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

**Date:** Monday 15 June 2020
**Time:** 3:30 p.m.
**Place:** Teams Videoconference

| | | OPEN SESSION | Action |
|---|---|---|---|
| 3:30 | | **Consent Agenda** | |
| | | **Motion:** To approve or receive for information by consent items 1-6 below. | |
| | 1. | Minutes of the 19 May 2020 Meeting | Decision |
| | 2. | Reports from Committees and Councils | |
| | | a. Graduate & Research Council | Information |
| | | b. Undergraduate Council | Decision/Information |
| | 3. | Reports from Teaching Awards Committees | |
| | | a. Amit & Meena Chakma Awards for Exceptional Teaching by a Student Committee | Information |
| | | b. Distinguished Teacher Awards Committee | Information |
| | 4. | Report of the President | |
| | | a. Recognition and Commendation | Information |
| | 5. | Reports from the Faculties | Information |
| | 6. | Committee Appointment | Decision |
| | | **Regular Agenda** | |
| 3:35 | 7. | Business Arising from the Minutes | Information |
| | 8. | Reports from Committees and Councils | |
| 3:40 | | a. Graduate & Research Council | Decision |
| 3:50 | | b. Undergraduate Council | Decision |
| 4:00 | 9. | Report on Reopening | |
| | | a. Research | Information |
| | | b. Fall term | Information |
| | | c. Health and safety | Information |
| | | d. Longer term considerations | Information |
| 4:30 | 10. | Report of the President | Information |
| 4:45 | 11. | Q&A Period with the President | Information |
| 4:55 | 12. | Report of the Vice-President, Academic & Provost | Information |
| 5:05 | 13. | Report of the Vice-President, University Research & International | |
| | | a. Research Strategic Plan | Information |
| | | b. International Strategic Direction | Information |
| 5:20 | 14. | Other Business | |

**CONFIDENTIAL SESSION**

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|---|---|---|
| 5:25 | 15. Minutes of the 19 May 2020 Meeting | Decision |
| 5:30 | 16. Business Arising from the Minutes | |
| 5:35 | 17. Report from Committees<br>    a. Nominating Committee for Honorary Degrees | Decision |
| 5:40 | 18. Other Business | |

8 June 2020

Karen Jack
University Secretary
KJJ/ees
Secretary to Senate

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**University of Waterloo**
**SENATE**
**Minutes of the Tuesday 19 May 2020 Meeting**

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**Present:** Sheila Ager, Jean Andrey, Sandra Banks, Kankar Bhattacharya, Carmen Bruni, Kofi Campbell, Jeff Casello, Robyn Clarke, David Clausi, Joan Coutu, Neil Craik, Eric Croiset, Richard Culham, Peter Deadman, Charmaine Dean, David DeVidi, Fraser Easton, Lynette Eulette, Aiman Fatima, Paul Fieguth, Wendy Fletcher, George Freeman, Martha George, Mark Giesbrecht, Rob Gorbet, Julia Goyal, David Ha, John Haddock, Feridun Hamdullahpur, Kevin Hare, Dennis Huber, Natalie Hutchings, Karen Jack (secretary), Martin Karsten, Achim Kempf, Veronica Kitchen, Scott Kline, Christiane Lemieux, Robert Lemieux, Lili Liu, Kesen Ma, Ellen MacEachen, Blake Madill, Teferi Mergo, Samantha Meyer, Ian Milligan, Zoran Miskovic, Barb Moffatt, Graham Murphy, Richard Myers, Beth Namachchivaya, Cathy Newell Kelly, Erin O'Connell, Daniel O'Connor, Troy Osborne, David Perrin, William Power, Sam Rubin, James Rush (chair), Max Salman, Naima Samuel, Emma Schuster, Marcus Shantz, Joanne Shoveller, Abbie Simpson, Siva Sivoththaman, Richard Staines, Susan Tighe, Bryan Tolson, Bruno Tremblay, Twesh Upadhyaya, Cristina Vanin, Johanna Wandel, Paul Ward, Stanley Woo, Nancy Worth, Clarence Woudsma, En-Hui Yang, Samer Zu'Mot

**Guests:** Joe Allen, Sonya Buffone, Bruce Campbell, Aldo Caputo, Andrea Chappell, Mario Coniglio, Shannon Dea, Jay Dolmage, Yufei Du, Donna Ellis, Rob Esselment, Barbara Forrest, Brian Forrest, Matthew Gerrits, Matthew Grant, Mike Grivicic, Fatma Gzara, Jasmin Habib, Michael Herz, Narveen Jandu, Ross Johnston, Andrea Kelman, Jennifer Kieffer, Meagan Lai, Nick Manning, Kelly McManus, Norah McRae, Christine McWebb, J.L. Michela, Bessma Momani, Diana Parry, Judene Pretti, Alice Raynard, Chris Read, Cynthia Richard, Lorna Rourke, Sarah Ruffell, Emily Schroeder, Mark Seasons, Daniela Seskar-Hencic, Allan Starr, Brandon Sweet, Ian VanderBurgh, Rebecca Wickens, Kathy Winter, Pia Zeni

**Absent:** Mike Ashmore, Dominic Barton, Lisa Bauer-Leahy, Anne Bordeleau*, Cindy Forbes*, Kelly Grindrod*, Sabrina Khandakar, Neil Randall*, June Xu

*regrets

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**OPEN SESSION**

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**CHAIR'S REMARKS**
The President introduced new and returning members: Mike Ashmore, Anne Bordeleau, Kofi Campbell, Robyn Clarke, Neil Craik, Aiman Fatima, George Freeman, Martha George, Achim Kempf, Christiane Lemieux, Blake Madill, Samantha Meyer, Graham Murphy, Daniel O'Connor, Sam Rubin, Max Salman, Emma Schuster, Abbie Simpson, Twesh Upadhyaya, Cristina Vanin, Paul Ward, Stanley Woo, Clarence Woudsma, En-Hui Yang, Samer Zu'Mot.

**Consent Agenda**

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

Freeman and Hare.

1. **MINUTES OF THE 20 APRIL 2020 MEETING**
   Senate heard a motion to approve the minutes of the meeting.

2. **REPORTS FROM COMMITTEES AND COUNCILS**
   **Executive Committee.** Senate received the report for information.

   **Graduate & Research Council.** Senate heard a motion to approve the following Graduate Studies Academic Calendar changes, effective 1 May 2020, at Attachment 1, specifically:

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  a. Removing the Michigan English Language Assessment Battery (MELAB) as an accepted examination for the English language proficiency (ELP) requirements.

  b. Editorial update to the parental leave requirements.

Senate received the rest of the report for information.

**3. REPORT OF THE PRESIDENT**
**Recognition and Commendation.** Senate received the report for information.

**4. REPORT OF THE VICE-PRESIDENT, ACADEMIC & PROVOST**
**Convocation Update.** Senate received the report for information.

**5. REPORTS FROM THE FACULTIES**
Senate received the reports for information.

**6. COMMITTEE APPOINTMENTS**
Senate heard the following motion:

**University Committee on Student Appeals:** In order to ensure the principles of natural justice are followed, and in particular to preclude bias, or a perception of bias, it has become necessary to temporarily appoint two extraordinary members to the University Committee on Student Appeals (UCSA). These individuals are proposed to be a part of the tribunal that will hear one specific student matter in the Spring 2020 term: Mario Coniglio, former chair of the UCSA, to act as chair of the tribunal, and Micheal Stone, professor in the Faculty of Environment, Department of Geography and Environmental Management and chair of the Faculty of Environment Faculty Committee on Student Appeals as the faculty representative on the tribunal.

**7. DEPARTMENT NAME CHANGE – WATERLOO CENTRE FOR THE ADVANCEMENT IN CO-OPERATIVE EDUCATION**
Senate heard a motion to recommend to the Board of Governors the following name change: from "Waterloo Centre for the Advancement of Co-operative Education (WatCACE)" to "Work-Learn Institute (WxL)."

The question was called, and the motion carried unanimously.

**Regular Agenda**

**8. BUSINESS ARISING FROM THE MINUTES**
  There was no business arising.

**9. REPORTS FROM COMMITTEES AND COUNCILS**
**Graduate & Research Council**

**Program Change, Faculty of Applied Sciences.** Senate heard a motion to approve the addition of a "Work and Health" graduate research field to the School of Public Health and Health Systems field option for both MSc and PhD students, effective 1 September 2020, as presented in Attachment 1.

Casello and Liu. Carried unanimously.

The following two motions were moved together.

**Program Change, Faculty of Arts.** Senate heard a motion to approve the addition of a graduate research field in Peace Integration within the Master of Arts in Global Governance, effective 1 September 2020, as presented in Attachment 2, and to approve the addition of a graduate

specialization in Peace Integration within the Master of Peace and Conflict Studies, effective 1 September 2020, as presented in Attachment 3.

Casello and Ager. Carried unanimously.

10. **REPORT OF THE PRESIDENT**
Speaking to his presentation, Hamdullahpur informed Senators about: some recent leadership appointments and awards; potential impacts of the global pandemic at Waterloo; what prospective students are telling us; some of the situations and factors which are at issue with regard to the intention to enroll; spring co-op data; government updates; the 15% budgetary holdback being implemented; a new committee responsible for the next stage of pandemic response.

In discussion: how fall term classes will be offered and the current absence of solid facts on which to make firm decisions; firmer plans are being worked on with the Faculties; whether some matters are decisions for Senate; personal protective equipment will be provided to those who need it on campus and details are being worked on now; further detail regarding co-op placements is available from McRae; discussions underway to streamline curricular reviews; planning being done at the library for researchers and students; particular efforts underway for graduate students, including those on and off campus; that any decisions regarding large classes will apply to all large activities; plans for a phased approach in reopening labs and eventually, the broader campus; the distinctions between "remote" and "online" instruction, and how the terms are used colloquially; consideration being given for financial aid for students; the pros and cons of synchronous and asynchronous instruction.

11. **REPORT OF THE VICE-PRESIDENT, ACADEMIC & PROVOST**
**Roster of Graduands.** Senate heard a motion to delegate approval of the roster of graduands to the Executive Committee for its 1 June 2020 meeting.

Rush and Newell Kelly. Carried.

**Course Evaluation Project Team Update**.
DeVidi provided Senators with an overview of the history of this project.

Senate heard a motion to endorse the decision of Deans' Council to accept and act on the recommendations described in the report, including the launch of the new Student Course Perception Instrument, currently planned for winter term 2021.

DeVidi and Liu.

In discussion: debate regarding the value of the use of student course perception assessments in faculty performance reviews; a question about the truth of the opinions expressed within such assessments; agreement with the need for equity and bias considerations; clarification that the committee fully supports the report, but one member did leave the committee as a result of disagreement over it; detail in the coming user's guide will provide instructors and evaluators with clarity on key points.

The question was called and the motion carried with 17 opposed and seven abstentions.

**Complementary Teaching Assessment Processes Team (CTAPT) Update**.
Ian VanderBurgh, chair of the CTAPT, provided Senators with an overview of the background on this project. Senators heard that the team is not making any recommendations at this time, but is seeking Senate's endorsement to continue its work.

Senate heard the following three motions:

**Motion:** That Senate endorse the decision of Deans' Council to accept and act on the recommendations as described in the report.

**Motion:** That Senate endorse the continued work to develop feasible mechanisms for the implementation of Teaching Dossiers and Peer Review of Teaching as part of the processes for assessment of teaching at the University.

**Motion:** That, regarding continuing work on teaching performance review, and in support of continuing improvement of teaching and learning at the University and fairness in performance review, the University continues working towards a system for summative assessment of teaching that considers many sources of information about all aspects of effective teaching.

Rush and Ward.

Several Senators offered kudos to the team on its work to date.

The question was called and the motion carried unanimously.

12. **REPORT OF THE VICE-PRESIDENT, RESEARCH & INTERNATIONAL**
Dean provided a brief overview of the Research Working Group, indicated that more information is coming from the Return to Campus committee, and shared the good news that University researchers generated $250M in research funding for the year, which is very much in line with last year. Senate received for information the report distributed with the agenda.

13. **OTHER BUSINESS**
There was no other business.

Senate convened in confidential session.

1 June 2020                                                                 Karen Jack
                                                                           University Secretary

## CONFIDENTIAL SESSION

The confidential minutes have been removed.

**University of Waterloo**
**SENATE GRADUATE & RESEARCH COUNCIL**
**Report to Senate**
**15 June 2020**

Senate Graduate & Research Council met on 11 May 2020 and agreed to forward the following items to Senate for approval or information as part of the consent agenda.

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

## FOR INFORMATION

### CURRICULAR SUBMISSIONS

On behalf of Senate, council approved new courses, course revisions, course inactivations, new milestones, milestone inactivations, and minor program revisions for the Faculty of Arts (master of digital experience innovation; MDEI), Faculty of Engineering (conrad school of entrepreneurship and business, department of civil and environmental engineering), Faculty of Mathematics (applied mathematics, pure mathematics), and Faculty of Science (physics, pharmacy, chemistry).

### ACADEMIC PROGRAM REVIEW REPORTS

On behalf of Senate, council approved:
- Two-Year Progress Report – Guelph-Waterloo Centre for Chemistry and Biochemistry (review completed by University of Guelph), as presented at Attachment 1.

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

OFFICE *of* THE PROVOST AND
VICE-PRESIDENT (ACADEMIC)

OFFICE OF QUALITY ASSURANCE

## Cyclical Program Review of the Guelph-Waterloo Centre for Graduate Work in Chemistry and Biochemistry

### Follow-up Report on the Implementation Plan

[Insert report submission date]

The review took place during the [eg 2016-2017] cycle.

The final stage of the cyclical program review is a follow-up report describing the progress to-date on the agreed upon implementation plan.  Complete the table below and include further information, if necessary.  The Chair/Director responsible for the program(s) under review is responsible for completing the table and, prior to final submission to the Senate Committee on Quality Assurance, will review this with the Dean and Associate Deans (Academic and/or Graduate Studies and Research) of the applicable College.  For interdisciplinary programs with joint management responsibility, the submission should be reviewed with all relevant parties.  For programs with a joint external partner, the submission should be reviewed by the joint partner.  For interdisciplinary and joint programs, the signature page must include the relevant Chair/Director/Dean from the partner academic unit and/or partner institution.

SCQA reviews the submission and reports to Senate per the University's IQAP.  If necessary, reports may also be shared with other relevant Senate Committees/Boards (ie Board of Undergraduate Studies, Board of Graduate Studies).

Questions on follow-up reporting, this template or the cyclical review process may be directed to the Office of Quality Assurance.

**Updated Implementation Plan: Briefly describe the status of each recommendation (completed, in progress, incomplete) and provide rationale for any alterations to the original implementation plan.**

| # | Recommendations | Proposed Follow-up | Responsibility for Leading Follow-up | Original Timeline for Completion | Status and Updated Timeline with Follow-up Plan |
|---|---|---|---|---|---|
| 1. | Faculty Renewal at Guelph | 3 new positions to be filled | Department Chair | January 2017 | Guelph: 1 faculty position was filled in 2017 at the full professor level (Prof. Aicheng Chen, CRC-Tier1) and another was filled in 2018 (Prof. Khash Ghandi associated with Prof. Tremaine's Industrial Research Chair). 3 additional appointments were recently made at the Assistant Professor level (Dr Leanne Chen (computational chemistry), Dr Rui Huang (NMR Spectroscopy and protein dynamics), Dr Derek O'Flaherty (RNA/DNA replication)); the new faculty will join the Department in Mar-Sept 2020**.** Waterloo: Since 2017, 3 appointments were made at the Assistant Professor level (Dr Rodney Smith (electrochemistry), Dr Anna Klinkova (nanomaterials), Subha Kalyaanamoorthy (computational biochemistry). The department is seeking to fill a faculty position in analytical chemistry in 2021.  With the current department age demographic, it is anticipated there will be ~1 faculty hire/year for the next ~10 years. |
| 2. | Link rooms update | Task force formed in Feb 2017 | GWC Director / Task Force | Summer 2018 | Ongoing videoconferencing facilities and support remain a critical requirement for GWC2 programs. Guelph: Full replacement of all communications equipment in MainLink and MiniLink.  Phase 1 was |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | completed in Summer 2017; Phase II was completed in Summer 2018.<br>Waterloo: >10 yr old CODEC from Guelph used to upgrade MainLink.<br>Staff support is Joe Mignacca (Guelph, university wide audio-visual support) and Paul Miskovsky (Waterloo, director, information technology).<br>Commitment for maintenance of existing equipment is in place. The equipment in the MainLink at Waterloo is functional but limited in current capabilities and lifetime. It is clear there is an upcoming need for new videoconferencing capabilities, but there is no plan in place to meet this important need to support ongoing GWC2 graduate courses, comprehensive exams, committee meetings, and seminar series. |
| **3.** | Admission of International students increased at Guelph | | University | Ongoing | Implementation of a sustainable internationalization plan is the responsibility of the Provost's office.<br>Guelph: Increased International Student enrollment is planned as part of the University of Guelph's Strategic Mandate Agreement 3, but details are not yet official. Currently all international PhD students who maintain >80% average have differential fees waived. |
| **4./ 5.** | New graduate courses | Curriculum committee formed | Director / Dept Chairs | Fall 2018 | Course curriculum committee formed in 2018. A plan has been made and is in the process of being implemented to enhance graduate training in written and oral communication skills and professional development. A pilot course (CHEM 7100/710: Manuscript Writing) including e-learning is being developed by Prof Kathryn Preuss (Guelph) in Winter 2020 and will be offered |

| | | | | | Summer 2020. New core courses in communication (including revising CHEM 7940/794: Masters Seminar) are in development for approval in 2020. |
|---|---|---|---|---|---|
| 6. | Raise profile and brand awareness | New website | Director | Fall 2017 | New GWC2 website was launched in March 2018, business cards, GWC2 flyer, Facebook page / Twitter. Social media presence remains only weakly developed due to the exchange of student leaders but is expected to expand in Winter 2020. Guelph will follow the Waterloo model of providing Departmental support for maintaining Faculty member web profiles. |
| 7. | Integration between campuses | | Director | Spring 2017 | GWC2 graduate student club formed; undergrad/grad socials; continuing GWC2 seminar series. CFI application for Free Electron Laser based at Waterloo includes both campuses. |
| 8. | Staff transition | New hires | Dept Chairs | Fall 2017 | Guelph: Lisa O'Dwyer was hired as Graduate Program Assistant in Summer 2017; Dan D'Aoust was hired into a regular full time position in the Chemistry Stockroom, and Karen Ingram has been transferred from the College of Biological Sciences to Chemistry as the regular full-time Stockroom Assistant. Rick Ford was hired as Chemistry's Software Manager and Web Support Staff. No other retirement replacement hires to date. |
| 9. | Students offices separated from labs | | University and Departments | 2018 | Guelph: MacN-West Phase 1 renovations were completed in Summer 2017; this created flexible common spaces on each of the four levels in MacN-West, and no students now have offices in the MacN-West laboratories. All workstations in MacN-West **were** replaced in December 2019 as part of the Phase 2 budget. Chemistry students in Summerlee Science Complex already have office spaces |

| | | | | | separate from laboratory spaces. Shared student office space will be created in Summer 2020 for Chemistry students in MacN-East. |
|---|---|---|---|---|---|
| 10. | Reduce MSc completion time | | Director / Chairs | 2017 | Guelph: Funding from Provost's office for students expires at end of eligibility period (2 years MSc, 4 years PhD), providing financial incentives for appropriate timelines. Guelph is exploring a 4+1 BSc+MSc program to streamline and accelerate the transition to graduate, see also 2.5 below. Revisions to graduate courses (see **4./5.** above) are being designed to reduce MSc completion time. |
| 11. | Recruitment | | Director | 2018 | Recruitment committee formed and met several times in 2018. Undergraduate socials in late Fall 2018 were expanded to include outside undergraduate students. Guelph is exploring the possibilities of expanding the number and quality of summer internships available to the College and the Department. 2020: Guelph is exploring developing website promotional videos. |
| 12. | Increase Centre resources to reduce workload | Increase staff | Department / University | 2017 | GWC2 streamlined comprehensive and Guelph streamlined routine student reporting paperwork through adoption of online document workflow systems. Resources for workload have been somewhat improved through hiring of Graduate Program Assistant (see **8.** above). |

The Department Chair/Director, in consultation with the Dean, is responsible for monitoring the Implementation Plan on an ongoing basis.

If necessary, use the following sections to include any additional, relevant information.

**1. Explain any circumstances that have affected the original implementation plan:**

1.1) Change of Directorship (to Waterloo) was to be effective September 2018, however, did not take effect until January 2019. The previous Director (at Guelph) stayed on in the interim.

1.2) Faculty renewal at Guelph was delayed (see **1.** above).

**2. Address any significant developments or initiatives that have arisen since the cyclical review, or that were not considered during the review:**

2.1) The University of Guelph has begun the process of replacing its 300 MHz NMR system that is used extensively for undergraduate teaching and graduate students' research.  Product and vendor selections are expected in early 2020.  The University of Waterloo obtained CFI funding in 2019 for a new console for the 600 MHz NMR (installed Jan 2020) and a new 300 MHz system (to be installed Spring 2020); both instruments are used very predominantly for research, including training of many graduate students.

2.2) The Surface Analysis facility at the University of Guelph (managed by the Electrochemistry Technology Centre) has been upgraded by a new higher throughput electron analyzer (~$200K); a funding application has been made to improve the sample handling systems (~$175K).

