type: none"> □ Link(s) to courses <ul style="list-style-type: none"> ○ Health Studies (HLTH) courses ○ Graduate course search □ Academic Integrity Workshop □ PhD Comprehensive Examination <ul style="list-style-type: none"> ○ Students are required to meet the University-level PhD Comprehensive Examination minimum requirements outlined in the "Minimum requirements for the PhD degree" section of the Graduate Studies Academic Calendar (GSAC), with certain noted differences that are specific to the Faculty of 	

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:
<p>Applied Health Sciences Comprehensive Examination minimum requirements:</p> <ul style="list-style-type: none"> ☐ Comprehensive examination purpose: Consistent with University-level minimum requirements. Note: In the Faculty of Applied Health Sciences, the novel research topic is tested through a separate thesis proposal process. ☐ Timing: Consistent with University-level minimum requirements. ☐ Committee: Consistent with University-level minimum requirements with the exception that in the Faculty of Applied Health Sciences, the composition of the comprehensive examining committee will be approved by the Associate Chair or Director, Graduate Studies for the student's Department/School, as delegated by the Associate Dean, Graduate Studies. ☐ Who Chairs an examination: Consistent with University-level minimum requirements. ☐ Format / Content: Consistent with University-level minimum requirements. ☐ Academic integrity: Consistent with University-level minimum requirements. <p>o In addition to the University-level and Faculty-level PhD Comprehensive Examination minimum requirements, students in the PhD in Public Health and Health Systems – Work and Health program must also note the following:</p> <ul style="list-style-type: none"> ☐ The purpose of the comprehensive examination is to test the breadth and depth of the candidate's comprehension of the methodological and theoretical aspects of their field of study. The process is designed to enable candidates to acquire a solid grounding in their core area of public health research that will provide a foundation for undertaking 	

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:
<p>dissertation research. The examination will also test the candidate's ability to critically evaluate the literature and synthesize information from sources to identify knowledge gaps and recommend solutions.</p> <ul style="list-style-type: none"> ☐ The comprehensive examination consists of three written questions followed by an oral examination. The written questions must be completed within eight weeks from the start date and the oral defence should be completed within four weeks of submission of the written examination. ☐ PhD Thesis <ul style="list-style-type: none"> ○ A PhD thesis on an approved topic is required, which is to be defended in an oral examination. The research is to be conducted under the supervision of the student's supervisor and the advisory committee. The PhD thesis advisory committee consists of at least three members, with the supervisor and at least one other committee member being faculty from within the SPHHS. The proposal will be defended before the thesis committee; however, upon completion of the thesis, the final document will be defended before a five person Examination Board. ○ The thesis will be on a topic in an area relevant to work and health. ☐ Other requirements <ul style="list-style-type: none"> ○ Student evaluation: a review of each student's progress takes place during the month of May each year. Students are evaluated on several criteria, including performance in courses, progress with regard to the comprehensive examination and thesis work and, where appropriate, reports submitted by the students regarding their research and teaching assistantship activity. 	

How will students currently registered in the program be impacted by these changes? The three students enrolled in the program in the School have completed course and milestone obligations; they will not be affected by the change and will receive the PhD in Public Health and Health Systems - Work and Health degree upon degree completion

Section will expand to accommodate content. Please include details here.

Department/School approval date (06/22/20):

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

Faculty approval date (mm/dd/yy):

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

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



M E M O

TO: Kathy Winter, Assistant University Secretary & Privacy Officer
Secretariat

FROM: S. Sivoththaman, Associate Dean, Graduate Studies
Faculty of Engineering

RE: Senate Graduate and Research Council Agenda

DATE: October 26, 2020

Please place the following motion forward for approval at the next meeting of SGRC. These motions were approved by EFC on October 19, 2020.

Items for Approval:

1. The department of **Electrical and Computer Engineering** would like to make the following calendar changes:
 - a. Discontinue (type 2) Graduate Diploma (GDip) in Software Engineering

Rationale for Request:

- a. The MEng in ECE program will be offering "Graduate Specializations" in a given area, in place of the currently offered Graduate Diplomas. The change from Graduate Diplomas to Graduate Specializations is to better reflect the nature of the course packaging and also to bring the credentialization of focused course selection into line with Faculty of Engineering objectives. Consequently, ECE will be discontinuing the existing Graduate Diplomas offered with the MEng. In their place, Graduate Specializations have been proposed.

Your attention to these matters is kindly appreciated.

A handwritten signature in blue ink, consisting of a stylized 'S' and 'A' followed by a horizontal line.

Siva Sivoththaman

SS/em

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

Faculty: Engineering

Program: Graduate Diploma (GDip) in Software Engineering

Program contact name(s): Kankar Bhattacharya, Jessica Rossi

Form completed by: Jessica Rossi

Description of proposed changes:

Note: changes to courses and milestones also require the completion/submission of the SGRC Course/Milestone-New/Revision/Inactivation form ([PC docx version](#) or [MAC docx version](#)).

Discontinue (type 2) Graduate Diploma (GDip) in Software Engineering.