2.3) New faculty office furnishings have been purchased upon demand at the University of Guelph; all faculty offices in MacN-West will have been renovated by the end of Summer 2020.

2.4) The completion of the MacN-West renovations in Sept 2020 will bring the Guelph facilities into full workplace compliance.

2.5) The University of Guelph is actively exploring the creation of a '4+1' streaming option for strong students that would lead to a combined undergraduate and Master's degree in a total of 5 years, and provide gifted students with enhanced access to the research facilities and projects of the Department. This 'managed enrollment' would help us to identify the strongest students in our programs, and it would serve as a recruiting tool for our programs. This '4+1' pathway has the support of the Assistant Vice-President (Graduate Studies) and is being considered at the College level. Once a framework is established, the Department of Chemistry at Guelph will assess its viability and implementation with GWC2.

**Date of Next Program Review:**         April 2023
                                                            Date

**Signatures of Approval:**

_Elizabeth Mercury_
_____Feb 10 2020_____
**Chair/Director**                                                    **Date**

**Bob Lemieux**   Digitally signed by Bob Lemieux
                          DN: cn=Bob Lemieux, o, ou,
                          email=rplemieux@uwaterloo.ca, c=CA
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**Dean**                                                              **Date**

_Mary Wells_
_Dean College of Eng'g and Physical Sciences, U Guelph_

**University of Waterloo**
**SENATE UNDERGRADUATE COUNCIL**
**Report to Senate**
**15 June 2020**

Senate Undergraduate Council met on 12 May 2020 and agreed to forward the following items to Senate. Council recommends that these items be included for information or approval, as noted, in the consent agenda.

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

**FOR APPROVAL**

**PLAN INACTIVATIONS**

**Faculty of Arts**
**Classical Studies**

1. **Motion:** That Senate approve the inactivation of the Greek and Latin minors effective 1 September 2021.

**Background and Rationale**: There has been very little interest in these minors for years and due to scheduling constraints students can no longer fulfill the requirements needed within a reasonable period of time. At the moment, there are no students enrolled and we will no longer sign students into this minor.

2. **Motion:** That Senate approve the inactivation of the diplomas in Croatian and Russian language effective 1 September 2021.

**Background and Rationale:**
Diploma in Croatian Language Rationale: Due to changes in outside (third-party) funding, Germanic and Slavic Studies is no longer able to offer courses in Croatian language beyond the first year. These courses have been inactivated. We can therefore no longer offer enough courses at the University or through study abroad or exchanges to make a Diploma in Croatian Language possible for students.

Diploma in Russian Language Rationale: We can no longer offer enough courses in Russian at the University or through study abroad or exchanges to make a Diploma in Russian Language possible for students.

**Faculty of Science**
**Biology**

3. **Motion:** That Senate approve the inactivation of the six Biology specialization plans listed below, effective 1 September 2021.

**Background and Rationale:** The following Biology specializations plans, in both regular and co-op, will become inactivated due to relatively low enrolment and additional scheduling constraints required to maintain the large number of specializations.

Honours Biology, Animal Biology Specialization
Honours Biology, Biotechnology Specialization

Honours Biology, Environmental Biology Specialization
Honours Biology, Microbiology Specialization
Honours Biology, Molecular Genetics Specialization
Honours Biology, Plant Biology Specialization
Honours Co-operative Biology, Animal Biology Specialization
Honours Co-operative Biology, Biotechnology Specialization
Honours Co-operative Biology, Environmental Biology Specialization
Honours Co-operative Biology, Microbiology Specialization
Honours Co-operative Biology, Molecular Genetics Specialization
Honours Co-operative Biology, Plant Biology Specialization

## REGULATION CHANGES

**Faculty of Arts**
**Co-op Requirements – Notes re: Transfer Credits**

4. **Motion:** That Senate approve the following changes to the regulations re: co-op requirements re: transfer credits effective 1 September 2021.

**Background and Rationale:**
Existing text: https://ugradcalendar.uwaterloo.ca/page/ARTS-BA-Co-op-Requirements

Proposed changes:
1) Eliminate Note #2 and incorporate similar statement into note #3.
2) Edit Note #3 as shown and move into the #2 spot.

Rationale:
1) Defining transfer credits as "post-secondary" is necessary since we have a practice by which high school transfer credits (AP/IB) can be suppressed.
2) The spirit of the "old" Note #2 is captured in the "new" Note #2 and reflects a change in practice brought on by the introduction of Honours Arts Co-op.
3) Both Honours Arts Co-op and Arts and Business Co-op are only available for a fall term start and students cannot begin beyond level 2A (6.5 units).
4) Previously, post-secondary transfer students wanting to enrol in a co-op program were limited to 4.0 units of credit, whether earned at other institutions or at Waterloo. Raising this number to 6.5 units allows them greater access to co-op and provides them the opportunity to take courses at Waterloo to enable their enrollment in a co-op program.

New text: Bolding = new text being added Strikeout = text being removed

…Notes
1. Co-operative plans are open only to full-time students.
2. ~~For students transferring in to the Faculty of Arts with more than two successfully completed work terms, eligibility to pursue co-op in the Faculty of Arts will be determined by the admitting program.~~
~~3.~~
**2.** Students with more than ~~9.0~~ **6.5** units (~~18~~ **13** courses) completed, including **post-secondary** transfer credits and credits completed outside the Faculty of Arts, are not eligible for admission to a co-op plan within the Faculty of Arts. **Students who have already successfully completed one or more Work Terms regardless of faculty may be considered for an exception to this rule – such exceptions will be determined by the admitting program.**
~~4.~~ **3.** Students seeking to complete a BA in the Faculty of Arts as a second degree having already completed

a bachelor's degree in any discipline at the University of Waterloo or elsewhere **are not eligible for admission to a co-op plan.** ~~will be considered for admission only to a non-co-op program.~~

**Faculty of Arts**
**Co-op Requirements – WKRPT and PD Courses**

5. **Motion:** That Senate approve the following changes to the regulations re: co-op requirements re: work reports and PD courses effective 1 September 2021.

**Background and Rationale:**
Existing text: https://ugradcalendar.uwaterloo.ca/page/ARTS-BA-Co-op-Requirements

Proposed changes:
1) Remove Work Term Reports requirement: four (4) work reports (3 WKRPT courses + first work report in PD 12)
2) Add one (1) PD course to PD course requirements, to a total of five (5) PD courses.

Rationale: Following co-op's initiative, PD courses will be revised to include reflection writing components, which is more pedagogically effective than the way WKRPT courses are currently conducted. This resolves the issue of the marking burden of WKRPTs because material in PD courses is graded within WatPD. This change will support efficient use of resources within the faculty and enhance consistency in marking of written reflections across academic plans. Since the current requirement of four (4) work reports is being eliminated, and three (3) of the four PD courses will integrate writing reflections that replace WKRPT courses, one (1) PD course is being added to the PD course requirements. A total of five (5) PD courses will be required, of which four (4) will include written reflections.

New text: Bolding = new text being added Strikeout = text being removed

Co-op Requirements
…
In order to be eligible to receive a co-op designation at the time of graduation, students in Bachelor of Arts (BA) co-op plans are required to complete:
• a minimum of four work terms beyond the 2A level, **and**
• a minimum of ~~four~~ **five** online professional development (PD) courses~~, and • a minimum of four work-term reports.~~

Professional Development (PD) Courses
PD courses are intended to enhance the professional development of the student and assist in integrating their academic and work-term experiences. With the exception of PD 1, students are expected to take the courses while on their co-op work terms. The required schedule for completing the PD courses is as follows:
• PD 1 must be taken in an academic term **prior to** the first work term,
• PD 12 must be taken **during** the first work term,
• ~~two~~ **three** additional PD courses of the student's choice should be taken in the second, ~~and~~ third**, and fourth** work terms.

~~Work-Term Reports~~
~~The following work reports must be completed:~~
~~• PD 12 (which counts for credit as the student's first work-term report)~~
~~• WKRPT 200A, WKRPT 300A, WKRPT 400A~~
~~Work-term report submission and assessment are managed through the University's learning management system, with the student's major discipline program being responsible for the assessment. With the~~

~~exception of PD 12, which must be completed by the end of the first work term, students must submit co-op work term reports by no later than the tenth day of classes in the academic term following the co-op work term for which the work report was prepared. Information regarding work-report topics and guidelines can be obtained at the Faculty level.~~

**Faculty of Arts**
**French Studies**

> 6. **Motion:** That Senate approve the following changes to the course preface notes for French Studies effective 1 September 2021.

**Background and Rationale:**
To update course preface notes.
Current text: http://www.ucalendar.uwaterloo.ca/2021/COURSE/course-FR.html

New text: Bolding = new text being added Strikeout = text being removed

~~1. The Department reserves the right to refuse admission to, and/or credit for, any of its language courses to a student who has, in the view of the Department, a level of competence unsuited to that course. Students from immersion programs may not enrol in FR 101, FR 151, or FR 152.~~
~~2. Students with no prior schooling in French should enrol in FR 101.~~
~~3. Students with some elementary or secondary school French not exceeding Ontario Grade 10 French or equivalent should enrol in FR 151. Those with Ontario Grade 11 or equivalent should enrol in FR 152.~~
~~4. Students with Ontario 4U French should enrol in FR 192A.~~
~~5. Students may enrol in courses for which they have secondary school antirequisites only with the written permission of the Department of French Studies.~~

**1. Students should contact an advisor if having difficulty selecting a course suitable to their level of competence. The department reserves the right to refuse admission to, and/or credit for, any of its language courses to a student who has, in the view of the department, a level of competence unsuited to that course. 2. Students may not be enrolled in two first-year French courses at the same time; they will be denied credit for all lower-level, first-year French courses taken during that term and will only receive credit for the highest-level course.**
**3. Students may not backtrack to a lower-year language courses after having taken a higher-level one (i.e., students who have completed FR 251 and/or 252 may not go back and later enrol in FR 192B, 192A, 152, 151, or 101).**
**4. Students with XX transferred university credits in French (e.g., FR 1XX) or who haven't taken French for more than three years must consult the department before enrolling in any French courses.**
**5. Basic placement rules:**
> **a. No previous experience in French: FR 101**
> **b. Elementary and Grade 9 core: FR 151**
> **c. Grade 10 core: FR 151**
> **d. Grade 11 core: FR 152**
> **e. Grade 12 core or 4U: FR 192A**
> **f. Grade 12 extended and immersion French: FR 192B**
> **g. Francophone students and students having graduated from a French high school must have the written permission of the French Department to enrol in any French courses.**
> **h. Students may enrol in courses for which they have secondary school anti-requisites only with the written permission of the Department of French Studies.**

**FOR INFORMATION**

## MINOR PLAN & CURRICULAR MODIFICATIONS
Council approved the following on behalf of Senate:
- minor plan changes for the faculties of applied health sciences (recreation and leisure, recreation and sport business); arts (economics, French studies, history, social development studies); mathematics (actuarial science minor, computational mathematics, mathematics/business administration, mathematics/financial analysis and risk management); and science (honour biology, microbiology specialization (reg and co-op)).
- new courses for the faculties of applied health sciences (school of public health and health systems); arts (accounting and finance, economics, history, political science, east Asian studies, social development studies, studies in Islam); environment (knowledge integration); and mathematics (computer science, math elective).
- course changes for the faculties of applied health sciences (school of public health and health systems, recreation and leisure); arts (accounting and finance, dean of arts, global business and digital arts, classical studies, economics, English language and literature, French studies, history, philosophy, political science, psychology, social development studies, studies in Islam, sociology, social work); environment (dean of environment); mathematics (computer science, dean of mathematics, statistics, actuarial science); and science (chemistry, science and business, science).
- course inactivations for the faculty of arts (French, Germanic and Slavic studies).

David DeVidi
*/rmw* Associate Vice-President, Academic

# DISTINGUISHED TEACHING AWARD FOR
# EXCEPTIONAL TEACHING BY A STUDENT

## REPORT TO SENATE FROM THE SELECTION COMMITTEE

### MONDAY, 1 JUNE 2020

In 1998, the Senate of the University of Waterloo approved the Distinguished Teaching by a Registered Student Award to be given annually to up to four individuals nominated by students and colleagues. Beginning in 2009, the award became known as the Amit and Meena Chakma Award for Exceptional Teaching by a Student, to reflect the former Provost's commitment to University teaching. The Selection Committee for the award is chaired by the Associate Vice-President of Graduate Studies and Postdoctoral Affairs and is comprised of two members of faculty (including a representative from the Centre for Teaching Excellence), two graduate students and three undergraduate students.

The following criteria, approved by Senate, are used by the Selection Committee to identify the recipients amongst the nominees:
- Students must have a formal teaching role (e.g., teaching assistant, laboratory demonstrator, adjunct lecturer) at the University of Waterloo or its federated and affiliated university/colleges;
- The Selection Committee will look for intellectual rigour and communication skills in the interpretation and presentation of subject matter. Concern for and sensitivity to the academic need of the students is an important criterion.

The University recognizes the incredible value that student teaching provides in achieving its academic mission. When Faculty members and students work collectively to create educational teams, the outcome is often exceptional engagement and, as a result, deep learning. As in past years, the caliber of the nominations received was simply outstanding. It is apparent that the University community is extraordinarily fortunate for the commitment that our student teachers make, across all Faculties.

To choose the award recipients, the Committee has met twice and spent considerable time reviewing the thoughtful and insightful nominations received. On behalf of the Committee, I am exceptionally pleased to recognize the 2020 recipients of the Amit and Meena Chakma Award for Exceptional Teaching by a Student. They are (in alphabetical order by surname):

- Dania Abuleil (School of Optometry and Vision Science)
- Amy Chow (School of Optometry and Vision Science)
- Dylon McChesney (Philosophy)
- Maša Torbica (English Language and Literature)

Please join me in congratulating and extending sincere appreciation to these spectacular student colleagues.

Jeff Casello
Associate Vice President Graduate Studies and Postdoctoral Affairs
Chair, Amit and Meena Chakma Award for Exceptional Teaching by a Student Selection Committe

# THE DISTINGUISHED TEACHER AWARDS
# REPORT TO SENATE FROM THE SELECTION COMMITTEE
## Monday, June 1, 2020

On December 15, 1975, the Senate of the University of Waterloo approved the "Distinguished Teacher" Award to be given annually to three individuals nominated by their students and colleagues. Senate endorsed the following criteria:

> "The Distinguished Teacher Award is given in recognition of a continued record of excellence in teaching at the University of Waterloo.  It is open to all those who teach students at the University of Waterloo and is not limited just to those holding faculty appointments. The Selection Committee will look for intellectual rigour and communication skills in the interpretation and presentation of subject matter.  The teacher's human quality, the concern for and sensitivity to the needs of students, is an obvious criterion. The Selection Committee will look for a clear indication that the nominee has a favourable and lasting influence on students. Evidence of successful innovation in teaching would also support a nomination, but it is also clear that excellence in teaching does not necessarily require innovation."

On March 21, 1988, Senate approved the recommendation to expand the Distinguished Teacher Award program to include one additional award earmarked for non-regular faculty members (i.e. part-time faculty, full- and part-time teaching staff, and faculty members holding adjunct appointments). In 2005, Senate approved the discontinuation of a separate non-regular award, with the understanding that non-regular nominations would be considered equally with those of regular faculty. Four recipients will still be identified each year to receive this prestigious teaching award.

The Distinguished Teacher Award consists of a citation and presentation at June Convocation and an amount of $1,500 placed in a University discretionary account, under the recipient's control, to be used in support of any teaching activities.

The Selection Committee for the Distinguished Teacher Award is composed of the Associate Vice-President, Academic as Chair, four members of faculty (including a representative from the Centre for Teaching Excellence), one alumnus, two graduate students, and three undergraduate students. The Committee met two times since February to consider the nominations.

Nominations were submitted for consideration by the Selection Committee. Many of these were very strong nominations and documented outstanding records of teaching and service to students at all levels of the University.

The recipients of the Distinguished Teacher Award for 2020 are:

- Cynthia Richard (School of Pharmacy)
- Lowell Ewert (Conrad Grebel, Peace and Conflict Studies)
- Rajinder Pal (Chemical Engineering)
- Rick Marta (Chemistry and Physics & Astronomy)

Sincerely,
DTA Selection Committee

**University of Waterloo**
**SENATE**
**Report of the President**
**15 June 2020**

**FOR INFORMATION**

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**Recognition and Commendation**

**Wes Graham** (1932–1999), the first director of the University's computing centre and the "Father of Computing" at the University of Waterloo, has been posthumously awarded the **2019 Lifetime Achievement Award from CS-Can/Info-Can**. "Wes Graham provided exceptional leadership in software developed for education that has given Waterloo and Canada an international reputation. His contributions shaped computer science education worldwide. He was pivotal in acquiring some of the world's fastest computer hardware during our early days at Waterloo," said Mark Giesbrecht, Director of the Cheriton School of Computer Science. From the 1960s until his death in 1999, Graham's pioneering work and leadership changed the way programming and other computer-related skills were taught at the University of Waterloo, across Canada and internationally. Thousands of copies of the software produced under his direction were used in more than 60 countries, and influenced the teaching of hundreds of thousands of students as well as encouraged dramatic improvements in software development for business and government. His impact on Canadian and international computer science education and software development practices has been dramatic.

Graham recognized that commercial software was not designed for teaching, and so, in 1965, Wes led four students and a junior faculty member in building WATFOR — Waterloo Fortran Compiler — for the IBM 7040 computer to solve the speed and error problems. This software made Waterloo a leader in teaching undergraduate students about computers. Graham led the development of other educational software, including software for COBOL, Pascal, BASIC, APL, and local area networks called Waterloo MicroNET, Waterloo JANET and MacJANET. His research also created early versions of word processors, spreadsheets and databases. As well, in the early 1960s, Wes convinced the University to invest in an IBM 7040. With the creation of the Faculty of Mathematics at Waterloo, he again provided leadership to obtain an IBM 360/75, the largest computer installed in Canada. Because of the widespread use of Waterloo software, Graham acquired over $35 million from major computer companies such as IBM, Digital Equipment and Hewlett Packard. Graham also assisted former students in starting spin-off companies including Watcom (now a division of SAP), Waterloo Maple (now Maplesoft), and OpenText.

(adapted from the Cheriton School of Computer Science News, 8 April 2020)

Professor and Nobel Laureate **Donna Strickland** and University Professor and Canada Research Chair **Linda Nazar** have been named **Fellows of the Royal Society**, the world's oldest independent scientific academy. Strickland and Nazar join more than 60 exceptional scientists from around the world who have been elected as Fellows and Foreign Members of the Royal Society. The 51 new Fellows, 10 Foreign Members and one Honorary Fellow have been selected for their outstanding contributions to scientific understanding. "They embody the global nature of science, with representation from Sweden, Israel, Germany, Australia, Canada, UK-born scientists working in Europe and beyond, and researchers from around the world enriching Britain's own research and innovation sector," says a Royal Society news release. "Their ranks include six Nobel laureates, as well as internationally recognised leaders in industry and science policy." New Fellows are formally admitted to the Society at the Admissions Day ceremony,

traditionally in July, when they sign the Charter Book and the Obligation of the Fellows of the Royal Society. However, the Royal Society reports that, considering current circumstances, this year's Admissions Day will take place in May 2021.

(adapted from the *Daily Bulletin*, 30 April 2020)

The Warriors football program saw three of their stars **drafted to CFL clubs** last week, tying the highest number of players drafted in one season. **Tyler Ternowski**, **Kurtis Gray**, and **Dion Pellerin** all got to live out their childhood dream of hearing they named called out on draft night. "I could not be more proud of these three Warriors," said head coach Chris Bertoia. "They have all come so far in their careers and have worked so hard to earn this feeling. I know when the chance presents, they will do everything they can to earn rosters spots on their respective clubs."

(adapted from the *Daily Bulletin*, 6 May 2020)

Every year, six exceptional co-op students, one from each Faculty, are recognized by the University of Waterloo for their contribution to their employer, their community, and the further development of experiential education. "These exceptional individuals have shown that co-op students at the University of Waterloo have a significant impact long before graduation," says Feridun Hamdullahpur, president and vice-chancellor. "It is wonderful to see their ability to learn, adapt to change and harness a range of essential skills that have made their employer and society better. We will continue to need the spirit and determination of these students more than ever."

The following are the University of Waterloo's 2019 Co-op Students of the Year:

**Yasmeen Mihad Razvi – Health Studies (Faculty of Applied Health Sciences)**: Razvi served as a Clinical Research Assistant at Sunnybrook's Odette Cancer Centre. During her time there, she initiated a study analyzing the accuracy of survival predictions for patients seen in the palliative clinic. The manuscripts were accepted into *Supportive Care in Cancer* and *Annals of Palliative Medicine*. Razvi also co-initiated a review of radiation doses to the heart and lung of approximately 5,000 patients seen at the Odette Cancer Center spanning from 2011 to 2018. In addition, she created a literature review on the lack of adherence of clinicians to treatment guidelines which were published in *Supportive Care in Cancer* and cited and shared by researchers around the world.

**Taylor Legere – Peace and Conflict Studies (Faculty of Arts)**: Legere served as an Operations Coordinator at the Intact Centre on Climate Adaptation for the University of Waterloo's Faculty of Environment. During her time there, she created a "Three Steps to Basement Flood Protection Infographic" which has been shared broadly across Canada. Legere also developed an app mock-up for her team that provided residents with a customized action list on how to reduce their flood risk. During her personal time, she promotes both co-operative education and her area of study to incoming students by participating in open houses and orientation.