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

Rationale for change(s):

The MEng in ECE program will be offering “Graduate Specializations” in a given area, in place of the currently offered Graduate Diplomas. The change from Graduate Diplomas to Graduate Specializations is to better reflect the nature of the course packaging and also to bring the credentialization of focused course selection into line with Faculty of Engineering objectives. Consequently, ECE will be discontinuing the existing Graduate Diplomas offered with the MEng. In their place, Graduate Specializations have been proposed

Proposed effective date: Term: Winter Year: 2021

Current [Graduate Studies Academic Calendar \(GSAC\)](#) page (include the link to the web page where the changes are to be made):

<https://uwaterloo.ca/graduate-studies-academic-calendar/engineering/department-electrical-and-computer-engineering/graduate-diploma-gdip-software-engineering>

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:
<p>GRADUATE DIPLOMA (GDIP) IN SOFTWARE ENGINEERING</p> <p>Program information</p> <ul style="list-style-type: none"> <input type="checkbox"/> Delivery mode <ul style="list-style-type: none"> <input type="radio"/> On-campus <input type="checkbox"/> Program type <ul style="list-style-type: none"> <input type="radio"/> Diploma <input type="checkbox"/> Study option(s) <ul style="list-style-type: none"> <input type="radio"/> Coursework 	

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:
<p>Admission requirements</p> <ul style="list-style-type: none"> <input type="checkbox"/> Minimum requirements <ul style="list-style-type: none"> <input type="checkbox"/> The GDip in Software Engineering is earned in conjunction with the Master of Engineering (MEng) in Electrical and Computer Engineering program. <p>Degree requirements Coursework option:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Courses <ul style="list-style-type: none"> <input type="checkbox"/> Students will learn the concepts, techniques and methods of modern, effective software development. They will gain knowledge in software specifications, design and testing and will be exposed to data structures and algorithms, networking lower and upper layers, data-base systems, knowledge modeling, computational intelligence, component-based software engineering, re-engineering, and network security. <input type="checkbox"/> To receive the GDip in Software Engineering, students must successfully complete 3 compulsory courses and 2 elective courses: <ul style="list-style-type: none"> <input type="checkbox"/> Compulsory courses: <ul style="list-style-type: none"> <input type="checkbox"/> ECE 650 Methods and Tools for Software Engineering <input type="checkbox"/> ECE 651 Foundations of Software Engineering <input type="checkbox"/> ECE 653 Software Testing, Quality Assurance and Maintenance <input type="checkbox"/> Elective courses (choose 2 from the following list): Note: not all elective courses may be offered each year. <ul style="list-style-type: none"> <input type="checkbox"/> ECE 606 Algorithm Design and Analysis <input type="checkbox"/> ECE 610 Broadband Communication Networks <input type="checkbox"/> ECE 628 Computer Network Security <input type="checkbox"/> ECE 654 Software Reliability Engineering <input type="checkbox"/> ECE 655 Protocols, Software, Issues in Mobile Systems 	

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:
<ul style="list-style-type: none"> <input type="checkbox"/> ECE 656 Database Systems <input type="checkbox"/> ECE 657 Tools of Intelligent Systems Design <input type="checkbox"/> ECE 658 Component Based Software o Note: Electrical and Computer Engineering MEng requirements allow for only 3 courses to be taken outside the Department. 	

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

Students admitted in Winter 2020 and after, will be directed to the Software Specialization while the GDip will remain in an inactive state, and finally discontinued in Winter 2021.

Department/School approval date (mm/dd/yy): 05/13/2019

Reviewed by GSPA (for GSPA use only) date (mm/dd/yy): 05/29/2020

Faculty approval date (mm/dd/yy):

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

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

November 27, 2020

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

FROM: Jeff Casello, Associate Vice-President, Graduate Studies and Postdoctoral Affairs

RE: Graduate Studies Academic Calendar changes

Item for approval:

Updates to the enrolment and time limits regulations.

Description and rationale for proposed changes:

The wording in the GSAC sections that relate to time limits and program extensions is being updated to: reflect current practices and increase clarity. The changes noted here in the GSAC are being made in concert with changes to the GSPA webpage outlining the program extension process wherein the rationale for this process is highlighted.

Proposed effective date: Term: Winter Year: 2021

Current [Graduate Studies Academic Calendar \(GSAC\)](#) page (include the link to the web page where the changes are to be made):

<https://uwaterloo.ca/graduate-studies-academic-calendar/general-information-and-regulations/enrolment-and-time-limits#Enrolment>

<https://uwaterloo.ca/graduate-studies-academic-calendar/general-information-and-regulations/enrolment-and-time-limits#Program%20time%20limits>

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:
<p>Enrolment</p> <p>At the University of Waterloo the calendar year is divided into three academic terms known as Fall (September-December), Winter (January-April) and Spring (May-August). Graduate students normally enrol for the first time in September at the beginning of the Fall term. In some cases, a department permits new students to enrol in January or May. To enrol, a new student must have been issued a Letter of Acceptance by Graduate Studies and Postdoctoral Affairs (GSPA) which specifies the date for which enrolment is authorized.</p> <p>Enrolment and residence: On successful completion of each four-month period (Fall, Winter, Spring) students advance as follows:</p>	<p>Enrolment</p> <p>At the University of Waterloo the calendar year is divided into three academic terms known as Fall (September-December), Winter (January-April) and Spring (May-August). Graduate students normally enrol for the first time in September at the beginning of the Fall term. In some cases, a department permits new students to enrol in January or May. To enrol, a new student must have been issued a Letter of Acceptance by Graduate Studies and Postdoctoral Affairs (GSPA) which specifies the date for which enrolment is authorized.</p> <p>Enrolment and residence: On successful completion of each four-month period (Fall, Winter, Spring) students advance as follows:</p>

Current Graduate Studies Academic Calendar content:

- full-time students will advance at the rate of one term (1.0);
- part-time students will advance at the rate of one-half term (0.5);
- inactive enrolment has a term value of 0.0.