**Eric Jihoon Song – Biomedical Engineering (Faculty of Engineering)**: Song served as a Software Developer at Maisha Meds. During his time there he worked on a core Android Application that allowed customers in Kenya to buy pharmaceuticals. Song also improved the old application by redesigning the basic data models within the app to target user complaints, help with future scalability and ensure full backward compatibility. For his capstone project, he is studying the effects of how the sub-Saharan African climate influences the effectiveness and quality of pharmaceutical drugs in East Africa – a notable problem for the public in this region.

**David Pau – Planning (Faculty of Environment):** Pau served as a Student Planner for the Region of Waterloo's Transportation & Environmental Services department, focused on development for Grand River Transit. During his time there, Pau helped successfully launch the largest transit infrastructure project in Waterloo Region's history: the ION Light Rail Transit. During the launch process he identified and fixed an error, that previously inflated the number of bus riders by approximately 35 per cent, to increase the accuracy of bus rider data in an annual region-wide report. In support of co-op, he spoke to over 20 Canadian transportation professionals at the 2019 Unified Mobility Summit about his contributions to the GRT as a co-op student and the benefits of co-operative education as whole.

**Keer Liu – Computer Science (Faculty of Mathematics)**: Liu served as a Software Infrastructure Intern at Slack Technologies Inc. During her time there, she performed a data migration from Slack's old database to a more reliable database which resulted in reduced costs and improved efficiency and quality. Liu also de-provisioned the old database which saved a large amount of server maintenance money and improved the database quality, saving engineers from operational overheads. In addition, she successfully organized the 2018 UW Engineering Hackathon, hosting more than 300 students and over 10 organizations at the event's Career Fair, promoting student-employer connections.

**Lydia Vermeer – Biochemistry (Faculty of Science)**: Vermeer served as a Genetic Counsellor Assistant at Sunnybrook Health Sciences Centre in the Cancer Genetics department. During her time there, Vermeer prepared a 40-page document along with numerous supporting materials for the development of a new format of genetic counselling and testing for breast-cancer that is physician-initiated. Vermeer also helped curate a database of clinic patients with mutations which involved comparing 4,000 mutations to online databases to ensure they were entered in standard notation. To ensure a smooth transition into the workplace for future successive Waterloo co-op students, she also rewrote the student manual for the position.

In addition to the students listed above, **Emily Lam** (Applied Health Sciences), **Jonathan Lee** (Arts), **Meggin Crisp** (Engineering), **Binoy Pattharwala** (Environment), **Spencer Whitehead** (Mathematics) and **Jonathan Hsu** (Science) received honourable mentions for Waterloo's awards.

(adapted from the Co-operative and Experiential Education News, 13 May 2020)

**Kelly Grindrod** never was your traditional neighbourhood pharmacist. An educator and practicing pharmacist, Grindrod holds the OCP Professorship in Pharmacy Innovation for the University of Waterloo. The diversity of her roles and accomplishments led to her receiving the **Pharmacist of the Year Award for 2020**. This highest distinction for Canadian pharmacists is presented annually by **the Canadian Pharmacists Association**, the national advocacy body for pharmacy in Canada. As an educator, innovator, and pharmacist, Grindrod has been at the forefront of encouraging pharmacists to embrace scope changes. That's what led her to design Pharmacy5in5, an online platform where pharmacists can learn five things about complex health topics in five minutes or less. She works with digital arts experts across the University of Waterloo and employs game theories and evidence-based health information in developing modules on topics like cannabis and pharmacy, opioids and naloxone, and, most recently, COVID-19. "I love figuring out messy problems and showing others how to navigate a similar problem," said Grindrod. "Pharmacy can be a puzzle, where you have dozens of pieces that need to fit together. In a busy pharmacy, it can be hard to find the time to solve the puzzle. That's why we started making our infographics and animated videos for Pharmacy5in5. Through my work, I've been able to find creative solutions to show pharmacists how to embrace these challenges and to feel empowered to help their patients."

As faculty at the School of Pharmacy, Grindrod has been recognized for her teaching and mentorship, held several academic leadership positions, and built a research group that examines medication use and digital technologies. The focus on technology emerged in part as a response to the way new technology is disrupting traditional pharmacy practice. Grindrod continues to model that kind of assertive and evidence-based practice for her students. "I love being a pharmacist but for me, "pharmacist" has meant many different things. I love that I get to show people a different side of pharmacy, and to also show my students how rewarding an academic career can be."

(adapted from the School of Pharmacy News, 20 May 2020)

Waterloo food security expert **Jennifer Clapp** has been awarded a **Killam fellowship** for her work on the rise of agrifood mega-companies and the implications for the global food system. During her fellowship, Clapp will conduct research on how corporate consolidation and the financialization in the agrifood sector create new risks for the food system. Clapp will also look at the dynamics of international policy responses to these shifts. "A Killam fellowship is one of the greatest achievements a Canadian scholar can achieve in any discipline," said Feridun Hamdullahpur, President of the University of Waterloo. "We're incredibly proud that Dr. Clapp is again recognized as a global leader in food security — something critical to our efforts to achieve the UN Sustainable Development Goals." Clapp's award comes at a time when our global food system is in peril due to the COVID-19 pandemic. Her recent opinion piece published in the New York Times revealed how a trend towards corporate consolidation and commodity specialization results in the paradoxical situation in which significant amounts of food are being destroyed around the world as a growing number of people are going hungry. Clapp, a Canada Research Chair in Global Food Security and Sustainability, was also awarded a Trudeau Fellowship in 2013. In 2018 Clapp won the Innes Gérin Medal for contributions to the Social Sciences from the Royal Society of Canada.

(adapted from the *Waterloo News*, 26 May 2020)

Waterloo creativity and strategic thinking were on display as the Canadian Council for the Advancement of Education (CCAE) celebrated its **2020 Prix d'Excellence Awards.** The awards recognize top achievements in alumni affairs, public affairs, communications, recruitment, marketing, fundraising and other initiatives that support the advancement of post-secondary institutions. Waterloo received four awards at last week's virtual ceremonies:

- **University Relations** won bronze for Best Website with Waterloo — Connecting imagination with impact.
- **University Relations'** promotions for the Waterloo Innovation Summit won silver for Best Advertisement or Poster.
- The **Office of Advancement's** ugly sweater year-end appeal won silver for Best Annual Giving Initiative.
- The **Office of Advancement's** 2018-19 Report on Giving won gold for Best Report to Donors.

(adapted from the *Daily Bulletin*, 28 May 2020)

**Charmaine Dean**, vice-president, research and international and professor in Waterloo's Department of Statistics and Actuarial Science has been named **Fellow of the Institute of Mathematical Statistics (IMS)**. Professor Dean is one of 35 nominees selected for the Fellowship in 2020. Each nominee for IMS Fellow is assessed by a committee of their peers for the award. Professor Dean received the award for "her scientifically important contributions to the analysis of count data, disease mapping, spatio-temporal data and more; for her outstanding leadership to the statistical profession, her record of mentorship and for her enormous work in keeping statistics visible at the center of science."

"Professor Dean has provided exceptional leadership to statistical science in Canada and internationally over many years," says Professor Stefan Steiner, chair of the Department of Statistics and Actuarial Science. "This includes serving as the President of the Statistical Society of Canada and the International Biometrics Society (Western North American Region) as well as on numerous grant selection committees."

Established in 1935, the Institute of Mathematical Statistics is a member organization that fosters the development and dissemination of the theory and applications of statistics and probability. The IMS has 3,500 active members throughout the world. Approximately 12 per cent of the current IMS membership has earned the status of fellowship.

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

**Marie-Claire Cordonier-Segger** is a professor at the School of Environment, Enterprise and Development (SEED), and has received the **International Justice Award**, which honours the legacy of His Excellency Judge CG Weeramantry, Vice-President of the International Court of Justice and recipient of the UNESCO Prize for Peace and Education. The award was presented by the Weeramantry family on May 15, 2020, during the online global symposium on Human Rights, the Sustainable Development Goals and the Law which engaged over 1,404 registrants from over 101 countries, and was hosted by McGill University Faculty of Law Centre for Human Rights and Legal Pluralism (CHRLP), the University of Montreal Faculty of Law, the Balsillie School of International Affairs Fulbright Chair in Global Governance, the University of Cambridge Centre for Environment, Energy and Natural Resources Governance (CEENRG), the Center for International Sustainable Development Law (CISDL), and other partners. Cordonier-Segger is recognized for her achievements in fields of sustainable development and international law. She was awarded the 2020 International Justice Award for her outstanding legal scholarship and teaching, and for her leadership of international foundations, councils and networks including the Centre for International Sustainable Development Law (CISDL), the Climate Law and Governance Initiative with the United Nations Framework Convention on Climate Change, the Biodiversity Law and Governance Initiative with the Convention on Biological Diversity and UN-Environment and as a senior advisor of the Interdisciplinary Centre on Climate Change. "Her leadership on sustainability and climate change law and governance is a gift to Canada and the world," said Jean Andrey, dean of the Faculty of Environment.

(adapted from the *Daily Bulletin*, 3 June 2020)

**University of Waterloo**
**REPORT OF THE DEAN OF APPLIED HEALTH SCIENCES TO SENATE**
**June 15, 2020**

## FOR INFORMATION

### A. APPOINTMENTS

**Definite Term Appointment – Full-time**
**JOHANSEN, Kelsey,** Lecturer, Department of Recreation and Leisure Studies, July 1, 2020 – August 31, 2022. B.A., Lakehead University (2008), H.B.Sc., Lakehead University (2008), H.B.O.R., Lakehead University (2008), M.E.S., Lakehead University (2011), PhD, University of Otago, (expected 2020).  Ms. Johansen will contribute to the teaching complement in the areas of therapeutic recreation, tourism, and event management.

**Adjunct Appointments**
*Graduate Supervision and Research*
**FOSTER, Glen**, Associate Professor, Department of Kinesiology, June 1, 2020 – May 30, 2022.

**PARKINSON, Robert,** Assistant Professor, Department of Kinesiology, July 1, 2020 – June 30, 2023.

**Special Lecturer Appointment**
**FERRO, Annalise,** Lecturer, School of Public Health and Health Systems, May 1, 2020 – August 31, 2020.

**WILLIAMS, Laura,** Lecturer, Department of Kinesiology, May 1, 2020 – August 31, 2020.

**Postdoctoral Appointments**
**BROWN, Katlyn**, Department of Kinesiology, July 1, 2020 – June 30, 2021.

**EAST, Katherine**, School of Public Health and Health Systems, April 14, 2020 – March 31, 2022.

### B. ADMINISTRATIVE APPOINTMENTS

**Change in Administrative Appointment**
**MEYER, Samantha,** Associate Director, Graduate Programs, School of Public Health and Health Systems, change **from** July 1, 2020 – June 30, 2023 **to** September 1, 2020 – June 30, 2023.

**MacEACHEN, Ellen**, Associate Director, Graduate Programs, School of Public Health and Health Systems, change from July 1, 2017 – June 30, 2020 **to** July 1, 2017 – August 31, 2020.


*For Approval by the Board of Governors*

### C. SABBATICALS

**McCARVILLE, Ronald**, Professor, Department of Recreation and Leisure Studies, September 1, 2020 – August 31, 2021 at 100% salary.
**Change in Sabbatical**

**JANES, Craig**, Professor, School of Public Health and Health Systems, change **from** July 1, 2020 – June 30, 2021at 100% **to** September 1, 2020 – August 31, 2021 at 100% salary.

**Lili Liu, Dean**
**Applied Health Sciences**

## UNIVERSITY OF WATERLOO
## REPORT OF THE DEAN OF THE FACULTY OF ARTS TO SENATE
### June 15, 2020

**FOR INFORMATION**

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**A. APPOINTMENTS**

**Probationary Term Appointments – Change in Date**

**DOLPHIN, Alexis,** (BA 1998 McMaster University, MA 2000 University of Western Ontario, PhD 2006 University of Massachusetts), Assistant Professor, Department of Anthropology, **from** July 1, 2019 to June 30, 2022 **to** July 1, 2019 to June 30, 2023.

**DRAKE, Anna,** (BA 2001 University of Waterloo, MA 2003 University of Victoria, PhD 2009 Queen's University), Assistant Professor, Department of Political Science, **from** July 1, 2019 to June 30, 2022 **to** July 1, 2019 to June 30, 2023.

**Definite Term Reappointments**

**BENNETT, Christopher,** Lecturer, Department of Political Science, July 16, 2020 to August 31, 2021.

**BLOEMHOF, Barbara,** Lecturer, Department of Economics, July 16, 2020 to August 31, 2021.

**CAREY, Kevin,** Lecturer, Department of Communication Arts, August 1, 2020 to August 31, 2021.

**CHENIER, Allison,** Lecturer, Department of Sociology and Legal Studies, September 1, 2020 to August 31, 2021

**DENTON, Stacy,** Lecturer, Department of English Language and Literature, July 16, 2020 to August 31, 2021.

**FORRESTER, Clive,** Lecturer, Department of English Language and Literature, August 1, 2020 to August 31, 2021.

**JONAHS, Andrea,** Lecturer, Department of English Language and Literature, August 1, 2020 to August 31, 2021.

**LAMONT, George,** Lecturer, Department of English Language and Literature, August 1, 2020 to August 31, 2021.

**MCCARTHY, Megan,** Lecturer, Department of Psychology, July 16, 2020 to August 31, 2021.

**RAY, Nicholas,** Lecturer, Department of Philosophy, July 1, 2020 to July 31, 2020.

**TAYLOR, Christopher,** Lecturer, Department of History, July 16, 2020 to August 31, 2021.

**Adjunct Appointments – Instruction**

**KRAFT, James,** Lecturer, School of Accounting and Finance, May 1, 2020 to August 31, 2020.

**Adjunct Reappointments – Instruction**

**ARNOLD, Brian,** Lecturer, School of Accounting and Finance, May 1, 2020 to August 31, 2020.

**BENVENUTI, Courtney,** Lecturer, School of Accounting and Finance, May 1, 2020 to August 31, 2020.

**BRIGGS, Catherine,** Lecturer, Department of History, May 1, 2020 to August 31, 2020.

**CARVER, Matthew,** Lecturer, Department of Fine Arts, May 1, 2020 to August 31, 2020.

**CYR, Dylan,** Lecturer, Department of History, May 1, 2020 to August 31, 2020.

**EHRENTRAUT, Judy,** Lecturer, Department of English Language and Literature, May 1, 2020 to August 31, 2020.

**GAZZOLA, Lynn,** Lecturer, Department of Economics, May 1, 2020 to August 31, 2020.

**JAIMES-DOMINGUEZ, Luis,** Lecturer, Department of Spanish and Latin American Studies, May 1, 2020 to August 31, 2020.

**JOHAL, Jasdeep,** Lecturer, School of Accounting and Finance, May 1, 2020 to August 31, 2020.

**KAPOOR, Akash,** Lecturer, School of Accounting and Finance, May 1, 2020 to August 31, 2020.

**LEE, Richard,** Lecturer, School of Accounting and Finance, May 1, 2020 to August 31, 2020.

**LEROUX, Carlie,** Lecturer, Department of Sociology and Legal Studies, May 1, 2020 to August 31, 2020.

**MALAMET, Elliott,** Lecturer, Department of Religious Studies, May 1, 2020 to August 31, 2020.

**MCDERMOTT, Neil,** Lecturer, Department of Psychology, May 1, 2020 to August 31, 2020.

**OFILI, Patricia,** Lecturer, Department of English Language and Literature, May 1, 2020 to August 31, 2020.

**WARRINER, Keith,** Associate Professor, (Associate Professor Emeritus), Department of Sociology and Legal Studies, May 1, 2020 to August 31, 2020.

**WOODFORD, Benjamin,** Lecturer, Department of English Language and Literature, May 1, 2020 to August 31, 2020.

**Adjunct Reappointments – Miscellaneous (research, consultations, etc.)**
**MACDONALD, Robert,** Assistant Professor, Department of Anthropology, September 1, 2020 to August 31, 2022.

**Graduate Students Appointed as Part-Time Lecturers**
**BERESFORD, Sally,** Department of English Language and Literature, May 1, 2020 to August 31, 2020.

**ELLIOTT, Caitlin,** Department of Sociology and Legal Studies, May 1, 2020 to August 31, 2020.

**GERBER, Kyle,** Department of English Language and Literature, May 1, 2020 to August 31, 2020.

**HOBIN, Nicholas,** Department of English Language and Literature, May 1, 2020 to August 31, 2020.

**JAFARI, Zahra,** Department of English Language and Literature, May 1, 2020 to August 31, 2020.

**MUNRO, Zachary,** Department of Sociology and Legal Studies, May 1, 2020 to August 31, 2020.

**SCHRAM, Brian,** Department of Sociology and Legal Studies, May 1, 2020 to August 31, 2020.

**SYCZ, Damian,** Department of Sociology and Legal Studies, May 1, 2020 to August 31, 2020.

**WOJCIECHOWSKI, Christine,** Department of Sociology and Legal Studies, May 1, 2020 to August 31, 2020.

**Staff Appointments to Faculty**
**NUNEZ, Camelia,** Lecturer, Faculty of Arts, May 1, 2020 to August 31, 2020.

B. **ADMINISTRATIVE APPOINTMENTS**
**Administrative Reappointment**
**CARTER, Angela,** Associate Director, Arts First, Department of Political Science, August 1, 2020 to December 31, 2020.

**PARK, Robert,** Associate Dean, Cooperative Education and Planning, Faculty of Arts, July 1, 2020 to June 30, 2021.

**PARK, Robert,** Interim Chair, Department of Anthropology, May 1, 2020 to June 30, 2021.

Sheila Ager
Dean, Faculty of Arts

**UNIVERSITY OF WATERLOO**
**REPORT OF THE DEAN OF ENGINEERING TO SENATE**
**June 15, 2020**


**FOR INFORMATION**


A.   *APPOINTMENTS*
     *Tenured Appointments*
     **AULTMAN-HALL, Lisa,** Professor, Department of Systems Design Engineering, August 1, 2020.
     PhD, Civil Engineering, McMaster University, Hamilton, ON,1996; MSc, Civil Engineering,
     Queen's University, Kingston, ON, 1993; Bachelor of Engineering, Civil Engineering, McMaster
     University, Hamilton, ON, 1991. Professor Lisa Aultman-Hall's research focuses on
     transportation systems, especially methods to collect unique databases for modeling and analysis
     of long-distance travel, transportation sector emissions, network resiliency, streetscape design,
     and non-motorized transportation. Professor Aultman-Hall's research aligns with our
     department's strategic objectives of increasing our research and impacts in Societal and
     Environmental Systems. As a chair, Dr Aultman-Hall's experience in teaching design and
     interdisciplinary courses as well as her leadership in interdisciplinary research will allow the
     Department's strategic priorities to continue moving forward.


     *New Definite Term Full-time*
     **EL-HAG, Ayman,** Lecturer, Department of Electrical and Computer Engineering, May 1, 2020 –
     April 29, 2022. PhD in Electrical Engineering, Thesis: Effect of Insulator Profile on Aging
     Performance of Silicone Rubber Insulators, University of Waterloo, Waterloo, ON, 2003; MS in
     Electrical Engineering, Thesis: Transformer No-Load Current Harmonics, King Fahd University of
     Petroleum and Minerals, Dhahran, Saudi Arabia, 1998; BS in Electrical Engineering, King Fahd
     University of Petroleum and Minerals, Dhahran, Saudi Arabia, 1993.


     *New Definite Term Reappointment Full-time*
     **NASSAR, Mohammed,** Lecturer, Department of Electrical and Computer Engineering, May 1, 2020
     – April 29, 2022. PhD, University of Waterloo, Waterloo, ON, 2017; MSc, Alexandria
     University, Alexandria, Egypt, 2010; BSc, Alexandria University, Alexandria, Egypt, 2006.

     **SHAH, Muhammad Umair,** Lecturer, Department of Management Sciences, August 31, 2020 –
     August 29, 2022. PhD, Doctor of Philosophy, Department of Management Sciences, University of
     Waterloo, Waterloo, ON, 2016; MSc, Department of Management Sciences, University of Waterloo,
     Waterloo, ON, 2011; BBA, Department of Management Sciences, National University of Computer
     and Emerging Sciences, Lahore, 2009.

     **SHAVANDI, Hassan,** Lecturer, Department of Management Sciences, September 1, 2020 – August
     31, 2021.PhD, Department of Industrial Engineering, Sharif University of Technology, Tehran, Iran,
     2005; MSc, Department of Industrial Engineering, Sharif University of Technology, Tehran, Iran,
     1998; BSc, Department of Industrial Engineering, Azad University of Qazvin, Qazvin, Iran, 1996.


     *Visiting Appointments*
     **LIANG, Yu,** Scholar, Department of Mechanical and Mechatronics Engineering, August 1, 2020 –
     January 31, 2021.

     **NIE, Qianqian,** Scholar, Department of Mechanical and Mechatronics Engineering, March 1, 2020 –
     November 29, 2020.

*Special Reappointments*
Undergraduate Instruction, Research and Other
**MURRAY, Mike,** Engineer in Residence, Department of Civil and Environmental Engineering, May 1, 2020 – August 31, 2020.

*Adjunct Appointments*
Graduate Supervision and Research
**KIM, Jong Uk,** Associate Professor, Department of Mechanical and Mechatronics Engineering, May 1, 2020 – April 30, 2023.