Term enrolment: Students will not be allowed to enrol after the government reporting date in a term (for relevant dates refer to the Academic deadlines and events page). If they are not enrolled, students will not receive credit for course work completed up to that date and will have to apply for readmission to their program.

Enrolment and time limits (additional Program time limits information is provided below): Students who have enrolled and paid fees, but have reached the ~~maximum~~ time limits ~~allowed~~ for their program must submit a [Petition for extension of program time limits form](#) to their department/Graduate Studies and Postdoctoral Affairs (GSPA) by the government reporting deadline of each applicable term (departments may have earlier deadlines). ~~Students who fail to do so will be de-registered from their program. Once de-registered, students will be required to re-apply to the program.~~

~~Failure of students to arrange fees as required will cause their enrolment in Graduate Studies to lapse. It may be re-established only if an application for readmission is approved.~~

Students who are readmitted to a program must enrol for a minimum of one academic term.

Program time limits

The University Senate has set the following program time limits:

Table of program time limits	
Program level	Time limits
Master's	6.0 terms

Proposed Graduate Studies Academic Calendar content:

- full-time students will advance at the rate of one term (1.0);
- part-time students will advance at the rate of one-half term (0.5);
- inactive enrolment has a term value of 0.0.

Term enrolment: Students will not be allowed to enrol after the government reporting date in a term (for relevant dates refer to the Academic deadlines and events page). If they are not enrolled, students will not receive credit for course work completed up to that date and will have to apply for readmission to their program.

Enrolment and time limits (additional Program time limits information is provided below): Students who have enrolled and paid fees, but have reached the [program time limits](#) are required to submit a [Request for Program Extension form](#) to their department by the specified dates prior to the term that the extension is required (i.e., Fall: August 1, Winter: December 1; Spring: April 1; unless an academic unit specifies different deadlines). Students who do not submit their form by the specified deadline will be [required to withdraw](#) from their program.

Fees: To avoid late fees, students must pay their fees or become [fees arranged](#) by specified dates (see [Academic deadlines and events page](#)). Students who are not fees arranged and have enrolled in classes will have their classes dropped at the end of the third week of classes (end of open enrollment; to request re-enrollment, students must submit a [Graduate Studies course drop/add form](#) and make a fee payment arrangement). Students who do not arrange fees by the specified [last day to arrange tuition and fees](#) (i.e., considered to be non-payment of fees) will be withdrawn from their program. Enrollment may be re-established only if an application for readmission is approved.

Students who are readmitted to a program must enrol for a minimum of one academic term.

Program time limits

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:																		
<table border="1"> <tr> <td data-bbox="207 319 682 415">PhD from an Honours Bachelor's</td> <td data-bbox="688 319 824 415">18.0 terms</td> </tr> <tr> <td data-bbox="207 424 682 520">PhD from a Master's</td> <td data-bbox="688 424 824 520">12.0 terms</td> </tr> <tr> <td data-bbox="207 529 682 625">PhD from an MA (Clinical Psychology)</td> <td data-bbox="688 529 824 625">15.0 terms</td> </tr> </table>	PhD from an Honours Bachelor's	18.0 terms	PhD from a Master's	12.0 terms	PhD from an MA (Clinical Psychology)	15.0 terms	<p>The University Senate has set the following program time limits:</p> <table border="1"> <thead> <tr> <th colspan="2" data-bbox="863 445 1474 508">Table of program time limits</th> </tr> <tr> <th data-bbox="863 516 1328 613">Program level</th> <th data-bbox="1334 516 1474 613">Time limits</th> </tr> </thead> <tbody> <tr> <td data-bbox="863 621 1328 684">Master's</td> <td data-bbox="1334 621 1474 684">6.0 terms</td> </tr> <tr> <td data-bbox="863 693 1328 789">PhD from an Honours Bachelor's</td> <td data-bbox="1334 693 1474 789">18.0 terms</td> </tr> <tr> <td data-bbox="863 798 1328 894">PhD from a Master's</td> <td data-bbox="1334 798 1474 894">12.0 terms</td> </tr> <tr> <td data-bbox="863 903 1328 999">PhD from an MA (Clinical Psychology)</td> <td data-bbox="1334 903 1474 999">15.0 terms</td> </tr> </tbody> </table>	Table of program time limits		Program level	Time limits	Master's	6.0 terms	PhD from an Honours Bachelor's	18.0 terms	PhD from a Master's	12.0 terms	PhD from an MA (Clinical Psychology)	15.0 terms
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PhD from an MA (Clinical Psychology)	15.0 terms																		
<p>Up to 3.0 terms' extension of these time limits may be obtained by petitioning the Graduate Officer of the Department. Further extensions must be approved by the Associate Dean (Graduate Studies) of the Faculty. A Petition for extension of program time limits form may be obtained from department graduate offices or through the Graduate Studies and Postdoctoral Affairs (GSPA) website. If the Petition is not approved, the student will be discontinued from their program. If students fail to submit a Petition approved by the government reporting date of each term (departments may have earlier deadlines), they will be discontinued from their program and must reapply.</p>	<p>If a student reaches the time limit for their program, they may request to continue their studies beyond these limits by submitting a Request for program extension form to their academic department. This is an important process that is intended to facilitate a conversation about academic progression and a plan for completion of the degree. For the first 3.0 terms after program limits have been reached, the approval process takes place at the Department/School level. Further extensions must be approved by the Associate Dean (Graduate Studies) of the Faculty. If the Request is not approved, the student will be required to withdraw from their program. Given the importance of this process, if students fail to submit a Request by the specified dates (i.e., for a Fall term extension: August 1; for a Winter term extension: December 1; for a Spring term extension: April 1; unless an academic unit specifies different deadlines), they will be required to withdraw from their program. A student receiving a Required to Withdraw decision (resulting from lack of request approval or failure to submit their form) may challenge that decision through Policy 70.</p>																		
<p>*For the purposes of these time limits a term is counted as 1.0 per term of full-time enrollment, and 0.5 per term of part-time enrollment.</p>	<p>*For the purposes of these time limits a term is</p>																		