*Adjunct Reappointments*
Graduate Supervision
**KOLLER, Heinz,** Lecturer, School of Architecture, May 1, 2020 – August 31, 2020.

*Adjunct Reappointments*
Graduate Supervision and Research
**BOHNS, Vanessa,** Associate Professor, Department of Management Sciences, July 1, 2020 – June 30, 2023.

**HABERKAMP, Jens,** Professor, Department of Civil and Environmental Engineering, May 1, 2020 – April 30, 2023.

*Cross-Appointments*
**NACKE, Lennart,** Associate Professor, Stratford School of Interaction Design and Business to Department of Management, Sciences, May 1, 2020 – April 30, 2023.

*Changes in Appointments*
**BASIR, Nada,** Assistant Professor, Conrad School of Entrepreneurship and Business, second probationary term appointment extended one year (COVID-19). New end date July 1, 2024.

*ADMINISTRATIVE APPOINTMENTS*
**AUCOIN, Marc,** Associate Chair, Department of Chemical Engineering, Undergraduate Studies, May 1, 2020 – April 30, 2022.

**AULTMAN-HALL, Lisa,** Chair, Department of Systems Design Engineering, August 1, 2020 – July 31, 2024.

**KARIM, Karim,** Executive Director, Centre for Bioengineering and Biotechnology, April 1, 2020 – March 31, 2025.

B.  *SABBATICAL LEAVES*
**KHAJEPOUR, Amir,** Professor, Department of Mechanical and Mechatronics Engineering, September 1, 2020 – March 31, 2021, six months sabbatical at 100% salary.

**LI, Dongqing,** Professor, Department of Mechanical and Mechatronics Engineering, September 21, 2021 – February 28, 2022, six months sabbatical at 100% salary.

**PARKER, Wayne,** Professor, Department of Civil and Environmental Engineering, September 1, 2020 – August 31, 2021, twelve months sabbatical at 100% salary.

**REN, Carolyn,** Professor, Department of Mechanical and Mechatronics Engineering, September 1, 2020 – February 28, 2021, six months sabbatical at 100% salary.

**REVINGTON, Dereck,** Associate Professor, School of Architecture, September 1, 2020 - August 31, 2021, twelve months at 85% salary.

*Cancelled*
**DIMITROV, Stanko**, Associate Professor, Department of Management Sciences. Early Sabbatical, November 1, 2020 – April 30, 2021, six months at 85% salary.

*Change of Dates*
**CULHAM, Richard,** Professor, Department of Mechanical and Mechatronics Engineering, Sabbatical change of dates from July 1, 2020 – December 31, 2020, six months at 100% salary to January 1, 2021 – June 30, 2021, six months at 100% salary.

**HANSSON, Carolyn,** Professor, Department of Mechanical and Mechatronics Engineering, Sabbatical change of dates from October 1, 2020 – March 31, 2021, six months at 100% of her half time to September 1, 2020 – February 28, 2021, six months at 100% of her half time.

C.      *SPECIAL LEAVES*
**Unpaid Leave**
**ARAMI, Arash,** Professor, Department of Mechanical and Mechatronics Engineering, March 11, 2020 - June 30, 2020.

Richard Culham, Interim Dean
Faculty of Engineering

**UNIVERSITY OF WATERLOO**
**REPORT OF THE DEAN OF THE FACULTY OF ENVIRONMENT TO SENATE**
**June 15, 2020**

**FOR INFORMATION**
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**A.  APPOINTMENTS**

### Cross Appointments

**CRAIG, James,** Associate Professor, Department of Civil and Environmental Engineering to the Department of Geography and Environmental Management, May 1, 2020 to April 30, 2023.

**RUTTY, Michelle,** Assistant Professor, Faculty of Environment, Dean's Office to the Department of Geography and Environmental Management, June 1, 2020 to May 31, 2023.

**SWATUK, Larry,** Professor**,** School of Environment, Enterprise and Development to the Department of Geography and Environmental Management, May 1, 2020 to April 30, 2023
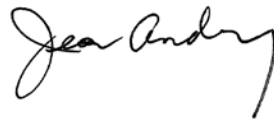
**B.  ADMINISTRATIVE APPOINTMENT**
**DEAN, Jennifer**, Associate Professor, School of Planning, Associate Director, Undergraduate Studies, School of Planning, July 1, 2020 to June 30, 2023.

**C.  SABBATICAL LEAVES**
*__For approval by the Board of Governors__*
**DOUCET, Brian**, Associate Professor, School of Planning, July 1, 2020 to December 31, 2020, *special early sabbatical* at 100% salary.

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Jean Andrey
Dean

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**University of Waterloo**
**REPORT OF THE DEAN OF MATHEMATICS TO SENATE**
**June 15, 2020**

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**FOR INFORMATION**

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**A.     APPOINTMENTS** (for approval by the Board of Governors)
**Probationary-Term Appointments**
**McINTOSH, Shane** (BA, 2008; MSc, 2011; PhD, 2015, both from Queen's University),
Associate Professor, David R. Cheriton School of Computer Science, July 1, 2020 – June 30,
2023.  Currently, Dr. McIntosh is a Canada Research Chair in Software Release Engineering at
McGill University.  He was one of two PhD graduates from the Queen's University class of 2015
to be recognized with the Academic Gold Medal from the Governor General of Canada for his
PhD work.  Dr. McIntosh's research area is in empirical software engineering.  More specifically
he has focused his research on release engineering.  He has made significant research contributions
in intelligent release pipelines, code review analysis and mining software repositories. His
presentation and very strong reference letters confirm that he will be a great teacher, supervisor
and colleague with numerous potential collaborations. Dr. McIntosh will strengthen our Software
Engineering area within the School.

**Continuing - Appointments**
**BALKA, Peter**, Lecturer, Dept. of Statistics and Actuarial Science, effective July 1, 2020.

**Definite Term - Reappointments**
**ADCOCK, James**, Lecturer, Dept. of Statistics and Actuarial Science, August 30, 2020 – August
29, 2021.

**BLAKE, Peter**, Lecturer, Office of the Dean, September 1, 2020 – August 31, 2023.

**GARBARY, Robert**, Lecturer, Office of the Dean, September 1, 2020 – August 31, 2022.

**LANCTOT, Kevin**, Lecturer, David R. Cheriton School of Computer Science, May 1, 2020 –
August 31, 2021.

**McGRATH, Paul**, Lecturer, Office of the Dean, September 1, 2020 – August 31, 2022.

**PAYNE, Ian**, Lecturer, Office of the Dean, September 1, 2020 – August 31, 2022.

**Visiting Appointments**
**BURGER, Reinhold**, Research Associate, David R. Cheriton School of Computer Science, May
1, 2020 – April 30, 2021.

**Adjunct Appointments**
**Research**
**MALTON, Andrew** (BlackBerry), Professor, David R. Cheriton School of Computer Science,
June 1, 2020 – June 30, 2023.

**TORNATORE, Massimo** (Politecnico di Milano), Associate Professor, February 1, 2021 – June
30, 2024.

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**Adjunct Reappointments**
**Instructor**
**BRADLEY, Kirsten**, Lecturer, David R. Cheriton School of Computer Science, May 1, 2020 – August 31, 2020.

**JAMSHIDPEY, Armin**, Lecturer, David R. Cheriton School of Computer Science, May 1, 2020 – August 31, 2020.

**Graduate Students reappointed as Part-time Lecturers**
**TOTH, Justin**, Lecturer, Dept. of Combinatorics and Optimization, May 1, 2020 – August 31, 2020.

**Postdoctoral Fellows appointed as Part-time Lecturers**
 **KNIGHT, Erick**, Dept. of Pure Mathematics, July 1, 2020 – June 30, 2020.

**Postdoctoral Fellow reappointed as part-time Lecturers**
**FADINA, Tolulope**, Dept. of Statistics and Actuarial Science, October 1, 2020 – April 15, 2021.

**RATEAU, Hanae**, David R. Cherition School of Computer Science, May 1, 2020 – April 30, 2021.

**Change in Appointment**
**MORLAND, Cameron**, Lecturer, (*ref.* Dean's Report to Senate*, May 2018)*
From:   Office of the Dean, July 31, 2018 – July 29, 2020.
To:      David R. Cheriton School of Computer Science, May 1, 2020 – August 31, 2021.


**B.**      **SABBATICALS** (already approved by the Board of Governors)
**ILYAS, Ihab** (Professor), David R. Cheriton School of Computer Science, September 1, 2020 – August 31, 2021, with 85% salary.

(to be approved by the Board of Governors)
**POULIN, Francis** (Professor), Dept. of Applied Mathematics, September 1, 2020 – August 31, 2021.


**C.**      **SPECIAL LEAVE**
**SALEM, Ken**, Professor David R. Cheriton School of Computer Science, September 1, 2020 – August 31, 2021.  This is an unpaid leave.


Kevin Hare
Interim Dean

## UNIVERSITY OF WATERLOO
## REPORT OF THE DEAN OF SCIENCE TO SENATE
### June 15, 2020

**For information:**

### A.    *APPOINTMENTS*

#### *New Definite Term*

**RONAGH, Pooya**, Research Assistant Professor, Department of Physics and Astronomy, September 1, 2020 to August 31, 2023.   [B.S. Computer Science, B.S. Math, Sharif University of Technology, Iran (2009); M.Sc. Math, University of British Columbia (2011); Ph.D. Math, University of British Columbia (2016).]   Dr. Pooya Ronagh's research focuses on the synergy between mathematical programming, machine learning, and quantum computation. His appointment overlaps several research directions in the Department, including condensed matter physics and quantum information.  Dr. Ronagh, with Professor Roger Melko, developed a successful new Machine Learning and Artificial Intelligence course in Physics & Astrononomy.   The course will become a permanent part of our new emphasis on computational physics.  Pooya's appointment is intended to strengthen ties between IQC and Perimeter Institute.

**SHALHOUB, Julie,** Clinical Lecturer, School of Optometry and Vision Science, July 15, 2020 to July 14, 2023.   [B.Sc., Biological Sciences, University of Guelph (2011); OD, School of Optometry, Indiana University (2015); Residency Certificate, Pediatrics and Vision Therapy, Southern College of Optometry (2016).]   Dr. Julie Shalhoub will be working in the area of Binocular Vision (BV)/Vision Therapy (VT)/Vision Rehabilitation.  We look forward to her leadership in growing the clinic specialty practice, increasing community access to care, and sharing her passion for clinical education and training.

#### *Adjunct Appointments*

#### *Graduate Supervision*

**BOUDREAULT, Richard**, Professor, Department of Earth and Environmental Sciences, April 1, 2020 to March 31, 2023.

#### *Graduate Supervision and Research*

**STEEVES, Jennifer,** Professor, School of Optometry and Vision Science, May 1, 2020 to April 30, 2023.

#### *Adjunct Reappointments*

#### *Graduate Supervision*

**LEFEBVRE, Rene**, Professor, Department of Earth and Environmental Sciences, April 1, 2020 to March 31, 2023.

**QUINTON, William**, Professor, Department of Earth and Environmental Sciences, February 1, 2020 to January 31, 2023.

**ROBERTSON, William**, Professor, Department of Earth and Environmental Sciences, May 1, 2020 to April 30, 2023.

*Other*

**LEE, Joseph**, Assistant Professor, School of Pharmacy, July 1, 2020 to June 30, 2023.

*Graduate Supervision and Research*

**PARK, Chul**, Professor, Department of Physics and Astronomy, May 1, 2020 to August 31, 2024.

*Cross Reappointments*

**LEUNG, Debbie**, Professor, Department of Combinatorics and Optimization, cross appointed to Department of Physics and Astronomy, April 1, 2020 to December 31, 2023.

*Changes in Appointment*

**HAINES, Lacey**, Assistant Clinical Professor, School of Optometry and Vision Science, second probationary term appointment extended one year (Covid-19).    New end date June 30, 2023.

**KATZENBACK, Barbara,** Assistant Professor, Department of Biology, second probationary appointment extended one year (Covid-19).    New end date June 30, 2023.

**KHAN, Shamrozé (Zay)**, Assistant Clinical Professor, School of Optometry and Vision Science, second probationary appointment extended two years (Covid-19 and maternity leave).    New end date June 30, 2025.

**MacIVER, Sarah,** Associate Clinical Professor, School of Optometry and Vision Science, second probationary appointment extended two years (Covid-19 and maternity leave).    New end date June 30, 2024.

**NISSIMOV, Jozef**, Assistant Professor, Department of Biology, first probationary appointment extended one year (Covid-19).    New end date June 30, 2024.

**STANBERRY, Andre**, Associate Clinical Professor, School of Optometry and Vision Science, second probationary term appointment extended one year (Covid-19).    New end date June 30, 2023.


**B.**    *ADMINISTRATIVE APPOINTMENTS*

**CHONG, Michael**, Associate Chair, Undergraduate Studies and Co-op, Department of Chemistry, July 1, 2020 to June 30, 2023.

**MÜLLER, Kirsten**, Chair, Department of Biology, January 1, 2021 to December 31, 2024.


*ADMINISTRATIVE REAPPOINTMENTS*

**McNAMARA, Brian**, Chair, Department of Physics and Astronomy, January 1, 2021 to December 31, 2024.

**C.**  *FOR APPROVAL BY THE BOARD OF GOVERNORS*

*SABBATICAL LEAVE*

**ISLAM, Kazi Rajibul**, Assistant Professor, Department of Physics and Astronomy, special early leave, July 1, 2020 to December 31, 2020, 100% salary arrangements.

**LUPASCU, Adrian**, Associate Professor, Department of Physics and Astronomy, early leave, January 1, 2021 to June 30, 2021, 85% salary arrangements.

**NAZAR, Linda**, Professor, Department of Chemistry, September 1, 2020 to August 31, 2021, 100% salary arrangements.

**SPAFFORD, Marlee**, Professor, School of Optometry and Vision Science, September 1, 2020 to April 30, 2023, 100% salary arrangements.

RP. Lemieux
Dean

RPL:lw

**University of Waterloo**
**SENATE**
**Report to Senate**
**15 June 2020**

**FOR APPROVAL**
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**Committee Appointment**
**Motion:** To approve the following appointment:

- **Senate Nominating Committee for Honorary Degrees:** Lisa Bauer-Leahy as the alumni member of Senate, term to 30 April 2021.

**University of Waterloo**
**SENATE GRADUATE & RESEARCH COUNCIL**
**Report to Senate**
**15 June 2020**

Senate Graduate & Research Council met on 11 May 2020 and agreed to forward the following items to Senate for approval as part of the regular agenda.

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

**FOR APPROVAL**

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**PROGRAM CHANGE**

**Faculty of Arts**
1. **Motion:** To approve the conversion of the Master of Digital Experience Innovation (MDEI) program from its current in-person, on-campus delivery mode to a leading-edge hybrid degree program with most course elements converted to online delivery, effective 1 September 2021, as presented in Attachment 1.

   **Rationale:** The Stratford School of Interaction Design and Business is proposing this leading-edge hybrid learning environment and mode of delivery in order to reach a broader marketplace across Canada, respond to the needs of today's knowledge workers, and leverage existing assets into new sources of revenue.

   Virtual or online learning has become an attractive alternative learning model for part-time and full-time studies, offering continuing education options to full-time professionals and international students. Online learning provides a framework for innovative teaching methods and forward-thinking pedagogical approaches that are core features of the University of Waterloo and the Stratford School's mandate.

   The Hybrid MDEI, which consists of eight (8) core courses anchored by two (2) on site intensive workshops (the 'Program Intensives') will provide students with the speed and flexibility of a short online program, while also providing valuable real-world learning opportunities developed in collaboration with faculty and our industry partners.

   Domestic and international students who are integrated personally and professionally in their home community will have the advantage of staying in their community instead of relocating to Stratford where they will have no connections.

   At the same time, through the online learning platform and, more importantly, the two Program Intensives, students will have the opportunity to network with their peers both virtually and in person. Industry partners will be part of the learning community through (1) mentorship during the Program Intensives and (2) by commissioning projects for students. This framework will offer students many networking opportunities for professional development, as well as prepare students for a world where more and more professionals work as part of virtual teams.

**Faculty of Engineering**
1. **Motion:** To update the Master of Engineering (MEng) degree requirements in Mechanical and Mechatronics Engineering (MME) to include 1 new specialization, effective 1 September 2020, as presented in Attachment 2.

   **Rationale:** The MEng in MME program will be offering "Graduate Specializations" in a given area, in place of the currently offered type 2 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 focused course selection into line with Faculty of Engineering objectives. MME will be discontinuing the existing type 2 Graduate Diploma (GDip) in Green Energy offered in conjunction with the MEng. In its place, a Graduate Specialization is being proposed.

2. **Motion:** To approve discontinuation of the (type 3) Graduate Diploma (GDip) in Green Energy (direct entry), effective 1 September 2020, as presented in Attachment 3.

   **Rationale:** MME is looking to discontinue the direct entry GDip in Green Energy based on very low uptake in the program since its creation in 2013. The direct entry GDip has never met the required steady state of 40 students per year for the program to be viable.

3. **Motion:** To approve the discontinuation of the (type 2) Graduate Diploma (GDip) in Green Energy, effective 1 September 2020, as presented in Attachment 4.

   **Rationale:** The MEng in MME program will be offering "Graduate Specializations" in a given area, in place of the currently offered type 2 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 focused course selection into line with Faculty of Engineering objectives. MME will be discontinuing the existing type 2 Graduate Diploma (GDip) in Green Energy offered in conjunction with the MEng. In its place, a Graduate Specialization is being proposed.


**Faculty of Science**
1. **Motion:** To approve the addition of a course-based MSc in Physics with a specialization in Quantum Technology, effective 1 September 2020, as presented in Attachment 5.

   **Rationale:** Quantum technology is based on the application of quantum physics to tasks and challenges related to information theory. They are impacting the way we process and share information as well as learn about the world around us through quantum computers, communication, and sensors. Quantum technology is rapidly evolving and maturing into a new economically important sector. An understanding of quantum mechanics, its applications, and the strengths and limitations of different quantum modalities are required for maximum impact in this field.

   The MSc in Physics with a Graduate Specialization in Quantum Technology is a course-based study option that will provide students with the theoretical foundation for quantum technology through in-class courses offered by the Faculty of Science and through the University of Waterloo Collaborative Graduate Program in Quantum Information. It will further provide hands-on experience with several major quantum platforms through unique laboratory courses.

   The Department of Physics and Astronomy at Waterloo have consulted with the Department of Physics and Astronomy at Guelph and they have no concerns with Waterloo's proposed addition of the coursework study option with a Graduate Specialization in Quantum Technology to the MSc in Physics program.

**GRADUATE STUDIES - ACADEMIC CALENDAR CHANGES**

1. **Motion:** To approve two Graduate Studies' Academic Calendar changes under Regulations (i.e., Enrolment and Time limits), effective 1 September 2020, as presented:

   a) Add required to withdraw regulations (Attachment 6a). **Rationale:** Required to withdraw regulations are being added to the Graduate Studies Academic Calendar to provide clarity and information for students, faculty, and staff on processes that already occur.

   b) Update voluntarily withdraw regulations (Attachment 6b). **Rationale:** Voluntarily withdraw regulation updates are being made to the Graduate Studies Academic Calendar to provide more clarity and information for students, faculty, and staff on processes that already occur.

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

**University of Waterloo**

Stratford School of Interaction Design and Business

**Master of Digital Experience Innovation (MDEI)**

**Proposal for Change in Mode of Delivery – from On-Campus to Hybrid**

Major Modification

Summary:

This document summarizes a proposal to convert the Master of Digital Experience Innovation (MDEI) program from its current in-person, on-campus delivery mode to a leading-edge hybrid degree program with most course elements converted to online delivery. This approach is proposed to ensure the program can appeal to a broader spectrum of potential students from across Canada and beyond, to respond to the needs of today's students, and to leverage the existing assets of the current MDEI program. Specifically, the full-time MDEI program will begin with an in-person intensive learning milestone (1-10 days in duration) designed by faculty in consultation with one or more industry partners, followed by four online courses in the Fall term, four online courses in the Winter term, and conclude with another in-person intensive learning milestone (2-10 days in duration). Similarly, the part-time program will begin and end with the in-person intensives (alongside the full-time students), and require two online courses per term for four terms in between the in-person intensives. This hybrid delivery mode is likely to appeal to more students and to allow the MDEI program to grow.

Present Position:

Currently in its ninth year of operation, the on-campus MDEI program explores new forms of design innovation that emerge through the intersections between business and digital technologies. Students learn to solve complex challenges using best practices from applied management, human-centred approaches to design, and interdisciplinary, forward-thinking modes of collaboration. Working with faculty and partners outside the university, students use creative leadership to develop innovative solutions for industry.

Currently, this professional program is offered as both a full time one-year program and as a part-time two-year program, giving students the opportunity to work directly with both faculty and industry mentors. Currently, the curriculum features team- and project-based learning in the following areas:

1. Design Thinking and Digital Design Solutions
2. User Experience Design
3. Applied Management
4. Working in Teams
5. Marketing Strategy
6. Project Management
7. Cultural Analysis in the Digital Space

MDEI provides a professional education for students seeking careers in the digital media industry or in creative leadership, and is open to students from a wide range of undergraduate disciplines from the humanities, social sciences, science, mathematics, environment, etc.