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:
	counted as 1.0 per term of full-time enrollment, and 0.5 per term of part-time enrollment.

Graduate Operations Committee approval date (mm/dd/yy): 11/23/20

University of Waterloo
SENATE UNDERGRADUATE COUNCIL
Report to Senate
18 January 2021

Senate Undergraduate Council met on 10 November 2020 and 15 December 2020 and agreed to forward the following items to Senate for approval in the regular agenda.

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

FOR APPROVAL

MAJOR MODIFICATIONS

Arts

Global Business and Digital Arts

1. **Motion:** That Senate approve the proposed change to the Bachelor of Global Business and Digital Arts as outlined below, effective 1 September 2022.

Background and Rationale:

The Stratford School of Interaction Design and Business is proposing a change to the current Honours Bachelor of Global Business and Digital Arts (GBDA) program which would entail the Honours Regular program (with one mandatory internship term) becoming an Honours Co-op program. This would allow the School to enhance the education offered, to respond to student and employer demand, and to bring the program in line with the rest of the Faculty of Arts, which offers co-op in all of its major plans. Co-operative and Experiential Education has completed a feasibility report for proposed honours co-op program, which is included in the 15 December 2020 undergraduate council agenda package:

https://uwaterloo.ca/secretariat/sites/ca.secretariat/files/uploads/files/2020-12-15_suc_agenda_package_0.pdf

Current Calendar text for degree requirements: <https://ugradcalendar.uwaterloo.ca/page/ARTS-BGBDA-Degree-Requirements>

New Calendar text:

bold= new, strikeout= delete

Degree Requirements

Eligibility for the degree of Bachelor of Global Business and Digital Arts (**Co-op**) requires:

1. Successful completion of 20 academic course units with ~~an overall~~ **minimum** cumulative **overall** average of 60%.
2. Successful completion of the following courses with a **minimum** cumulative average of 70%:
 - o GBDA 101, GBDA 201, GBDA 202, GBDA 203, GBDA 204, GBDA 205, GBDA 210, GBDA 211, GBDA 212, GBDA 228, GBDA 301, GBDA 302, GBDA 303, GBDA 304, GBDA 305, GBDA 306, GBDA 310, GBDA 311, GBDA 402 (2.0 units), GBDA 410, GBDA 412, GBDA 413, GBDA 414
 - o ECON 101
3. Successful completion of the following requirements and courses:

- o Undergraduate Communication Requirement
- o CS 105, CS 106, CS 330
- o Two language courses **from the following subject codes:** (see Note 1)
 - **ARABIC, CHINA, CROAT, DUTCH, FR, GER, GRK, ITAL, JAPAN, KOREA, LAT, MOHAWK, PORT, RUSS, and SPAN**
- o GBDA 312 (see Notes 3 and 4)
- o **Appropriate co-op requirements** (*LINK to new Co-op Requirements calendar page*)