Specifically, the program aims to equip future leaders, strategic thinkers, and team managers with the skills they need to innovate and thrive in a rapidly evolving field. While the program will provide students with an appreciation for and working knowledge of digital production and implementation, hands-on training in design is not its primary focus. Rather, MDEI focuses on developing broader capabilities in the areas of team and project management, and leadership in the digital media context. As they move through the program, students are asked to apply

learned methodologies for working in teams, mimicking real-world professional environments. Developing core projects in close consultation with both faculty and industry partners, students in the MDEI program graduate with an adaptable, transferable, and highly marketable set of skills. Training in both the theory and practice of team building, business modeling, marketing strategy, critical/cultural analysis, user experience and design thinking position these MDEI graduates to respond to future challenges and be able navigators in the complex and fast-moving digital media industry.

## Limitations:

The growth of the current program is severely restricted by its in-person course delivery and its location in Stratford, over one hour from the nearest population density and a forty-minute drive from the University of Waterloo's main campus. Our location limits the impact of our program in that we are unable to attract the ideal target learner group(s), and learners have limited opportunities to connect to the communities in which they plan to work.

Anecdotal evidence suggests that the students experience several barriers to enrolling in the current in-class MDEI program offered in Stratford. Many students who are interested in this program are international students or international recent graduates that do not live near Stratford or do not live in Canada. Some students interested in MDEI are working professionals in the GTA or elsewhere and cannot relocate because of their employment, but do not live close enough to the Stratford Campus to attend in-person classes four times per week. Working professionals looking to take MDEI on a part-time basis require the flexibility to take their courses online. Target learners include:

- Working professionals from the Greater Toronto Area (GTA) and surrounding areas, at the mid-career stage, who are typically employed full-time and who would opt for the part-time stream of the program. For this type of learner, it is often difficult to physically travel to the Stratford School twice a week to attend class.
- Domestic full time students, who find the accelerated course schedule (Monday-Thursday, 4:00 – 7:00 pm) a barrier.
- International students, many of whom have completed undergraduate degrees in the US and in Canadian schools, do not typically have ties to the Stratford region, and find the location too remote.
- Recent graduates who reside in the KW area are often reluctant to commit to a 45 minute commute to Stratford.

## Rationale:

Virtual or online learning has become an attractive alternative learning model for part-time and full-time studies, offering continuing education options to full-time professionals and international students. Online learning provides a framework for innovative teaching methods and forward-thinking pedagogical approaches that are core features of the University of Waterloo and the Stratford School's mandate.

The Hybrid MDEI, which consists of eight (8) core courses anchored by two (2) on site intensive workshops (the 'Program Intensives') will provide students with the speed and flexibility of a short online program, while also providing valuable real-world learning opportunities developed in collaboration with faculty and our industry partners.

Domestic and international students who are integrated personally and professionally in their home community will have the advantage of staying in their community instead of relocating to Stratford where they will have no connections.

At the same time, through our online learning platform and, more importantly, the two Program Intensives, students will have the opportunity to network with their peers both virtually and in person. Our industry partners will be part of the learning community through (1) mentorship during the

Program Intensives and (2) by commissioning projects for our students. This framework will offer students many networking opportunities for professional development as well as prepare students for a world where more and more professionals work as part of virtual teams.

Program Delivery - Full-time Students:

Students who wish to complete the program full time will take four courses per semester, and will complete the program in 8 months. MDEI Program Intensives will take place at the beginning and the end of the program:

|  |  | Year 1 | |
|---|---|---|---|
| **Course** | | **Fall** | **Winter** |
| *DEI INT1* | *Intensive 1 – 10 days* | 🟩 | |
| DEI 612 | Working in Teams | 🟦 | |
| DEI 613 | Digital Media Solutions: Design | 🟦 | |
| DEI 626 | User experience (UX) Fundamentals & User experience Research (UER) | 🟦 | |
| DEI 623 | Digital Media Solutions: Project Management | 🟦 | |
| DEI 614 | Principles of Marketing | | 🟦 |
| DEI 625 | Business Innovation and Impact *(Revision)* | | 🟦 |
| *DEI 616* | *Special Topics 1 (New course)* | | 🟦 |
| *DEI 627* | *Special Topics 2 (New course)* | | 🟦 |
| *DEI INT2* | *Intensive 2 – 10 days* | | 🟩 |

Program Delivery - Part-time Students:

Students who wish to complete the program part time will take two courses per semester, and will complete the program in 2 years (20 months). MDEI Program Intensives will take place at the beginning and the end of the program:

| | | Year 1 | | Year 2 | |
|---|---|---|---|---|---|
| Course | | F | W | F | W |
| DEI INT1 | Intensive 1 – 10 days | 🟩 | | | |
| DEI 612 | Working in Teams | 🟦 | | | |
| DEI 613 | Digital Media Solutions: Design | 🟦 | | | |
| DEI 614 | Principles of Marketing | | 🟦 | | |
| DEI 625 | Business Innovation and Impact *(Revision)* | | 🟦 | | |
| DEI 626 | User experience (UX) Fundamentals & User experience Research (UER) | | | 🟦 | |
| DEI 623 | Digital Media Solutions: Project Management | | | 🟦 | |
| DEI 616 | Special Topic 1 (New course) | | | | 🟦 |
| DEI 627 | Special Topic 2 (New course) | | | | 🟦 |
| DEI INT2 | Intensive 2 – 10 days | | | | 🟩 |

Residency Requirements:

Students will be required to attend two Program Intensives, one at the beginning and one at the end of the program. Part-time students will attend one Intensive per year, one at the beginning of the program and one in their final semester, alongside the full-time students. The Intensives will run over a ten-day period, from Friday to Sunday; the number of contact hours is six to eight hours per day. Students will be required to attend in person, however, we will develop a policy that provides alternate arrangements for those student for whom attending in person will cause extreme hardship. Each case will be carefully reviewed and decisions will be made on a case- by-case basis.

Program Intensives:

The Program Intensives will be designed by faculty in collaboration with one or more industry partners. Intensive 1 takes place in August, and is designed to build fundamental team-building skills that will enable students to work effectively in virtual team environments throughout the program. Students will complete the equivalent of the first four classes of Working in Teams (DEI 612), which covers the elements of designing, managing and working in teams. Learning outcomes will include:

1. Communication
2. Basic team processes, cooperation and competition, leadership
3. Decision-making
4. Problem-solving and creativity
5. Introduction of first assignment, working sessions and project presentations

We will also cover the following topics, which will introduce students to the program in general:

1. Program introduction/overall learning objectives

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2. Applied innovation workshop
3. Marketing mini-workshop
4. UX mini-workshop
5. Design mini-workshop
6. Special Topics/Guest Speaker Presentations (sneak preview of topics from term 2)

Program Intensive 2 will follow a similar structure to the current MDEI Capstone (DEI 631), where students will be presented with a complex problem from our industry partners, for which they will develop a business solution. The learning objectives and outcomes are based on predefined challenges provided by industry partners. The introduction to and selection of the partners and team assignments will occur during the previous semester, and students are expected to have completed the following prior to the start of the Intensive:

1. Conducting background research
2. Conceptualizing a project
3. Assessing the business dimension with a business plan

During the Intensive, students will complete the following:

1. Developing a business model canvas
2. Designing, creating and evaluating prototypes using iterative user testing
3. Presenting the final solution to the industry partner who commissioned the project

Both full- and part-time students will complete the Program Intensives. The cost of the Intensives will be included in the tuition for each semester, meaning that students would only be charged for either two or four semesters. The Program Intensives will be a "milestone" requirement.

Proposed Schedule and Cost of Development:

All online courses will be delivered through LEARN and will be developed in collaboration with the course instructor and the Centre for Extended Learning (CEL). The quoted development cost from CEL is $0/course. The cost of development to the Faculty of Arts Stratford budget is $20K per course in order to pay for two sessional instructors allowing faculty members a two- course release for development of one course.

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| Course | Instructor | 2019 | | 2020 | | 2021 | | | 2022 |
|---|---|---|---|---|---|---|---|---|---|
| | | F | W | Spr | F | W | Spr | F | W |
| DEI 612 (Working in Teams) | Linda Carson | Dev | Dev | C | | | C | Launch | |
| DEI 613 (Digital Media Solutions: Design) | Jessica Thompson | Dev | Dev | A | | | A | Launch | |
| DEI 626 (User Experience Design) | Lennart Nacke | | Dev | P Dev | | | P | Launch | |
| DEI 623 (Digital Media Solutions: Project Management) | Tabatha Dominguez | | | S Dev | Dev | | S | Launch | |
| DEI 614 (Principles of Marketing) | TBC | | | T | Dev | Dev | T | | Launch |
| DEI 625 (Business Innovation and Impact) | TBC | | | O | Dev | Dev | O | | Launch |
| DEI 616 (Special Topics 1) | TBC | | | N | | Dev | N Dev | | Launch |
| DEI 627 (Special Topics 2) | TBC | | | E | | Dev | E Dev | | Launch |
| PROGRAM DELIVERY | | Stratford | Stratford | | Stratford | Stratford | | Online | Online |

Prepared by:
Christine McWebb, Director
Jessica Thompson, Associate Director, Graduate

February 10, 2020

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**: Arts

**Program**: Master of Digital Experience Innovation (MDEI)

**Program contact name(s)**: Emanuel Carvalho, Acting Director, Stratford School

**Form completed by**: Jessica Thompson, Associate Director, Graduate

**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).

*The Stratford School of Interaction Design and Business is proposing the conversion of the on-campus part-time and full-time options for the Master of Digital Experience Innovation (MDEI) program be into a leading-edge hybrid learning environment and mode of delivery in order to reach a broader marketplace across Canada, respond to the needs of today's knowledge workers, and leverage our existing assets into new sources of revenue.*

*Currently in its 9th year of operation, the MDEI program explores new forms of design innovation that emerge through the intersections between business and digital technologies. Students learn to solve complex challenges using best practices from applied management, human-centred approaches to design, and interdisciplinary, forward-thinking modes of collaboration. Working with partners outside the university, students use creative leadership to develop innovative solutions for industry.*

*The program focuses on the development of creative leaders, with a strong focus on user experience design, marketing, project management, leadership, and business development. Students are taught by faculty as well as industry leaders, and the purpose-built campus offers state-of-the-art tools and lab space for user research, design, content creation, gamification, and user experience.*

**Is this a major modification to the program?** Yes

**Rationale for change(s):**

*Virtual or online learning has become an attractive alternative learning model for part-time and full-time studies, offering continuing education options to full-time professionals and international students. Online learning provides a framework for innovative teaching methods and forward-thinking pedagogical approaches that are core features of the University of Waterloo and the Stratford School's mandate.*

*The hybrid MDEI, which consists of eight (8) core courses anchored by two (2) on site intensive workshops (the 'Program Intensives') will provide students with the speed and flexibility of a short online program, while also providing valuable real-world learning opportunities developed in collaboration with our industry partners.*

*The current program is severely restricted by its location in Stratford, Ontario, over one hour from the nearest population density and a forty-minute drive from the University of Waterloo's main campus. Our location limits the impact of our program in that we are unable to attract the ideal target learner group(s). With this new hybrid delivery model, domestic and international students who are integrated personally and professionally in their home community will have the advantage of staying in their community instead of relocating to Stratford where they will have no connections.*

*At the same time, through online chat groups and, more importantly, the two Program Intensives, students will have the opportunity to network with their peers both virtually and in person. Our industry partners will be part of the learning community through (1) mentorship during the Program Intensives and (2) by commissioning projects for our students. This framework will offer students many networking opportunities for professional development.*

**Proposed effective date:**          Term: Fall   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/arts/stratford-school-interaction-design-and-business/master-digital-experience-innovation-mdei*

| Current Graduate Studies Academic Calendar content: | Proposed Graduate Studies Academic Calendar content: |
|---|---|
| **Program information** | **Program information** |
| • **Admit term(s)**<br>   o Fall | • **Admit term(s)**<br>   o Fall |
| • **Delivery mode**<br>   o ~~On-campus (Stratford campus)~~ | • **Delivery mode**<br>   o <u>Online / hybrid</u> |
| • **Program type**<br>   o Master's<br>   o Professional | • **Program type**<br>   o Master's<br>   o Professional |
| • **Registration option(s)**<br>   o Full-time<br>   o Part-time | • **Registration option(s)**<br>   o Full-time<br>   o Part-time |
| • **Study option(s)**<br>   o Coursework | • **Study option(s)**<br>   o Coursework |
| **Degree requirements**<br><br>**Coursework option:**<br>• **Graduate Academic Integrity Module (Graduate AIM)**<br><br>• **Courses**<br>   o Students must successfully complete the following 8 required courses:<br>      • DEI 612 Working in Teams<br>      • DEI 613 Digital Media Solutions 1: Design Principles and Practice<br>      • DEI 614 Principles of Marketing ~~in a Globalized World: Leveraging Digital Technology~~<br>      • ~~DEI 615 New Perspectives: Media History and Analysis~~<br>      • DEI 623 Digital Media Solutions 2: Project Management<br>      • ~~DEI 624 Understanding the Consumer Universe: Market Research in Digital Media~~<br>      • DEI 625 ~~Media~~ Innovation and Impact | **Degree requirements**<br><br>**Coursework option:**<br>• **Graduate Academic Integrity Module (Graduate AIM)**<br><br>• **Courses**<br>   o Students must successfully complete the following 8 required courses:<br>      • DEI 612 Working in Teams<br>      • DEI 613 Digital Media Solutions 1: Design Principles and Practice<br>      • DEI 614 Principles of Marketing<br>      • <u>DEI 616 Special Topics 1</u><br>      • DEI 623 Digital Media Solutions 2: Project Management<br>      • DEI 625 <u>Business</u> Innovation and Impact<br>      • DEI 626 User Experience (UX) Fundamentals and User Research (UER)<br>      • <u>DEI 627 Special Topics 2</u><br>• **Link(s) to courses**<br>   o Digital Experience Innovation (DEI) courses |

| Current Graduate Studies Academic Calendar content: | Proposed Graduate Studies Academic Calendar content: |
|---|---|
|         ▪ DEI 626 User Experience (UX) Fundamentals and User Research (UER)<br><br>  o ~~The courses are taught by faculty from a range of disciplines including Speech Communication, Economics, Fine Arts, and Sociology. In addition, senior-level industry partners of the University of Waterloo Stratford Campus may be invited to give special seminars and teach certain course components.~~<br><br>  o ~~Students must also complete DEI 631 Projects. A major project course which must be completed in the final term of study. Supervised by a University of Waterloo faculty member and supported by an industry partner, the project will normally be undertaken by teams of 4-6 students and will address an approved topic derived from the previous course work or based on a relevant issue in the digital economy.~~<br><br>• **Link(s) to courses**<br>  o Digital Experience Innovation (DEI) courses<br>  o Graduate course search<br><br>• **Academic Integrity Workshop**<br><br>• ~~**Master's Workshop**~~<br>  o ~~The Master's Workshop for MDEI is otherwise known as Bootcamp. Bootcamp is the first milestone requirement for the MDEI which is held the two weeks leading up to the first day of class. It gives students the chance to engage with their classmates and learn valuable skills that will be applied throughout the program.~~ |   o Graduate course search<br><br>• **Academic Integrity Workshop**<br><br>• **Program Intensive 1**<br>  o <u>Students must complete the mandatory Program Intensive 1 academic milestone at the Stratford School of Interaction Design and Business. Program Intensive 1 takes place over 10 days in August (at the beginning of the program) and is designed to introduce students to the program and to develop fundamental team-building skills that will enable students to work effectively in virtual environments throughout the program. Students will complete the equivalent of the first four classes of DEI 612 Working in Teams, which covers the elements of designing, managing and working in teams.</u><br><br>• **Program Intensive 2**<br>  o <u>Students must complete the mandatory Program Intensive 2 academic milestone at the Stratford School of Interaction Design and Business. Program Intensive 2 takes place over 10 days in April (at the end of the program). Students will be presented with a complex challenge from our industry partners, for which they will develop a business solution based on relevant issues in the digital economy. Learning objectives and outcomes are specific to each partner and challenge, and students will be supervised by a University of Waterloo faculty member and 1-2 representative from each partner. Projects will normally be undertaken in teams of 4-6 students, working in person, on a schedule determined by the project scope.</u> |

**How will students currently registered in the program be impacted by these changes?**

*Students currently registered in the program will not be impacted by these changes. Students who begin the program full time in Fall 2020 will be completing the program by August 2021 and will not be affected. Students who begin the program part-time in Fall 2020 will start their program with in-person delivery and will finish their program with hybrid delivery.*

**Department/School approval date** (mm/dd/yy):

**Reviewed by GSPA** (for GSPA use only) ☒ date (mm/dd/yy): 02/18/2020

**Faculty approval date** (mm/dd/yy):  03/17/20
**Senate Graduate & Research Council (SGRC) approval date** (mm/dd/yy):
**Senate approval date** (mm/dd/yy) (if applicable):

<span style="color:red">**SECRETARY NOTE:**
This program change was endorsed and recommended to Senate for approval by Senate Graduate and Research Council (SGRC) on 11 May 2020.

This program change was endorsed and recommended to Senate for approval by the Vice-President, Academic and Provost, as communicated by Dean of Arts, Sheila Ager, on 19 May 2020.</span>

**Graduate Studies
Program Revision Template**

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**: Master of Engineering (MEng) in Mechanical and Mechatronics Engineering

**Program contact name(s)**: Allison Walker

**Form completed by**: Allison Walker

**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).

 *Update of MEng degree requirements to include 1 new specialization.*

**Is this a major modification to the program?** Yes

**Rationale for change(s):**

*The MEng in MME program will be offering "Graduate Specializations" in a given area, in place of the currently offered type 2 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 focused course selection into line with Faculty of Engineering objectives.*

*MME will be discontinuing the existing type 2 Graduate Diploma (GDip) in Green Energy offered in conjunction with the MEng. In its place, a Graduate Specialization is being proposed.*

**Proposed effective date:**      Term: Fall   Year: 2020

**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-mechanical-and-mechatronics-engineering/master-engineering-meng-mechanical-and-mechatronics-engineering*

| **Current Graduate Studies Academic Calendar content**: | **Proposed Graduate Studies Academic Calendar content**: |
|---|---|
| **Program information**<br><br>• **Admit term(s)**<br>  o Fall<br>  o Winter<br>  o Spring<br>• **Delivery mode**<br>  o On-campus<br>• **Program type** | **Graduate specialization**<br>• Green Energy<br><br>**Program information**<br><br>• **Admit term(s)**<br>  o Fall<br>  o Winter<br>  o Spring |

| Current Graduate Studies Academic Calendar content: | Proposed Graduate Studies Academic Calendar content: |
|---|---|
| <ul><li>o Master's</li><li>o Professional</li><li>**Registration option(s)**<ul><li>o Full-time</li><li>o Part-time</li></ul></li><li>**Study option(s)**<ul><li>o Coursework</li></ul></li><li>**Additional program information**<ul><li>o The University of Waterloo does not provide funding for MEng in Mechanical and Mechatronics Engineering students, and the candidates are expected to be self-supporting.</li></ul></li></ul><br>**Admission requirements**<br><ul><li>**Minimum requirements**<ul><li>o The Department of Mechanical and Mechatronics Engineering requires either (i) a 75% overall standing in the last two years, or equivalent, in a relevant four-year Honours Bachelor's degree or equivalent or (ii) a 75% overall standing or equivalent, in a relevant four-year Honours Bachelor's degree or equivalent, as the minimum requirement for admission to a Master's program for applicants educated at a Canadian institution. A 75% overall standing or equivalent, in a relevant four-year Honours Bachelor's degree or equivalent is the minimum requirement for admission to a Master's program for applicants educated outside of Canada.</li><li>o Graduate Record Examination (GRE) test scores (requirement only for applicants who completed their undergraduate degree from an institution located outside of Canada or the United States of America).</li></ul></li><li>**Application materials**<ul><li>o Résumé</li><li>o Supplementary information form</li><li>o Transcript(s)</li></ul></li><li>**References**<ul><li>o Number of references:  2</li><li>o Type of references:  academic</li></ul></li><li>**English language proficiency (ELP)** (if applicable)</li></ul><br>**Degree requirements**<br>**Coursework option:** | <ul><li>**Delivery mode**<ul><li>o On-campus</li></ul></li><li>**Program type**<ul><li>o Master's</li><li>o Professional</li></ul></li><li>**Registration option(s)**<ul><li>o Full-time</li><li>o Part-time</li></ul></li><li>**Study option(s)**<ul><li>o Coursework</li></ul></li><li>**Additional program information**<ul><li>o The University of Waterloo does not provide funding for MEng in Mechanical and Mechatronics Engineering students, and the candidates are expected to be self-supporting.</li></ul></li></ul><br>**Admission requirements**<br><ul><li>**Minimum requirements**<ul><li>o The Department of Mechanical and Mechatronics Engineering requires either (i) a 75% overall standing in the last two years, or equivalent, in a relevant four-year Honours Bachelor's degree or equivalent or (ii) a 75% overall standing or equivalent, in a relevant four-year Honours Bachelor's degree or equivalent, as the minimum requirement for admission to a Master's program for applicants educated at a Canadian institution. A 75% overall standing or equivalent, in a relevant four-year Honours Bachelor's degree or equivalent is the minimum requirement for admission to a Master's program for applicants educated outside of Canada.</li><li>o Graduate Record Examination (GRE) test scores (requirement only for applicants who completed their undergraduate degree from an institution located outside of Canada or the United States of America).</li></ul></li><li>**Application materials**<ul><li>o Résumé</li><li>o Supplementary information form</li><li>o Transcript(s)</li></ul></li><li>**References**<ul><li>o Number of references:  2</li><li>o Type of references:  academic</li></ul></li><li>**English language proficiency** (ELP) (if applicable)</li></ul><br>**Degree requirements** |

| Current Graduate Studies Academic Calendar content: | Proposed Graduate Studies Academic Calendar content: |
|---|---|
| • **Graduate Academic Integrity Module (Graduate AIM)** <br><br> • **Courses** <br>     o Students must complete 8 one-term (0.50 unit weight) graduate level courses (or courses acceptable for graduate credit). <br>     o A maximum of 2 500-level courses may be counted for credit. <br>     o An English for Multilingual Speakers (EMLS) technical/professional course is normally required for all students who were not English Language Proficiency (ELP) exempt at the time of admission. This course is normally taken in the first term of the program. <br>     o The EMLS communication course can be waived at the discretion of the Department. <br>     o At least 2 out of the 8 required courses must be taken from the following list of ME graduate core courses: <br>        ▪ ME 620 Mechanics of Continua <br>        ▪ ME 621 Advanced Finite Element Method <br>        ▪ ME 631 Mechanical Metallurgy <br>        ▪ ME 632 Experimental Methods in Materials Engineering <br>        ▪ ME 640 Autonomous Mobile Robotics <br>        ▪ ME 649 Control of Machines and Processes <br>        ▪ ME 651 Heat Conduction <br>        ▪ ME 652 Convective Heat Transfer <br>        ▪ ME 653 Radiation Heat Transfer <br>        ▪ ME 662 Advanced Fluid Mechanics <br>        ▪ ME 664 Turbulent Flow <br>     o ~~MEng students completing 1 of the 3 GDip program options are allowed to use their GDip mandatory courses to count toward 2 of the 8 core courses.~~ <br>     o MEng students must attend at least 4 MME research seminars. <br>     o Additional Faculty regulations concerning Master's degree requirements are: <br>        ▪ The candidate must obtain a pass in all courses credited to their program, with a minimum overall average of 70% (a grade | **Coursework option:** <br><br> • **Graduate Academic Integrity Module (Graduate AIM)** <br><br> • **Courses** <br>     o Students must complete 8 one-term (0.50 unit weight) graduate level courses (or courses acceptable for graduate credit). <br>     o A maximum of 2 500-level courses may be counted for credit. <br>     o An English for Multilingual Speakers (EMLS) technical/professional course is normally required for all students who were not English Language Proficiency (ELP) exempt at the time of admission. This course is normally taken in the first term of the program. <br>     o The EMLS communication course can be waived at the discretion of the Department. <br>     o At least 2 out of the 8 required courses must be taken from the following list of ME graduate core courses: <br>        ▪ ME 620 Mechanics of Continua <br>        ▪ ME 621 Advanced Finite Element Method <br>        ▪ ME 631 Mechanical Metallurgy <br>        ▪ ME 632 Experimental Methods in Materials Engineering <br>        ▪ ME 640 Autonomous Mobile Robotics <br>        ▪ ME 649 Control of Machines and Processes <br>        ▪ ME 651 Heat Conduction <br>        ▪ ME 652 Convective Heat Transfer <br>        ▪ ME 653 Radiation Heat Transfer <br>        ▪ ME 662 Advanced Fluid Mechanics <br>        ▪ ME 664 Turbulent Flow <br>     o <u>MEng students completing 1 of the 2 Graduate Diploma (GDip) program options or the Graduate Specialization are allowed to use the mandatory courses from the GDips or Graduate Specialization to count toward 2 of the 8 core courses.</u> <br>     o MEng students must attend at least 4 MME research seminars. <br>     o Additional Faculty regulations concerning Master's degree requirements are: |

| Current Graduate Studies Academic Calendar content: | Proposed Graduate Studies Academic Calendar content: |
|---|---|
| of less than 65% in any course counts as a failure).<br>▪ At least half of the courses used for credit must normally be Faculty of Engineering courses and the other half need to be Mechanical & Mechatronics Engineering courses. | ▪ The candidate must obtain a pass in all courses credited to their program, with a minimum overall average of 70% (a grade of less than 65% in any course counts as a failure).<br>▪ At least half of the courses used for credit must normally be Faculty of Engineering courses and the other half need to be Mechanical & Mechatronics Engineering courses.<br><br>Students in the MEng in Mechanical and Mechatronics Engineering program may choose to pursue the following Graduate Specialization:<br><br>1. Green Energy<br><br>A Graduate Specialization is a University credential that is recognized on the student's transcript but not on the diploma and is intended to reflect that a student has successfully completed a set of courses that together provide an in-depth study in the area of the Graduate Specialization. A student will only obtain the Graduate Specialization on their transcript if they have completed the requirements associated with the MEng degree and the requirements associated with the Graduate Specialization.<br><br>All MEng Graduate Specializations in Mechanical and Mechatronics Engineering consist of a set of at least 4 graduate (0.50 weight) level courses and this set is comprised of a mix of *compulsory* and *elective* courses. *Compulsory* courses are those that are prescribed as part of the Graduate Specialization. *Elective* courses are those that are on a list of courses designated as electives for a given Graduate Specialization. The requirements for the Graduate Specialization are described below.<br><br>1. Graduate Specialization in Green Energy<br><br>• To receive the Graduate Specialization in Green Energy, students must successfully complete 1 compulsory course and 3 elective courses:<br>  o Compulsory course:<br>    ▪ ME 659 Energy and Environment<br>  o Elective courses (choose 3 from the following list):<br>    ▪ ME 738 Special Topics in Materials: Hydrogen Storage Materials<br>    ▪ ME 751 Fuel Cell Technology<br>    ▪ ME 753 Solar Energy |

| Current Graduate Studies Academic Calendar content: | Proposed Graduate Studies Academic Calendar content: |
|---|---|
| | - ME 760 Special Topics in Thermal Engineering: Low Energy Building Systems<br>- ME 760 Special Topics in Thermal Engineering: Building Energy Performance<br>- ME 760 Special Topics in Thermal Engineering: Air Pollution and Greenhouse Gases<br>- ME 760 Special Topics in Thermal Engineering: Wind Energy |

**How will students currently registered in the program be impacted by these changes?**

*Students admitted to the MEng in MME program prior to Fall 2020 that complete the course requirements for the type 2 GDip in Green Energy, will receive the GDip upon degree completion.*

**Department/School approval date** (mm/dd/yy): February 12, 2020
**Reviewed by GSPA** (for GSPA use only) ☒ date (mm/dd/yy): 01/14/2020
**Faculty approval date** (mm/dd/yy):
**Senate Graduate & Research Council (SGRC) approval date** (mm/dd/yy):
**Senate approval date** (mm/dd/yy) (if applicable):

**UNIVERSITY OF WATERLOO**

# Graduate Studies
# Program Revision Template

Prior to form submission, review the <u>content revision instructions</u> and information regarding <u>major/minor modifications</u>. For questions about the form submission, contact <u>Trevor Clews</u>, Graduate Studies and Postdoctoral Affairs (GSPA).

**Faculty**: Engineering

**Program**: Graduate Diploma (GDip) in Green Energy (direct entry)

**Program contact name(s)**: Allison Walker

**Form completed by**: Allison Walker

**Description of proposed changes:**
Note: changes to courses and milestones also require the completion/submission of the SGRC Course/Milestone-New/Revision/Inactivation form (<u>PC docx version</u> or <u>MAC docx version</u>).

*Discontinue (type 3) Graduate Diploma (GDip) in Green Energy (direct entry).*

**Is this a <u>major modification</u> to the program?** Yes

**Rationale for change(s):**

*The department is looking to discontinue the direct entry GDip in Green Energy based on very low up take in the program since its creation in 2013. The direct entry GDip has never met the required steady state of 40 students per year for the program to be viable.*

**Proposed effective date:**        Term: Fall   Year: 2020

**Current <u>Graduate Studies Academic Calendar (GSAC)</u> page** (include the link to the web page where the changes are to be made):

*https://uwaterloo.ca/graduate-studies-academic-calendar/engineering/department-mechanical-and-mechatronics-engineering/graduate-diploma-gdip-green-energy-direct-entry*

| Current Graduate Studies Academic Calendar content: | Proposed Graduate Studies Academic Calendar content: |
|---|---|
| ~~**GRADUATE DIPLOMA (GDIP) IN GREEN ENERGY (DIRECT ENTRY)**~~<br><br>~~**Program information**~~<br><br>~~• Admit term(s)~~<br>  ~~○ Fall~~<br>  ~~○ Winter~~<br>  ~~○ Spring~~<br>~~• Delivery mode~~<br>  ~~○ Online~~<br>~~• Length of program~~ | |

| Current Graduate Studies Academic Calendar content: | Proposed Graduate Studies Academic Calendar content: |
|---|---|
| <ul><li><ul><li>~~1 mandatory course and 3 elective courses must be completed within two years (six terms).~~</li></ul></li><li>~~Program type~~<ul><li>~~Diploma~~</li></ul></li><li>~~Registration option(s)~~<ul><li>~~Full-time~~</li><li>~~Part-time~~</li></ul></li><li>~~Study option(s)~~<ul><li>~~Coursework~~</li></ul></li><li>~~Additional program information~~<ul><li>~~The GDip in Green Energy program uses a state-of-the-art interactive instruction facility called the Live-Link. This remote learning environment is enabled through the use of smart boards and multi-point interactive video conferencing.~~</li><li>~~The Live-Link technology provides an immersive, real-time experience where students seamlessly participate with the instructor and others in the class as if they were in the same location.~~</li><li>~~If students miss a class, they will have the opportunity to watch a recorded session of the class and email questions to the instructor.~~</li><li>~~When using the E5 Live System the minimum requirements to ensure the quality of the experience are:~~<ul><li>~~Up to date computer or laptop with 1GB video card and current drivers.~~</li><li>~~Wired network connection with a minimum 1 Mbps to 2 Mbps upload speed.~~</li><li>~~Web camera, microphone, speakers or headphones.~~</li><li>~~Microsoft Windows OS or current Mac OS (Linux is not supported at this time).~~</li></ul></li></ul></li></ul>**~~Admission requirements~~**<br><br><ul><li>~~Minimum requirements~~<ul><li>~~The Department of Mechanical and Mechatronics Engineering requires either (i) a 75% overall standing in the last two years, or equivalent, in a relevant four-year Honours Bachelor's degree or equivalent or (ii) a 75% overall standing or equivalent, in a relevant four-year Honours Bachelor's degree or equivalent, as the minimum requirement for admission to a Master's~~</li></ul></li></ul> | |

| Current Graduate Studies Academic Calendar content: | Proposed Graduate Studies Academic Calendar content: |
|---|---|
| program for applicants educated at a Canadian institution. A 75% overall standing or equivalent, in a relevant four-year Honours Bachelor's degree or equivalent is the minimum requirement for admission to a Master's program for applicants educated outside of Canada. | |

- Application materials
  - Résumé
  - Transcript(s)
- References
  - Number of references: 2
  - Type of references: 1 must be academic
- English language proficiency (ELP) (if applicable)

**Degree requirements**
  Coursework option:

- Graduate Academic Integrity Module (Graduate AIM)
- Courses
  - The GDip program is completed by taking 4 graduate level courses and without pursuing a formal graduate studies degree program. Students can study part-time, taking 1 course per term, or full-time, taking 2 courses per term. 1 mandatory course and 3 elective courses must be completed within two years (six terms).
  - Students must complete the following courses:
  - Mandatory course:
    - ME 659 Energy and Environment
  - Choose 3 electives from the following list of courses:
    - ME 751 Fuel Cell Technology
    - ME 753 Solar Energy
    - ME 760 Special Topics in Thermal Energy: Building Energy Performance
    - ME 760 Special Topics in Thermal Energy: Low Energy Building Systems
    - ME 760 Special Topics in Thermal Energy: Air Pollution and Greenhouse Gases
    - ME 765 Special Topics in Fluid Mechanics: Wind Energy
- Link(s) to courses
  - Mechanical Engineering (ME) courses

| Current Graduate Studies Academic Calendar content: | Proposed Graduate Studies Academic Calendar content: |
|---|---|
|     o   Graduate course search | |

**How will students currently registered in the program be impacted by these changes?**

*Students admitted to the direct entry GDip in Green Energy prior to Fall 2020, will receive the GDip upon degree completion.*

**Department/School approval date** (mm/dd/yy): February 12, 2020
**Reviewed by GSPA** (for GSPA use only) ☒  date (mm/dd/yy): 01/14/2020
**Faculty approval date** (mm/dd/yy):
**Senate Graduate & Research Council (SGRC) approval date** (mm/dd/yy):
**Senate approval date** (mm/dd/yy) (if applicable):

# UNIVERSITY OF WATERLOO

# Graduate Studies
# Program Revision Template

Prior to form submission, review the <u>content revision instructions</u> and information regarding <u>major/minor modifications</u>. For questions about the form submission, contact <u>Trevor Clews</u>, Graduate Studies and Postdoctoral Affairs (GSPA).

**Faculty**: Engineering

**Program**: Graduate Diploma (GDip) in Green Energy

**Program contact name(s)**: Allison Walker

**Form completed by**: Allison Walker

**Description of proposed changes:**
Note: changes to courses and milestones also require the completion/submission of the SGRC Course/Milestone-New/Revision/Inactivation form (<u>PC docx version</u> or <u>MAC docx version</u>).

*Discontinue (type 2) Graduate Diploma (GDip) in Green Energy.*

**Is this a <u>major modification</u> to the program?** Yes

**Rationale for change(s):**

*The MEng in MME program will be offering "Graduate Specializations" in a given area, in place of the currently offered type 2 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 focused course selection into line with Faculty of Engineering objectives.*

*MME will be discontinuing the existing type 2 Graduate Diploma (GDip) in Green Energy offered in conjunction with the MEng. In its place, a Graduate Specialization is being proposed.*

**Proposed effective date:**       Term: Fall   Year: 2020

**Current <u>Graduate Studies Academic Calendar (GSAC)</u> page** (include the link to the web page where the changes are to be made):

*https://uwaterloo.ca/graduate-studies-academic-calendar/engineering/department-mechanical-and-mechatronics-engineering/graduate-diploma-gdip-green-energy*

| Current Graduate Studies Academic Calendar content: | Proposed Graduate Studies Academic Calendar content: |
|---|---|
| ~~**GRADUATE DIPLOMA (GDIP) IN GREEN ENERGY**~~<br><br>~~**Program information**~~<br><br>• ~~Delivery mode~~<br>  ○ ~~On-campus~~<br>• ~~Program type~~<br>  ○ ~~Diploma~~<br>• ~~Study option(s)~~ | |

| Current Graduate Studies Academic Calendar content: | Proposed Graduate Studies Academic Calendar content: |
|---|---|
| <ul><li>○ Coursework</li></ul>**Admission requirements**<ul><li>Minimum requirements<ul><li>○ Students in the Master of Engineering (MEng) in Mechanical and Mechatronics Engineering program may complete the requirements for the GDip in Green Energy in conjunction with their MEng requirements.</li></ul></li></ul>**Degree requirements**<br>　　**Coursework option:**<ul><li>Courses<ul><li>○ Students must complete the following courses:</li><li>○ Mandatory courses:<ul><li>ME 659 Energy and Environment</li></ul></li><li>○ Specific courses: 3 from the following list:<ul><li>ME 738 Special Topics in Materials: Hydrogen Storage Materials</li><li>ME 751 Fuel Cell Technology</li><li>ME 753 Solar Energy</li><li>ME 760 Special Topics in Thermal Engineering: Low Energy Building Systems</li><li>ME 760 Special Topics in Thermal Engineering: Building Energy Performance</li><li>ME 760 Special Topics in Thermal Engineering: Air Pollution and Greenhouse Gases</li><li>ME 765 Special Topics in Fluid Mechanics: Wind Energy</li></ul></li><li>○ General courses: 4 additional Faculty of Engineering graduate courses (subject to the approval of the Department).</li><li>○ All courses are 600 and 700 level courses and students are not allowed to take more than 2 500 level courses (courses open to both undergraduates and graduates) out of their 8 required courses.</li></ul></li><li>Link(s) to courses<ul><li>○ Mechanical Engineering (ME) courses</li><li>○ Graduate course search</li></ul></li></ul> | |

| Current Graduate Studies Academic Calendar content: | Proposed Graduate Studies Academic Calendar content: |
|---|---|
| Department of Mechanical and Mechatronics Engineering website | |

**How will students currently registered in the program be impacted by these changes?**

*Students admitted to the MEng in MME program prior to Fall 2020 that complete the course requirements for the type 2 GDip in Green Energy, will receive the GDip upon degree completion.*

**Department/School approval date** (mm/dd/yy): February 12, 2020
**Reviewed by GSPA** (for GSPA use only) ☒  date (mm/dd/yy): 01/14/2020
**Faculty approval date** (mm/dd/yy):
**Senate Graduate & Research Council (SGRC) approval date** (mm/dd/yy):
**Senate approval date** (mm/dd/yy) (if applicable):

**UNIVERSITY OF WATERLOO** | **IQC** Institute for Quantum Computing

**INSTITUTE FOR QUANTUM COMPUTING**
519-888-4021 | fax 519-888-7610
iqc@uwaterloo.ca | uwaterloo.ca/iqc

# Memo

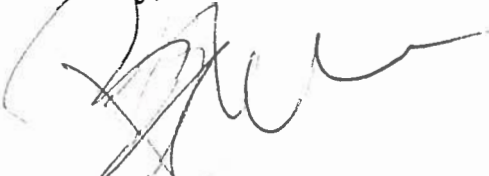| To: Sean Wettig, Associate Dean, Graduate Studies (Science) Agnes Kolic, Administrator Graduate & Research | From: Brian McNamara, Chair of Physics & Astronomy Kevin Resch, Interim Executive Director, IQC |
|---|---|
| Phone: | Date: March 6, 2020 |
| Re: MSc Physics with specialization in Quantum Technology | Cc: Trevor Clews, Academic Officer Jeannie Bairos, IQC Director Assistant, Sandy Dickenson, Administrative Assistant, Physics & Astronomy |

Hello Sean,

Please find attached a proposal for a new course-based MSc in Physics with a specialization in quantum technology.

This proposal was endorsed by both the faculty of the Department of Physics & Astronomy and the faculty of the Institute for Quantum Computing.

We are submitting this proposal for approval at the faculty level.

Sincerely,

Brian McNamara
Chair of Physics & Astronomy

Kevin Resch
Interim Executive Director, IQC

Prior to form submission, review the <u>content revision instructions</u> and information regarding <u>major/minor modifications</u>. For questions about the form submission, contact <u>Trevor Clews</u>, Graduate Studies and Postdoctoral Affairs (GSPA).

**Faculty**: Science

**Program**: Master of Science (MSc) in Physics

**Program contact name(s)**: Kevin Resch, Brian McNamara

**Form completed by**: Kevin Resch

**Description of proposed changes:**
Note: changes to courses and milestones also require the completion/submission of the SGRC Course/Milestone-New/Revision/Inactivation form (<u>PC docx version</u> or <u>MAC docx version</u>).