Notes

- ~~1. The second language course must be chosen from any of the following participating subjects: ARABIC, CHINA, CROAT, DUTCH, FR, GER, GRK, ITAL, JAPAN, KOREA, LAT, MOHAWK, PORT, RUSS, and SPAN. Taking two courses in the same language is recommended.~~
- ~~2. During Year One of the Global Business and Digital Arts program, students will take the majority of their courses at the University of Waterloo Campus. In 1B term, students will take one or two courses at the Stratford Campus. For Years Two, Three, and Four, courses are offered at the Stratford Campus.~~
- ~~3. The program includes a paid internship scheduled for the spring term following the completion of Year Three. The successful completion of GBDA 312 will indicate completion of this requirement; however, no academic credit is given.~~
- ~~4. Students are required to complete PD 1: Career Fundamentals before they begin their mandatory internship.~~
- ~~5. Students are encouraged to participate in a term abroad experience in either the 3A (GBDA 365) or 4A (GBDA 465) term. Discussion and approval of options and course selection must be made with the Global Business and Digital Arts advisor.~~
- 6. 3. Students are encouraged to participate in a term abroad experience in 4A, for which they receive a provisional GBDA 465 (*LINK to course description*) designation. The course equivalencies and amount of credit received will depend on the number of units successfully completed. Course selection at a University of Waterloo approved institution of higher learning abroad must be discussed and decided in consultation with the Global Business and Digital Arts academic advisor and the associate director – Undergraduate.**

New Undergraduate Calendar Page

Arts Degree Requirements

Bachelor of Global Business and Digital Arts

<https://ugradcalendar.uwaterloo.ca/group/ARTS-Bachelor-of-Global-Business-and-Digital-Arts>

Co-op Regulations and Requirements

General Regulations

1. Successful completion of a minimum of three of the four available work terms is required.
2. Students are required to follow the prescribed study/work-term sequence through to graduation unless given special permission to do otherwise by the Stratford School of Interaction Design and Business, and Co-operative and Experiential Education. Students may not end their sequence with a work term.
3. Students who meet all the academic graduation requirements for this plan, but who do not meet the minimum requirements for a co-op degree may, in exceptional circumstances and at the discretion of the Stratford School of Interaction Design and Business and the Faculty of Arts Examinations and Standings (E&S) Committee, be awarded a regular Bachelor of Global Business and Digital Arts Degree.

Professional Development (PD) Courses

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

Legend for Study/Work Sequence Information Chart

Key	Description
F, W, S	Terms: F=September-December; W=January-April; S=May-August
1,2,3,4 plus A or B	Denotes academic year and term.
WT	Work term
off	Neither an academic term nor a work term

Study/Work Sequence Information Chart

F	W	S	F	W	S	F	W	S	F	W	S	F
1A	1B	Off	2A	2B	3A	WT	3B	WT	4A	WT	WT	4B

/rmw

David DeVidi
 Associate Vice-President, Academic

Vice-President, Research & International Report to Senate January 2021

Announcement of an Award for Outstanding Researchers Named after Dr. Donna Strickland

On November 25, 2020, the Natural Sciences and Engineering Research Council of Canada (NSERC) announced two new prizes to honour Canada's most recent science Nobel laureates by launching prizes in their names. One of these prizes is the [NSERC Donna Strickland Prize for Societal Impact of Natural Sciences and Engineering Research](#). Valued at \$250,000, the prize will be awarded annually to an individual or team whose outstanding research has led to exceptional benefits for Canadian society, the environment and/or the economy. Any NSERC-funded researcher, regardless of their career stage, can be nominated for this award for research conducted in Canada.

Awards

Waterloo received notice of three new award winners in October and November 2020.

- **Imre Szeman** (ARTS, Communication Arts) – 2020 Fellow of the Canadian International Council – October 14, 2020
- **Aiping Yu** (ENG, Chem ENG): Advanced 2-Dimensional Carbon Nanomaterials for Next Generation Batteries and Supercapacitors. *2020 E.W.R. Steacie Memorial Fellowships*.
- Shalev Ben-David and Eric Blais (Math, Cheriton School of Computer Science): A New Minimax Theorem for Randomized Algorithms. received a prestigious [best paper](#) award at [FOCS 2020](#), the 61st Annual IEEE Symposium on Foundations of Computer Science.
 - This award-winning paper extends the minimax theorem, a seminal contribution to computer science by Andrew Yao, the 2000 Turing Award laureate.

Research Awards

For the period October and November 2020, Waterloo secured **\$31,661,529** in research funds. The majority of these funds were Institutional Research funds (82.2%), followed by industry Research Partnership awards (8.5%) and Tri-Agency funding and various other non-profit sponsor (5.3%) awards. International Research and Partnership (3.3%) and “other” awards (0.8%) comprised the remaining amount of the total funding awarded over these two months.

Of note, the Institutional Research funding awards were notably high this period for the following reasons:

- **Ontario Research Fund-Research Excellence (ORF-RE):** These applications were submitted in September 2019 and results were pending in April 2020, but COVID-19 delayed the release of these results until November 2020.
- **Ontario Research Fund-Research Infrastructure (ORF-RI):** The June and October 2019 submissions were both announced in November 2020.
- **Canada Foundation for Innovation, Exceptional Opportunities Fund (CFI EOF) COVID-19 Awards:** This was a targeted call that was released in July 2020 in response to COVID-19. Results were released in just three months, in October 2020.
- **Canada Foundation for Innovation-Innovation Fund (CFI-IF):** This is a major infrastructure award that provides significant investments in infrastructure to help Canada remain at the forefront of exploration and knowledge generation. Applications were submitted in January 2020 and results were released in November 2020. The CFI-IF funding (\$172,721,134) represents over half (54.6%) of the total funds secured in October and November 2020.