*Adding a Coursework study option with a Graduate Specialization in Quantum Technology to the MSc in Physics program.*

**Is this a <u>major modification</u> to the program?** Yes

**Rationale for change(s):**

*Quantum technology is based on the application of quantum physics to tasks and challenges related to information theory. They are impacting the way we process and share information as well as learn about the world around us through quantum computers, communication, and sensors. Quantum technology is rapidly evolving and maturing into a new economically important sector. An understanding of quantum mechanics, its applications, and the strengths and limitations of different quantum modalities are required for maximum impact in this field.*

*The MSc in Physics with a Graduate Specialization in Quantum Technology is a course-based study option that will provide students with the theoretical foundation for quantum technology through in-class courses offered by the Faculty of Science and through the University of Waterloo Collaborative Graduate Program in Quantum Information. It will further provide hands-on experience with several major quantum platforms through unique laboratory courses.*

*The Department of Physics and Astronomy at Waterloo have consulted with the Department of Physics and Astronomy at Guelph and they have no concerns with Waterloo's proposed addition of the coursework study option with a Graduate Specialization in Quantum Technology to the MSc in Physics program.*

**Proposed effective date:** Term: Fall Year: 2020

**Current <u>Graduate Studies Academic Calendar (GSAC)</u> page** (include the link to the web page where the changes are to be made):

| Current Graduate Studies Academic Calendar content: | Proposed Graduate Studies Academic Calendar content: |
|---|---|
| **Graduate research fields**<br><br>• Astrophysics and Gravitation<br>• Atomic Molecular and Optical Physics<br>• Biophysics<br>• Chemical Physics<br>• Condensed Matter and Materials Physics<br>• Industrial and Applied Physics<br>• Quantum Computing<br>• Subatomic Physics<br><br>**Program information**<br><br>• **Admit term(s)**<br> ○ Fall<br> ○ Winter<br> ○ Spring<br><br>• **Delivery mode**<br> ○ On-campus<br><br>• **Program type**<br> ○ Joint<br> ○ Master's<br> ○ Research<br><br>• **Registration option(s)**<br> ○ Full-time<br> ○ Part-time<br><br>• **Study option(s)**<br> ○ Thesis<br> ○ Master's Research Paper<br><br>**Admission requirements**<br><br>• **Minimum requirements**<br> ○ An Honours Bachelor's degree (or equivalent) in Science with at least a 75% standing.<br><br>• **Application materials**<br> ○ Graduate Record Examination (GRE) Physics subject test scores for all students who have completed their post-secondary education outside of Canada.<br> ○ Supplementary information form | **Graduate research fields**<br><br>• Astrophysics and Gravitation<br>• Atomic Molecular and Optical Physics<br>• Biophysics<br>• Chemical Physics<br>• Condensed Matter and Materials Physics<br>• Industrial and Applied Physics<br>• Quantum Computing<br>• Subatomic Physics<br><br>**<u>Graduate specialization</u>**<br><br>• <u>Quantum Technology</u><br><br>**Program information**<br><br>• **Admit term(s)**<br> ○ Fall<br> ○ Winter<br> ○ Spring<br><br>• **Delivery mode**<br> ○ On-campus<br><br>• **Program type**<br> ○ Joint<br> ○ Master's<br> ○ Research<br><br>• **Registration option(s)**<br> ○ Full-time<br> ○ Part-time<br><br>• **Study option(s)**<br> ○ Thesis<br> ○ Master's Research Paper<br> ○ <u>Coursework</u><br><br>• **Additional program information**<br> ○ <u>Note: the coursework study option is only open to students at the University of Waterloo.</u><br><br>**Admission requirements**<br><br>• **Minimum requirements**<br> ○ An Honours Bachelor's degree (or equivalent) in Science with at least a |

| Current Graduate Studies Academic Calendar content: | Proposed Graduate Studies Academic Calendar content: |
|---|---|
| o Transcript(s) | 75% standing. |
| **References** | **Application materials** |
| o Number of references: 3 | o Graduate Record Examination (GRE) Physics subject test scores for all students who have completed their post-secondary education outside of Canada. |
| o Type of references: 2 of which are normally from academic sources | o Supplementary information form |
| | o Transcript(s) |
| **English language proficiency** (ELP) (if applicable) | **References** |
| | o Number of references: 3 |
| | o Type of references: 2 of which are normally from academic sources |
| **Degree requirements** | |
| **Thesis option:** | **English language proficiency** (ELP) (if applicable) |
| **Graduate Academic Integrity Module (Graduate AIM)** | **Degree requirements** |
| | **Thesis option:** |
| **Courses** | |
| o Students must complete 4 one-term courses (0.50 unit weight) acceptable for graduate credit. | **Graduate Academic Integrity Module (Graduate AIM)** |
| o 1 of the 4 courses must include at least 1 of the following: | **Courses** |
| ▪ PHYS 701 Quantum Mechanics 1 | o Students must complete 4 one-term courses (0.50 unit weight) acceptable for graduate credit. |
| ▪ PHYS 703 Introduction to Quantum Field Theory | o 1 of the 4 courses must include at least 1 of the following: |
| ▪ PHYS 704 Statistical Physics 1 | ▪ PHYS 701 Quantum Mechanics 1 |
| ▪ PHYS 706 Electromagnetic Theory | ▪ PHYS 703 Introduction to Quantum Field Theory |
| ▪ PHYS 767 Quantum Information Processing | ▪ PHYS 704 Statistical Physics 1 |
| ▪ PHYS 781 Fundamentals of Astrophysics | ▪ PHYS 706 Electromagnetic Theory |
| ▪ PHYS 782 Fundamentals of Astrophysics II | ▪ PHYS 767 Quantum Information Processing |
| o 1 of the 4 courses may be an upper level undergraduate course. The supervisor must submit a memo justifying why the undergraduate course is acceptable for graduate credit and approval must be received from the Physics and Astronomy Graduate Officer and the Associate Dean of Science for Graduate Studies prior to enrolment in the course. | ▪ PHYS 781 Fundamentals of Astrophysics |
| | ▪ PHYS 782 Fundamentals of Astrophysics II |
| o An average of at least 70% must be obtained in the required courses. A minimum grade of 65% is required for a pass in each course. No more than 2 courses, of the first 4 taken, can have averages of less than 70%. If a student does not meet these minimum grade requirements, or receives a failing grade in any course, the student may | o 1 of the 4 courses may be an upper level undergraduate course. The supervisor must submit a memo justifying why the undergraduate course is acceptable for graduate credit and approval must be received from the Physics and Astronomy Graduate Officer and the Associate Dean of Science for Graduate Studies prior to enrolment in the course. |

| Current Graduate Studies Academic Calendar content: | Proposed Graduate Studies Academic Calendar content: |
|---|---|
| be required to withdraw from the program.<br><br>- **Link(s) to courses**<br>  o Physics (PHYS) courses<br>  o Graduate course search<br><br>- **Academic Integrity Workshop**<br>  o This is a milestone requirement for all full-time students. Part-time students are not required to complete this workshop. This is a mandatory workshop on academic integrity and intellectual property which will be offered to all new incoming graduate students within the Faculty of Science during the first term of each Fall and Winter.<br>  o Note: students will be required to complete both the Academic Integrity Module as a required course along with the Academic Integrity Workshop milestone. The Module will appear on the student's transcript as a course. The Workshop will appear on the student's transcript as a milestone.<br><br>- **Master's Thesis**<br>  o Students must complete a thesis based on some original research. The subject of research must be approved by the candidate's supervisor and the thesis must be read and approved by the supervisor and two other faculty members. Part of the research may be conducted off-campus at a collaborating laboratory. The supervisor based at that laboratory will be an adjunct member of the Department of Physics and Astronomy and a member of the joint Physics graduate program with the University of Guelph. There will also be an on-campus co-supervisor.<br>  o An acceptable thesis on a research topic must be submitted. Detailed specifications of the format of the thesis are available from the appropriate Graduate Office. Acceptance of the thesis requires the approval by an Examining Committee following an oral defence of the thesis.<br><br>- **Other requirements**<br>  o Supervisory Committee meetings: it is required that the student meet formally | o An average of at least 70% must be obtained in the required courses. A minimum grade of 65% is required for a pass in each course. No more than 2 courses, of the first 4 taken, can have averages of less than 70%. If a student does not meet these minimum grade requirements, or receives a failing grade in any course, the student may be required to withdraw from the program.<br><br>- **Link(s) to courses**<br>  o Physics (PHYS) courses<br>  o Graduate course search<br><br>- **Academic Integrity Workshop**<br>  o This is a milestone requirement for all full-time students. Part-time students are not required to complete this workshop. This is a mandatory workshop on academic integrity and intellectual property which will be offered to all new incoming graduate students within the Faculty of Science during the first term of each Fall and Winter.<br>  o Note: students will be required to complete both the Academic Integrity Module as a required course along with the Academic Integrity Workshop milestone. The Module will appear on the student's transcript as a course. The Workshop will appear on the student's transcript as a milestone.<br><br>- **Master's Thesis**<br>  o Students must complete a thesis based on some original research. The subject of research must be approved by the candidate's supervisor and the thesis must be read and approved by the supervisor and two other faculty members. Part of the research may be conducted off-campus at a collaborating laboratory. The supervisor based at that laboratory will be an adjunct member of the Department of Physics and Astronomy and a member of the joint Physics graduate program with the University of Guelph. There will also be an on-campus co-supervisor.<br>  o An acceptable thesis on a research topic must be submitted. Detailed specifications of the format of the thesis |

| Current Graduate Studies Academic Calendar content: | Proposed Graduate Studies Academic Calendar content: |
|---|---|
| with their Supervisory Committee within the first six months of registration and subsequently at least once every six months. While one meeting in a year must be a formal one, the other meeting may be held informally; in the latter case, the meeting may simply take the form of a brief discussion of the student's academic progress, but, apart from the student and the supervisor, the meeting must involve at least one other member of the Committee.<br>o  A student in the MSc in Physics program, who shows a particular aptitude for research, may be permitted under certain circumstances to transfer to the PhD program without writing an MSc thesis.<br><br>**Master's Research Paper option:**<br><br>• **Graduate Academic Integrity Module (Graduate AIM)**<br><br>• **Courses**<br>o  Students must complete 7 one-term courses (0.50 unit weight) acceptable for graduate credit.<br>o  2 of the courses may be upper level undergraduate courses. The supervisor must submit a memo justifying why the undergraduate course(s) are acceptable for graduate credit, and approval must be received from the Physics and Astronomy Graduate Officer and the Associate Dean of Science for Graduate Studies prior to enrolment in the course.<br>o  An average of at least 70% must be obtained in the required courses. A minimum grade of 65% is required for a pass in each course. No more than 2 courses, of the first 4 taken, can have averages of less than 70%. If a student does not meet these minimum grade requirements, or receives a failing grade in any course, the student may be required to withdraw from the program.<br><br>• **Link(s) to courses**<br>o  Physics (PHYS) courses | are available from the appropriate Graduate Office. Acceptance of the thesis requires the approval by an Examining Committee following an oral defence of the thesis.<br><br>• **Other requirements**<br>o  Supervisory Committee meetings: it is required that the student meet formally with their Supervisory Committee within the first six months of registration and subsequently at least once every six months. While one meeting in a year must be a formal one, the other meeting may be held informally; in the latter case, the meeting may simply take the form of a brief discussion of the student's academic progress, but, apart from the student and the supervisor, the meeting must involve at least one other member of the Committee.<br>o  A student in the MSc in Physics program, who shows a particular aptitude for research, may be permitted under certain circumstances to transfer to the PhD program without writing an MSc thesis.<br><br>**Master's Research Paper option:**<br><br>• **Graduate Academic Integrity Module (Graduate AIM)**<br><br>• **Courses**<br>o  Students must complete 7 one-term courses (0.50 unit weight) acceptable for graduate credit.<br>o  2 of the courses may be upper level undergraduate courses. The supervisor must submit a memo justifying why the undergraduate course(s) are acceptable for graduate credit, and approval must be received from the Physics and Astronomy Graduate Officer and the Associate Dean of Science for Graduate Studies prior to enrolment in the course.<br>o  An average of at least 70% must be obtained in the required courses. A minimum grade of 65% is required for a pass in each course. No more than 2 courses, of the first 4 taken, can have averages of less than 70%. If a student |

| Current Graduate Studies Academic Calendar content: | Proposed Graduate Studies Academic Calendar content: |
|---|---|
| o Graduate course search<br><br>• **Academic Integrity Workshop**<br> o This is a milestone requirement for all full-time students. Part-time students are not required to complete this workshop. This is a mandatory workshop on academic integrity and intellectual property which will be offered to all new incoming graduate students within the Faculty of Science during the first term of each Fall and Winter.<br> o Note: students will be required to complete both the Academic Integrity Module as a required course along with the Academic Integrity Workshop milestone. The Module will appear on the student's transcript as a course. The Workshop will appear on the student's transcript as a milestone.<br><br>• **Master's Research Paper**<br> o The Master's Research Paper will have to be approved by the candidate's Supervisory Committee.<br><br>• **Other requirements**<br> o Supervisory Committee meetings: it is required that the student meet formally with their Supervisory Committee within the first four months of registration and subsequently at least once every six months. While one meeting in a year must be a formal one, the other meeting may be held informally; in the latter case, the meeting may simply take the form of a brief discussion of the student's academic progress, but, apart from the student and the supervisor, the meeting must involve at least one other member of the Committee. | does not meet these minimum grade requirements, or receives a failing grade in any course, the student may be required to withdraw from the program.<br><br>• **Link(s) to courses**<br> o Physics (PHYS) courses<br> o Graduate course search<br><br>• **Academic Integrity Workshop**<br> o This is a milestone requirement for all full-time students. Part-time students are not required to complete this workshop. This is a mandatory workshop on academic integrity and intellectual property which will be offered to all new incoming graduate students within the Faculty of Science during the first term of each Fall and Winter.<br> o Note: students will be required to complete both the Academic Integrity Module as a required course along with the Academic Integrity Workshop milestone. The Module will appear on the student's transcript as a course. The Workshop will appear on the student's transcript as a milestone.<br><br>• **Master's Research Paper**<br> o The Master's Research Paper will have to be approved by the candidate's Supervisory Committee.<br><br>• **Other requirements**<br> o Supervisory Committee meetings: it is required that the student meet formally with their Supervisory Committee within the first four months of registration and subsequently at least once every six months. While one meeting in a year must be a formal one, the other meeting may be held informally; in the latter case, the meeting may simply take the form of a brief discussion of the student's academic progress, but, apart from the student and the supervisor, the meeting must involve at least one other member of the Committee.<br><br>**<u>Coursework option:</u>** |

| Current Graduate Studies Academic Calendar content: | Proposed Graduate Studies Academic Calendar content: |
|---|---|
| | • **Graduate Academic Integrity Module (Graduate AIM)**<br><br>• **Courses**<br> ○ At this time, the only MSc in Physics coursework option includes a Graduate Specialization in Quantum Technology.<br> ○ A Graduate Specialization is a University credential that is recognized on the student's transcript but not on the diploma and is intended to reflect that a student has successfully completed a set of courses that together provide an in-depth study in the area of the Graduate Specialization. Students must complete the following 8 one-term courses (0.50 unit weight) acceptable for graduate credit in order to obtain the Graduate Specialization in Quantum Technology on their transcript:<br> ▪ PHYS 701 Quantum Mechanics 1<br> ▪ PHYS 760/QIC 860 Laboratory on Control of Quantum Technology<br> ▪ PHYS 761/QIC 861 Laboratory on Photonic Quantum Technology<br> ▪ PHYS 762/QIC 862 Laboratory on Low Temperature Quantum Technology and Nanofabrication<br> ▪ PHYS 763/QIC 863 Independent Project in Quantum Technology or 1 QIC 800 level elective<br> ▪ PHYS 767/QIC 710 Quantum Information Processing<br> ▪ QIC 750 Quantum Information Processing Devices<br> ▪ 1 PHYS 700 level or QIC 800 level elective<br> ○ Substitutions of courses are possible subject to approval from the Graduate Officer.<br> ○ It is recommended that students who wish to go on to PhD programs choose the PHYS 763/QIC 863 Independent Project in Quantum Technology course to develop their research capabilities.<br> ○ An average of at least 70% must be obtained in the required courses. A minimum grade of 65% is required for a |

| Current Graduate Studies Academic Calendar content: | Proposed Graduate Studies Academic Calendar content: |
|---|---|
| | pass in each course. No more than 2 courses, of the first 4 taken, can have averages of less than 70%. If a student does not meet these minimum grade requirements, or receives a failing grade in any course, the student may be required to withdraw from the program.<br><br>• **Link(s) to courses**<br>  ○ Physics (PHYS) courses<br>  ○ Graduate course search<br><br>• **Academic Integrity Workshop**<br>  ○ This is a milestone requirement for all full-time students. Part-time students are not required to complete this workshop. This is a mandatory workshop on academic integrity and intellectual property which will be offered to all new incoming graduate students within the Faculty of Science during the first term of each Fall and Winter.<br>  ○ Note: students will be required to complete both the Academic Integrity Module as a required course along with the Academic Integrity Workshop milestone. The Module will appear on the student's transcript as a course. The Workshop will appear on the student's transcript as a milestone. |

**How will students currently registered in the program be impacted by these changes?**

*Students accepted to the regular MSc program (thesis or MRP option) may transfer to this coursework option subject to approval from the Graduate Officer. Note that the funding offer for the regular MSc program (thesis or MRP option) does not carry over to this coursework option.*

**Department/School approval date** (mm/dd/yy):
**Reviewed by GSPA** (for GSPA use only) ☒ date (mm/dd/yy): 03/04/2020
**Faculty approval date** (mm/dd/yy):
**Senate Graduate & Research Council (SGRC) approval date** (mm/dd/yy):
**Senate approval date** (mm/dd/yy) (if applicable):

**UNIVERSITY OF WATERLOO**

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

May 1, 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

**Items for approval:**
1) Required to withdraw regulations

**Description and rationale for proposed changes:**

*Required to withdraw regulations are being added to the Graduate Studies Academic Calendar to provide clarity and information for students, faculty, and staff on processes that already occur.*

**Proposed effective date:**        Term: Fall   Year: 2020

**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

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**Proposed Graduate Studies Academic Calendar content:**

**Required to Withdraw**

A Required to Withdraw decision is made by a Faculty and a Department/School or Program, when a student cannot continue at the University of Waterloo (without subsequent re-application). These reasons may include but are not limited to:
- a failed PhD thesis examination;
- failure to maintain minimum academic standing;
- an unsuccessful comprehensive exam;
- insufficient progress in program;
- failure to submit or a "not approved" program extension;
- the absence of a graduate research supervisor, following the discontinuation with a previous supervisor, as identified in the University Responsibilities regarding Supervisory Relationships; and
- a penalty as outlined in Policy 71.

Prior to arriving at a Required to Withdraw decision, if a student is struggling in their program, support for that student must be provided consistent with the practices outlined in *Guidelines for evaluating and providing feedback on graduate student progress.*

Guidelines for evaluating and providing feedback on graduate student progress in PhD and research Masters programs

Guidelines for evaluating and providing feedback on graduate student progress in coursework programs

**UNIVERSITY OF WATERLOO**

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

**Proposed Graduate Studies Academic Calendar content**:

When a Required to Withdraw decision is reached, the Graduate Officer (or Faculty Associate Dean, Graduate Studies) shall communicate that decision formally to the student, in writing, specifying the sequence of events that led to the decision. This letter will be reviewed by the Faculty Associate Dean, Graduate Studies prior to distribution to ensure that decisions are consistent with the Faculty's practices. The Faculty Associate Dean, Graduate Studies and the University's Associate Vice-President Graduate Studies and Postdoctoral Affairs must be copied on the final correspondence.

Upon receipt of the letter, the student may elect to Voluntarily Withdraw if they are not being Required to Withdraw under Policy 71. The student's transcript will reflect whether the student's withdrawal was voluntary or required.

A student receiving a Required to Withdraw decision may challenge that decision through Policy 70.

**Graduate Operations Committee approval date** (mm/dd/yy): 04/21/2020

# UNIVERSITY OF WATERLOO

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

May 15, 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

**Items for approval:**
   1) Voluntarily withdraw regulation updates

**Description and rationale for proposed changes:**

*Voluntarily withdraw regulation updates are being made to the Graduate Studies Academic Calendar to provide more clarity and information for students, faculty, and staff on processes that already occur.*

**Proposed effective date:**        Term: Fall   Year: 2020

**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*

| Current Graduate Studies Academic Calendar content: | Proposed Graduate Studies Academic Calendar content: |
|---|---|
| **Voluntarily withdraw** | **Voluntarily withdraw** |
| Students who are unable to ~~participate~~ in their program ~~of study for more than two consecutive terms should voluntarily withdraw from the program by completing a Change of enrolment status form. In advance of voluntary withdrawal, students must discuss with their department any conditions which must be met if they are approved for readmission.~~ Students who reapply to a program and are approved for readmission, will be required to ~~enrol~~ for a minimum of one full term, without tuition refund, to complete their program. ~~The University reserves the right to require a student to withdraw from a program for academic reasons.~~ | Students who are unable to <u>continue</u> in their program, or <u>who have been inactive for more than two consecutive terms (outside of parental leave or an approved inactive period beyond the usual limit of two terms for exceptional circumstances), should voluntarily withdraw from the program by completing a change of enrolment status.</u> <br><br> <u>If students wish to have the option to reapply to the program from which they are withdrawing, they should discuss with their department any conditions which must be met to be granted readmission.</u> Students who reapply to a program and are approved for readmission, will be required to <u>be enrolled</u> for a minimum of one full term, without tuition refund, to complete their program. <u>Readmission is not guaranteed.</u> |

| Current Graduate Studies Academic Calendar content: | Proposed Graduate Studies Academic Calendar content: |
|---|---|
| | Students who voluntarily withdraw will have "voluntary withdrawal" reflected on their transcripts. |

**SECRETARY NOTE:**
This item was endorsed and recommended to Senate for approval by Senate Graduate and Research Council (SGRC) by e-vote on 19 May 2020.

<div align="center">

**University of Waterloo**
**SENATE UNDERGRADUATE COUNCIL**
**Report to Senate**
**15 June 2020**

</div>

Senate Undergraduate Council met on 12 May 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**

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**NEW ACADEMIC PLANS**

**Faculty of Arts**
**Communication Arts and Design Practice**

1.  **Motion:** That Senate approve the proposed new plan in Communication Arts and Design Practice as described in attachment #1 effective 1 September 2021.

**Rationale and Background:**
The Bachelor of Arts in Communication Arts & Design Practice will be a major plan available through the entry programs, Honours Arts (HA) and Honours Arts and Business (HARBUS), both of which have co-op and regular streams. The aim of this plan is to integrate theoretical reflection on how multimodal forms of representation make meaning with critical practices of design and production. Students will learn to: 1) understand the production of meaning, and the implications of meaning making, in a variety of contexts; 2) investigate the multimodality of representation; and 3) produce effective performative and communicative phenomena for the public good.

Existing faculty expertise, research, creative work, and pedagogical practices in the Department support this program by attending to the demands and possibilities of embodied and mediated performance, communication, and representation in a variety of public settings. This program uses the resources of the Department to their fullest potential; brings complementary and symmetrical interests together; and supports the broader movement toward interdisciplinary studies that facilitates innovative research opportunities and appeals to students. The program focuses on theoretically-informed practice; project-based, interdisciplinary and collaborative pedagogy; and experiential learning. Its combination of interests and commitments make the program unique within the Faculty of Arts and give it the potential to recruit students interested in attending other Ontario universities.