A detailed breakdown of each of these awards, including the awardee names, project titles and funding amounts are provided below.

Research Partnerships

In October and November 2020, Waterloo was awarded **\$2,684,184** in industry research partnership awards through NSERC Alliance (18%), Canadian (67%) and US federal (15%) awards. The details of these awards are provided below.

In October and November 2020, Waterloo secured **six NSERC Alliance** awards that totaled **\$484,317**.

1. **Robert Gracie** (ENG, Civil and Environmental Engineering): *“Combating the Tyranny of Scales in Simulation with Reduced Order Modelling”*
2. **Robert Gracie** (ENG, Civil and Environmental Engineering): *“Simulation of Dynamic Stimulation of Wells by Pressure Pulsing”*
3. **Fatma Gzara** (ENG, Management Sciences) *“Supply Chain for Good: Enhancing Governmental Rapid Response Logistics with Industry Spare Capacity”*
4. **Hamid Jahed** (ENG, Mechanical and Mechatronics Engineering): *“Characterization of Single and Laminated Electrical Steel Sheets Under Static and Cyclic Loads at Room and Elevated Temperature”*
5. **Behrad Khamesee** (ENG, Mechanical and Mechatronics Engineering): *“RespirAct Synchronization with MRI and its Impact on CVR Mapping: A Simultaneous Gas Control-Imaging System”*

6. **Shunde Yin** (ENG, Civil and Environmental Engineering): *“Development of a Thermal Fracturing Model for Cold CO₂ Injection in Enhanced Geothermal Systems”*

Waterloo was awarded **five Canadian federal awards** that totaled **\$1,807,510**.

1. **Wesley van Wychen** (ENV, Geography and Environmental Management): *Sea ice/Lake ice/Ocean/Glacier interactions in the Canadian Arctic*. Environment Canada and Climate Change.
2. **Ali Safavi-Naeini** (ENG, Electrical and Computer Engineering): *Ka-band phased array antenna system for broadband mobile satellite communications based on modular architecture*. Canadian Space Agency.
3. **Steve Fischer** (AHS, Kinesiology): *Development and validation of the CANadian virtual Soldier Performance Prediction and Optimization Tool (CAN-SPPOT)*. Department of National Defence.
4. **David Hammond** (AHS, School of Public Health and Health Systems): *Cannabis, Women, Harm Reduction, and Treatment*. Health Canada.
5. **Sharon Kirkpatrick** (AHS, School of Public Health and Health Systems): *Development of an adherence assessment tool reflecting the 2019 Canada’s Food Guide (the “what to eat” recommendations)*. Health Canada.

Waterloo was awarded **three US federal awards** that totaled \$299,715 USD = **\$392,357** CDN, converting using **Current rate = 1.3091** (November 23, 2020).

1. **Hans De Sterck** (Math, Applied Mathematics): *Parallel-in-Time Integration for Hyperbolic Problems*. US Dept of Energy.
2. **Slim Boumaiza** (ENG, Electrical and Computer Engineering): *Frequency Multiplier based Millimeter-Wave Phased Array Transmitter Front-End Technologies*. US Army Research Office. Basic Scientific Research.
3. **Liam McGuire** (SCI: Biology): *White-nose Syndrome National Response Implementation*. US Fish and Wildlife Service.

International Research and Partnerships

In October and November 2020 Waterloo was awarded **five** international research and partnership awards that totaled **\$1,033,135**.

1. **Jeff Aramini** (Velocity): *Portable, Low-cost Hardware for Decentralized COVID-19 Diagnostics for Canada, Colombia and Ecuador*. International Development and Research Centres.
2. **David Hammond** (AHS, School of Public Health and Health Systems): *What is the impact of vaping on smoking, nicotine intake and toxin exposure among youth in England compared with youth in North America?* National Institute for Health Research, UK; subproject with King’s College, London.

3. **Multiple PIs.** Grant held under **Vice-President Research and International:** Gift Agreement to University of Waterloo to continue research partnership with *Technion Israel Institute of Technology*. Gerald Schwartz and Heather Reisman Foundation.
4. **Anita Layton** (Math, Applied Mathematics): *Restoring 24-hour substrate rhythmicity to improve glycemic control by timing of lifestyle factors*. CIHR and ZonMw (Netherlands organization for Health and Research Development); subproject with University of Sherbrooke.
5. **Olaf Weber** (ENV, School of Environment, Enterprise Development): *COPERNICUS: Social Finance for Social Enterprises: Theory and Practice to build a more inclusive society*. Horizon2020; Marie Skłodowska Curie Individual Fellowships Global.

Tri-Council Awards

Waterloo was awarded a total of approximately **\$1M** in Tri-Agency awards in October and November 2020. These awards were comprised of SSHRC Connection Grants (2%), CIHR Project Grants (60%) and other (38%) various non-profit sponsor awards. Details of these awards are provided below.

1. **Igor Grossman** (Arts, Psychology): *Post-Pandemic Kaleidoscope: Behavioral and Social Scientists' Wisdom for Navigating the New Normal*; SSHRC Connection Grant.
2. **Mair, Heather** (AHS, Rec& Leisure): *Changing the 'Face' of Curling: Increasing Diversity and Inclusion in Sport*; SSHRC Connection Grant
3. **David Hammond** (AHS, SPHHS): *The impact of cannabis legalization on the illicit cannabis market in Canada*; CIHR.
4. **Paul Stolee** (AHS, SPHHS): Why aren't we engaging our most at-risk older patients? Developing an in-depth understanding of patient/family engagement across care transitions; CIHR.

Awards from Non-Profit Sponsors

In October and November 2020 Waterloo also secured an additional **eleven** awards from **non-profit sponsors** totalling **\$633,348**.

1. **Raouf Boutaba** (Math, Comp Sci): Joint Security Project Aggregation and Visualization Tools. CANARIE.
2. **Susan Elliott** (ENV, GEMS): Translating Lupus: knowledge & action. U of Calgary/Arthritis Society of Canada.
3. **David Hammond** (AHS, SPHHS): Transitioning to the legal cannabis market in Canada: Legal and illegal cannabis purchases, and the effect of price, retail availability, and consumer perceptions. Canadian Centre on Substance Use and Addiction.

4. **David Hammond** (AHS, SPHHS): *Health Warnings, product labelling regulations, and consumer understanding of the health risks of cannabis* Canadian Centre on Substance Use and Addiction.
5. **Amelia Clarke** (ENV, SEED): Community Impact Evaluation. Canadian Wildlife Federation.
6. **Mark Servos** (SCI, Biol): Influence of temperature on the toxicity of TFM to sea lamprey and non-target juvenile lake sturgeon. WLU/Great Lakes Fishery commission.
7. **Bryan Tolson** (ENG, CEE): RS3-124 PAVICS-Hydro 2. ETS/CANARIE.
8. **Andrea Edginton** (SCI, Pharm): Optimizing clotting factor use through WAPPS (OTTAWA). IPSPG/SickKids Hospital.
9. **Igor Grossman** (Arts, Psych): Post-Pandemic Kaleidoscope: Documenting Social Scientists' Wisdom on how to Navigate the New Normal. Templeton World Charity Foundation.
10. **William Ngo** (SCI, Opt): 2020 Korb-Exford Dry Eye Career Development Grant. American Academy of Optometry Foundation.
11. **Kaylena Ehgoetz Martens** (AHS, Kin): Freezing of Gait: Understand, Detect, Predict. Parkinson Canada (new investigator award).

Institutional Research Awards¹

Waterloo was awarded **\$26,010,134** in Institutional Research awards in October and November 2020. These awards were comprised of a Canada Research Chair award (2%), awards from the Canada Foundation for Innovation (CFI) including the Exceptional Opportunities Fund (CFI EOF) COVID-awards (5%), CFI Innovation Fund (66%), and CFI John R. Evans Leaders Fund (4%). As well, Waterloo secured Ontario Research Fund (ORF) awards including the ORF Research Excellence (ORF-RE) (16%) and ORF Research Infrastructure Fund (ORF-RI) awards (7%). The specifics of each of these awards are provided below.

Canada Research Chair (CRC) Award

- **Hannah Neufeld** (AHS, School of Public Health and Health Systems): Tier 2 CIHR Canada *Research Chair in Indigenous Health, Wellbeing and Food Environments*.

Canada Foundation for Innovation, Exceptional Opportunities Fund (CFI-EOF) COVID-19 Awards

Nationally, 56 of 112 (or 50% success rate) CFI EOF applications were awarded resulting in a 50% success rate and a national funding rate of 52%.

¹ Note that all results except for the CFI-EOF COVID-19 awards are under embargo.

In October 2020, Waterloo was awarded **three** (of four or 75% success rate) **CFI-EOF COVID19 awards** that totaled **\$1,365,000**.

1. **Gary Dmitrienko** (SCI, Chemistry): *Synthesis of chromogenic substrates and inhibitors of SARS CoV-2 main protease to overcome COVID19 infection.*
2. **Mark Servos** (SCI, Biology): *Wastewater surveillance of SARS-CoV-2 to support public health assessment of trends in community infection.*
3. **Tam, Michael** (ENG, Chem. Eng) & Musselman, Kevin (ENG, MME): *Advanced engineering processes and materials to produce compostable masks and antimicrobial coatings for PPE.*

Canada Foundation for Innovation, Innovation Fund (CFI-IF) Awards

Nationally, 102 out of 307 applications were awarded (33% success rate) with a total CFI awarded amount of **\$393,700,000**.

In November 2020, Waterloo was awarded **six** (of 16 or 37.5% success rate) **CFI-IF 2020 awards** that totaled **\$17,272,134**.

1. **Michael Fich** (SCI, Physics and Astronomy): *CCAT-prime: A Submillimetre Wavelength Survey Telescope in Chile.*
2. **Monica Emelko** (ENG, Civil and Env. Eng.) & Silins, Uldis² (UofA): *for Water AID: Advanced Infrastructure Development for forested drinking water source protection technologies in Canada.*
3. **Linda Nazar** (SCI, Chemistry) & Chen, Zhongwei² (ENG, Chem. Eng): *Ontario Centre for Battery and Electrochemical Research.*
4. **Paul Craig** (SCI, Biology) & Dixon, Brian² (SCI, Biology): *Waterloo Aquatic Threats Environmental Research (WATER) Facility.*
5. **Tong Leung** (SCI, Chemistry) & Ebrahimi, Maryam² (Lakehead): *Advanced Materials Ontario: Harnessing the power of multifunctional materials for new technologies.*
6. **David Blowes** (SCI, Earth Sciences) & Ptacek, Carol² (SCI, Earth Sciences): *Developing Innovative Technologies for Predicting and Remediating Environmental Contamination.*

Canada Foundation for Innovation, John R. Evans Leaders Fund (CFI-JELF)

In November 2020, Waterloo was awarded **eight** (of 12 or 67% success rate) **CFI-JELF awards** that totaled **\$922,108**. (The provincial funding rate for this competition was 71.4%).

² denotes Co-Leads listed on the award.

1. **Zahid Butt** (AHS, SPHHS): *Public Health Research and Analytics Lab: a platform for disease mapping, health data analyses and knowledge translation.*
2. **M. Tamer Ozsü** (MATH, School of Computer Science): *Scalable Infrastructure for Big Data Systems.*
3. **Helen Jarvie** (ENV, Geography and Environmental Management): *Multi-element signatures to trace nutrient sources, pathways and processes: from field to watershed scales.*
4. **Zhao Pan** (ENG, Mechanical and Mechatronics Engineering): *Mild-impact-induced cavitation in soft matter and traumatic brain injury: From fluid physics to applied health.*
5. **Dale Martin** (SCI, Biology): *Microscopy System for Targeting S-Palmitoylation in Neurodegeneration.*
6. **Chengnian Sun** (MATH, School of Computer Science): *Continuous, Intelligent, Semantics-Aware Fuzz Testing of System Software.*
7. **Kaylena Ehgoetz Martens** (AHS, Kinesiology): *Understanding Gait Patterns in Health and Disease.*
8. **Wesley Van Wychen** (ENV, Geography and Environmental Management): *Establishment of the Glacier and Cryosphere Research Laboratory.*

Ontario Research Fund: Research Excellence (ORF-RE) Round 10

In November 2020, Waterloo was awarded **two** (of seven or 29% success rate) **ORF-RE** (Round 10) awards that totaled **\$4,032,032** (The provincial funding rate for this competition was 19.9%).

1. **Naila Keleta-Mae** (ARTS, Communication Arts): *Freedom in Black Expressive Culture.*
2. **Linda Nazar** (SCI, Chemistry): *Empowering Ontario's Transportation Sector with Electrochemical Solid-State Energy Storage Batteries.*

Ontario Research Fund: Research Infrastructure (ORF-RI)

In November 2020, Waterloo was awarded **11 ORF-RI awards** that totaled **\$1,918,860**.

1. **David G. Cory** (SCI, Chemistry): *Transmission Electron Microscope.*
2. **Ihab Francis Ilyas** (MATH, School of Computer Science): *Infrastructure for Large-scale Integration and Processing of Structured and Graph Data.*
3. **Maria Strack** (ENV, Geography and Environmental Management): *Flexible Automated Chamber System for Quantifying the Effect of Disturbance and Restoration on Peatland GHG Exchange.*
4. **Sean Meehan** (AHS, Kin): *Neural Substrates of Cognitive Influence Over Sensory-Motor Control: Implications for learning and stroke rehabilitation.*

5. **Christopher Batty** (MATH, School of Computer Science): *Physics-Based Visual Computing Infrastructure*.
6. **Julie Messier** (SCI, Biology): *Plant phenomics: Understanding trait covariation across scales*.
7. **Mahla Poudineh** (ENG, ECE): *Integrated Device-Driven Approaches for Automated, Real-Time Tracking*.
8. **Marco Alfano** (ENG, Mechanical and Mechatronics Engineering): *Enabling toughening and damage tolerance in adhesive bonding of multi-material lightweight structures*.
9. **Neil Randall** (ARTS, English Language and Literature): *The StoryBoard Lab*.
10. **Stewart McLachlin** (ENG, Mechanical and Mechatronics Engineering): *A dynamic force and motion simulator for characterizing spine biomechanics under complex loading*.
11. **Yousra Aafer** (MATH, School of Computer Science): *Security Evaluation and Synthesis for Smart Devices*.

CRC Communications Strategy for EDII

In collaboration with third party expert consulting group Taylor Newberry Consulting, Waterloo is undertaking a review of strategies used to communicate the value of equity, diversity, inclusion, and Indigenous initiatives (EDII) to Waterloo's Canada Research Chairs (CRC) Program as part of the approved institutional CRC EDI Action Plan. The goal of this review is to increase the understanding of the importance of EDII to Waterloo's CRC program, and the campus community more broadly. The work will be rooted in an environmental scan of current communications strategies, and direct engagement with key stakeholders involved in managing the CRC program, Department Chairs, and current CRCs and CRC nominees. Key deliverables will be a business case for EDII in Waterloo's CRC program and tangible recommendations for an effective communications strategy that will support Waterloo in achieving its 10-year equity targets within an inclusive and supportive campus community.