Communication Studies is the fastest growing Liberal Arts Undergraduate Major in North America. Communication Studies programs like those at Wilfrid Laurier University and Concordia University admit anywhere from 160-200 students per year. These comparable programs clearly show a need for, and interest in, the kinds of programming offered by this program. At the same time, these programs do not emphasize critical design practice and do not give students the kinds of experiential education that this program will provide. Therefore, it is anticipated that the new Communication Arts & Design Practice program will be able to attract new groups of students that frequently look elsewhere for Communication degree programming. Because of the high standards for admission in the Faculty of Arts, we anticipate modest growth and enrolments compared to comparable programs.

**Faculty of Arts**
**School of Accounting and Finance**

2.  **Motion:** That Senate approve the new professional accountant specialization as described below effective 1 September 2021.

**Background and Rationale:**
This specialization is open to students in the Accounting and Financial Management program. The specialization includes courses, beyond AFM degree required courses which are endorsed by CPA Canada and allow students to pursue the CPA designation.

…
The Professional Accountant Specialization requires successful completion of the following 3.0 academic course units:
o AFM 362, AFM 382, AFM 451, AFM 462, AFM 482, AFM 491

**Faculty of Arts**
**School of Accounting and Finance**

3.  **Motion:** That Senate approve the new business analytics specialization as described below effective 1 September 2021.

**Background and Rationale:**
This specialization is open to students in the Accounting and Financial Management program. Some of the most significant drivers of disruption in the business community is big data, increasing computer processing power, and access to mobile/cloud communication and storage. Strong understanding of business analytics has become a necessity for financial managers and this need is growing.

This specialization is designed to develop strong business analytics competencies in financial managers. The courses are focused on data users and interpreters of model output in the business setting as opposed to programmers or analysts which are commonly the focus of data science, computer science, and data analytics courses offered in the Faculty of Mathematics. For this reason, a new sequence of courses was needed building on the sequence of business analytics courses already introduced in the first two years of the AFM program (AFM 112, AFM 113, AFM 207, and AFM 244).

…
The Business Analytics Specialization requires successful completion of 2.5 academic course units:
o AFM 345 or AFM 346
o Four of AFM 323, AFM 341, AFM 344, AFM 345, AFM 346, AFM 347, AFM 423, AFM 444, AFM 445, AFM 446, AFM 447, AFM 448

Notes
1. Students may complete both AFM 345 and AFM 346 and would then be required to complete three additional courses to complete the Business Analytics Specialization.

**Faculty of Arts**
**School of Accounting and Finance**

4.  **Motion:** That Senate approve the new entrepreneurial mindset specialization as described below effective 1 September 2021.

**Background and Rationale:**
This specialization is open to students in the Accounting and Financial Management program. The specialization mirrors the Entrepreneurship Minor but allows AFM students to obtain a credential completing five additional courses as opposed to seven required by the minor, thus allowing greater utilization of elective credits. Students wanting exposure to entrepreneurship can complete the minor in place of the requirement to complete one of six AFM specializations. Departments offering the non-AFM courses have been consulted.

…
The Entrepreneurial Mindset Specialization requires successful completion of 2.5 academic course units:
o BET 320 and BET 340
o 1.5 academic course units from the following:
o AFM 326 (0.25 units), AFM 377, AFM 426 (0.25 units), AFM 470, BET 350, BET 400, BET 420, BET 430, BET 450, BET 460, BET 470, BET 580, ENBUS 203, MGMT 220

Notes
1. Students are not eligible to complete both the Entrepreneurial Mindset Specialization and the Entrepreneurship Minor. Completion of the Entrepreneurship Minor can be substituted for the Entrepreneurial Mindset Specialization in fulfilment of the AFM degree requirement to complete one AFM specialization.

**Faculty of Arts**
**School of Accounting and Finance**

> 5.  **Motion:** That Senate approve the new sustainability specialization as described below effective 1 September 2021.

**Background and Rationale:**
This specialization is open to students in the Accounting and Financial Management program. Beyond big data and business analytics, the second major need in the business environment is to recognize and manage the impacts of business practices on natural systems and society. Financial managers must develop practices to identify, measure, and manage sustainability of business activities, extending the measure of success beyond fiscal measures. This specialization exposes students to the concepts of sustainability and the measurement of intangible aspects of business practices. Departments offering the non-AFM courses have been consulted.

…
The Sustainability Specialization requires successful completion of 3.0 academic course units:
o ENBUS 102, ENVS 195, ENVS 220
o One of the following sets of three courses:
o ENBUS 310, ENBUS 408, ENBUS 410
o AFM 485, ENBUS 202, ENBUS 407

**Faculty of Arts**
**School of Accounting and Finance**

> 6.  **Motion:** That Senate approve the new financial leadership specialization as described below effective 1 September 2021.

**Background and Rationale:**
This specialization is open to students in the Accounting and Financial Management program. This specialization is designed to development leadership expertise and competencies beyond degree-required courses. Students are required to take corporate governance and risk management (AFM 434) and international financial management

(AFM 478). Students then select one of 3 additional business courses focused on financial institutions (AFM 422), Mergers and Acquisitions (AFM 477) or management of fast-growing firms (AFM 470). BET 450 and BET 460 develop leadership and negotiation skills. The final "one of" requirement gives students exposure to sustainability concepts in the business setting. Departments offering the non-AFM courses have been consulted.

…
The Financial Leadership Specialization requires successful completion of 3.0 academic course units:
o AFM 434, AFM 478
o BET 450, BET 460
o One of AFM 422, AFM 470, AFM 477
o One of AFM 485, ENBUS 310, ENBUS 407, or ENVS 220

**Faculty of Arts**
**School of Accounting and Finance**

7.  **Motion:** That Senate approve the new financial markets specialization as described below effective 1 September 2021.

**Background and Rationale:**
This specialization is open to students in the Accounting and Financial Management program. This specialization allows students to build their own sequence in a series of finance career pathways which will be described on the SAF website. The specialization includes courses which cover the CFA body of knowledge for students seeking the CFA designation.

…
The Financial Markets Specialization requires successful completion of 3.0 academic course units from the following:
o AFM 322, AFM 324, AFM 326 (0.25 units), AFM 328 (0.25 units), AFM 329 (0.25 units), AFM 377, AFM 422, AFM 423, AFM 425, AFM 426 (0.25 units), AFM 427, AFM 428 (0.25 units), AFM 429 (0.25 units), AFM 434, AFM 470, AFM 477, AFM 478

**Faculty of Arts**
**English Language and Literature**

8.  **Motion:** That Senate approve the new communication design specialization as described below effective 1 September 2021.

**Background and Rationale:** Communication design (CD), which teaches design as it enables, prevents, and augments the effective transmission of ideas and arguments, has long been a component in our Rhetoric, Media, and Professional Communication (RMPC) Plans. These courses are popular with RMPC students, who often take more than the required one CD course.

In addition, specializations are increasingly popular with both RMPC and Literature students because they enable students to customize their degree according to their interests and career goals. Employers will more easily recognize that students have these skills when students are able to earn a Communication Design credential as part of their degree. A CD specialization will also provide students with a clear path into our Master's program in Rhetoric and Communication Design.

The CD specialization is open to all English majors. The following units have been consulted about this specialization: Communication Arts, Fine Arts, GBDA.

**Course Titles:**
ENGL 392A - Information Design
ENGL 392B - Visual Rhetoric
ENGL 408C - The Rhetoric of Digital Design: Theory and Practice
ENGL 210J - Technical Editing
ENGL 295 - Social Media
ENGL 408B - The Discourse of Advertising
ENGL 493 - Topics in Professional Writing and Communication Design

**…**
**Communication Design Specialization**
The Communication Design Specialization requires successful completion of four courses:
• ENGL 392A, ENGL 392B, ENGL 408C
• one of ENGL 210J, ENGL 295, ENGL 408B, ENGL 493

**ACADEMIC PLAN CHANGES**

**Faculty of Arts**
**School of Accounting and Finance**

9.  **Motion:** That Senate approve the following changes to the Bachelor of Accounting and Financial Management, effective 1 September 2021.

**Background and Rationale:**
**Overall:** Guided by the School of Accounting and Finance Five-Year Strategic Plan, SAF has redesigned the third and fourth years of the Accounting and Financial Management program with the objectives of diversifying the program and giving students more elective space to take courses within the Faculty of Arts and other Faculties. Currently, students wanting to obtain the CPA designation are required to complete 18 academic units; this number has been reduced to 16.5 academic units. In total, students will have 13 elective courses in the proposed AFM plan. A minimum of five electives are required to complete one of the six AFM Specializations. The AFM Specializations are designed to leverage the strengths of the University, encourage interdisciplinary learning, and develop future financial leaders.

**Replacement of AFM 231 with AFM 335**: Law curriculum in the AFM Plan has been moved to third year when students have more Co-op experience and can apply the curriculum more fully in the business context. SAF will continue to offer AFM 231 (cross listed with LS 283) as a service course; scheduling and curriculum will be unchanged.

**Requirement to take AFM 323, AFM 341, or AFM 344**: In recognition of the diverse pathways now available within the AFM plan, students are given the option to take either a finance analytics course (AFM 323) or a business analytics course (AFM 344) as alternatives to AFM 341 (Accounting Information Systems, CPA Canada required course). This degree requirement recognizes the increasing demands of data competency by employers and the professions.

**Removal of requirement to take AFM 333, AFM 434, AFM 478, ECON 231, or PSCI 281**: This requirement was included in a series of initiatives to embed global perspectives in the AFM Plan. All of the other initiatives have been removed over time, replaced with global perspectives across the finance and strategy courses in the curriculum. Given this global perspective inherent in the program, requiring a specific global perspective course

was viewed as redundant. Students will be encouraged to take these courses as electives. A note associated with this requirement has been correspondingly removed.

Revised calendar text below: (strike out = deleted text, bold = new entry)
_____

Eligibility for the degree of Bachelor of Accounting and Financial Management (Co-op) requires:
1. Successful completion of 20 academic course units with an overall cumulative average of at least 60%. A minimum cumulative average of 70% is required in all of the courses identified in section 2 below, and all Accounting and Financial Management (AFM) electives.
2. Successful completion of the following ~~15~~**13**.5 academic course units:
   - ~~AFM 101, AFM 102,~~ AFM 112, AFM 113, AFM 121, AFM 132, **AFM 182, AFM 191,** AFM 212, ~~AFM 231,~~ AFM 241, AFM 244, **AFM 273, AFM 274,** ~~AFM 280,~~ AFM 291, AFM 311, **AFM 321, AFM 335,** AFM 373, AFM 391, AFM 433, **AFM 480**
   - AFM 205, AFM 206, AFM 207, AFM 208 (see Note 1 ~~6~~)
   - ~~AFM 273, AFM 274 (see Note 4)~~
   - ~~one of AFM 333, AFM 434, AFM 478, ECON 231, PSCI 281 (see Note 3)~~
   - **one of AFM 323, AFM 341, AFM 344**
   - BET 100
   - ECON 101, ECON 102
   - AFM 111, SPCOM 111 **(see Note 3)**
   - ~~an additional 2.5 units of AFM courses at the 300-level or above (e.g., five courses if all courses have a unit weight of 0.5)~~
3. **Successful completion of one AFM Specialization (see note 4)**

~~Notes~~
~~1. Students interested in qualifying as a Chartered Professional Accountant (CPA) are required by the governing professional body to demonstrate a specific set of competencies. A list of competencies is available from the School of Accounting and Finance website.~~
~~2. Guidance on recommended courses for students interested in specific streams within finance, or in preparing for the Chartered Financial Analyst examinations, is available on the School of Accounting and Finance website.~~
~~3. In lieu of "one of AFM 333, AFM 434, AFM 478, ECON 231, PSCI 281", an alternate course may count towards this requirement provided the desired course has substantial international content. In this case, however, students must have the prior written approval of the undergraduate officer.~~
~~4. AFM 272 and AFM 372 are approved substitutes for AFM 273 and AFM 274. Students wishing to take AFM 272 and AFM 372 should take MATH 135/MATH 136 and MATH 137/MATH 138, and STAT 230/STAT 231. Please consult the undergraduate officer for assistance before proceeding.~~
~~5. The Management Studies Minor is not available to students currently enrolled in Accounting and Financial Management.~~
~~6. The four AFM 205, AFM 206, AFM 207, and AFM 208 courses, each worth 0.25 unit, are designed to be completed in advance of a student's first co-op work term. The courses are corequisites, designed to be completed during the same academic term.~~

**Notes**
**1. The four courses, AFM 205, AFM 206, AFM 207 and AFM 208, each 0.25 academic units, should be completed in advance of a student's first co-op work term.**
**2. Students interested in qualifying as a Chartered Professional Accountant (CPA) are required by the governing professional body to demonstrate a specific set of competencies. Beyond AFM degree required courses, completion of the Professional Accountant Specialization and AFM 341 are required for students pursing the CPA designation.**

**3. Communication skills are essential to academic, professional, and personal success. The Undergraduate Communication Requirement is fulfilled for AFM students by the successful completion of both AFM 111 and SPCOM 111.**
**4. Students are required to complete one AFM specialization and may elect to complete a second AFM specialization.**
**5. Guidance on recommended courses in the Financial Markets Specialization, which prepares students for the Chartered Financial Analyst examinations, is available on the School of Accounting and Finance website.**
**6. Students are required to complete courses in the following sequence:**
o **1A Term: AFM 111, AFM 112, AFM 132, AFM 191, ECON 101**
o **1B Term: AFM 113, AFM 121, AFM 182, BET 100, SPCOM 111**
o **2A TERM: AFM 205, AFM 206, AFM 207, AFM 208, AFM 212, AFM 273**
o **2B TERM: AFM 241, AFM 244, AFM 274, AFM 291, ECON 102 (see note 7)**
**Students who are required to repeat a course or who can't follow this sequence due to transfer credits are required to follow a course sequence approved by the academic advisor.**
**7. Students may elect to take ECON 102 in either the 2A or 2B term allowing the second-year elective to be taken in either the 2A or 2B term.**

**Faculty of Arts**
**Economics**

10. **Motion:** That Senate approve the following changes to the econometrics and finance specializations, effective 1 September 2021.

**Background and Rationale:**
With our curricular updates since 2016, the undergraduate program in Economics has focused more on curriculum that emphasizes real economic analysis and application. By adding 4 new 400-level ECON courses and a general shift in focus towards economic analysis of data, the Department thought it was time to review these specializations. The proposed specialization changes will a) reflect new course offerings and b) offer students more flexibility around completing these specializations.

Revised calendar text below: (strike out = deleted text, bold = new entry)
_____

**Econometrics Specialization**
The Econometrics Specialization requires successful completion of four courses:
- ~~ECON 323 or STAT 231~~
- ~~ECON 421 or STAT 331~~
- ~~ECON 422, ECON 423~~
- **Four of: ECON 422, ECON 423, ECON 424, ECON 425, ECON 426; ECON 421 or STAT 321 or STAT 331**

**Finance Specialization**
The Finance Specialization requires successful completion of four courses:
- ~~ECON 371~~, ECON 372
- ~~two~~ **three** of ECON 332, ECON 406, ECON 423, **ECON 424**

**Faculty of Arts**
**French Studies**

11. **Motion:** That Senate approve the following changes to the three-year general plan, effective 1 September 2021.

**Background and Rationale:** We are removing text from the Notes for the 3-Year General plan that mentions studying completely online in order to be more transparent about our current course offerings, since it is uncertain if students can complete all of the required courses online and within a reasonable timeline. We are also adding a note regarding high school French immersion students.

Revised calendar text below: (strike out = deleted text, bold = new entry)

…
- at least six academic course units (12 courses) in French, including:
  - FR 192A, FR 192B, FR 250, FR 251, FR 252, FR 276, FR 296, FR 297, FR 351
  - one of FR 203, FR 303
  - one additional FR course at the 300-level or above
  - one literature or culture course from FR 332, FR 343, FR 354, FR 363, FR 365, FR 367, FR 373, FR 375, FR 410, FR 424, FR 471, FR 473, FR 484, FR 485, FR 486, FR 487

Notes
1. **High school French immersion students,** Francophone students**,** and students who graduated from a French high school begin above FR 192A. Those students are still required to complete a minimum of 12 French courses above the FR 192A level.
2. ~~Students enrolled in a Three-Year General French degree exclusively online may substitute either an oral French course taken for credit at another post-secondary institution, or credit obtained by participating in the Explore program, for FR 250 Intermediate Spoken French. In either case, the student must fill out a Letter of Permission Application and receive approval from the Department of French Studies before enrolling in the transfer credit.~~

**Faculty of Arts**
**French Studies**

12. **Motion:** That Senate approve the following changes to the four-year honours plan, effective 1 September 2021.

**Background and Rationale:** To reflect the inactivation of courses due to the end of the Nantes exchange and add a note regarding high school French immersion students.

Revised calendar text below: (strike out = deleted text, bold = new entry)

…
at least eight academic course units (16 courses) in French, including:
- FR 192A, FR 192B, FR 250, FR 251, FR 252, FR 276, FR 296, FR 297, FR 303, FR 351, FR 452
- one additional FR course at the 300-level or above
- four literature or culture courses from FR 332, ~~FR 332A, FR 332B,~~ FR 343, ~~FR 343A, FR 343B,~~ FR 354, ~~FR 354A, FR 354B,~~ FR 363, ~~FR 363A, FR 363B,~~ FR 365, FR 367, FR 373, FR 375, ~~FR 393A, FR 393B, FR 395A, FR 395B,~~ FR 399A, FR 410, FR 424, ~~FR 424A, FR 424B,~~ FR 471, FR 473, FR 484, FR 485, FR 486, FR 487

Note
**High school French immersion students,** Francophone students, and students who graduated from a
French high school begin above FR 192A. Those students are still required to complete a minimum of 16
French courses above the FR 192A level.

**Faculty of Arts**
**French Studies**

13. **Motion:** That Senate approve the following changes to the intensive French and francophone literatures
and cultures specialization, effective 1 September 2021.

**Background and Rationale:** To reflect the inactivation of courses due to the end of the Nantes exchange.

Revised calendar text below: (strike out = deleted text, bold = new entry)

In combination with the Honours French plan-level requirements listed above, students interested in
pursuing the Intensive French and Francophone Literatures and Cultures Specialization will be required
to fulfil the following requirements:
- A minimum French major average of 75%.
- Successful completion of four additional courses, for a total of 10 academic course units (20 courses) in
French:
  - four literature or culture courses from FR 332, ~~FR 332A, FR 332B,~~ FR 343, ~~FR 343A, FR 343B,~~
FR 354, ~~FR 354A, FR 354B,~~ FR 363, ~~FR 363A, FR 363B,~~ FR 365, FR 367, FR 373, FR 375, ~~FR
393A, FR 393B, FR 395A, FR 395B,~~ FR 399A, FR 410, FR 424, ~~FR 424A, FR 424B,~~ FR 471,
FR 473, FR 484, FR 485, FR 486, FR 487 (see Note 2)

Notes
1. The Intensive French and Francophone Literatures and Cultures Specialization is only open to students
majoring in the Honours French academic plan.
2. FR 3XX or 4XX transfer credits will be counted towards the Intensive French and Francophone Literatures and
Cultures Specialization if they are transferred from ~~one of~~ the Department's French-speaking university partner~~s~~:
~~either~~ the Université du Québec à Chicoutimi (Canada) ~~or the Université de Nantes (France).~~
3. Students must achieve a cumulative major average of at least 75% in all French courses counted towards their
Honours French major.
4. Students who have completed courses towards this specialization but are not able to sustain the required 75%
major average but are still eligible for Honours standing will normally be allowed to continue in the Honours
French major but without the specialization.
5. Students may enroll in either the French Teaching Specialization or the Intensive French and Francophone
Literatures and Cultures Specialization, but not both.

**Faculty of Arts**
**Germanic and Slavic Studies**

14. **Motion:** That Senate approve the following changes to the diploma in Dutch language, effective 1
September 2021.

**Background and Rationale:** We can no longer offer second-year courses taught in Dutch at the University of
Waterloo due to lower enrolment numbers over the past years, changes to minimum enrolment numbers required
for undergraduate courses, and to resources available to hire instructors (Germanic and Slavic Studies does not
have full-time faculty in Dutch). We will advise students at higher levels to take courses abroad. We want,

however, to allow students who return from exchange or work in the Netherlands and take language courses beyond the 100-level there to be able to apply for a Diploma in Dutch language.

Revised calendar text below: (strike out = deleted text, bold = new entry)
_____

Students registered in degree programs or any non- or post-degree academic plan at the University of Waterloo may pursue the Diploma in Dutch Language.

Students must successfully complete two academic course units (four courses)**, taught in Dutch,** with a minimum cumulative average of 70% as follows:

- DUTCH 101, DUTCH 102, ~~DUTCH 201, DUTCH 202~~ and the equivalent of 1.0 unit (two courses) in Dutch at the 200-level or higher

**Note: Completion of the Diploma requires 1.0 unit (two courses) in Dutch language courses taken at an institution or institutions other than the University of Waterloo.**

~~Note~~
~~Not all courses are offered on a yearly basis.~~

**Faculty of Arts**
**Articulated Admission, Transfer Credit and Progression Agreement with University of Essex**

15. **Motion:** That Senate approve the admissions and progression requirements outlined in the attached agreement between the University of Waterloo and University Essex, effective as of the commencement date of the agreement.

**Background and Rationale:** The University of Waterloo and the University of Essex wish to establish a collaborative arrangement under which students will complete their first three years of study in Waterloo's Faculty of Arts and then complete two additional years in the Essex Faculty of Humanities Essex Law School, resulting in the awarding of an honours bachelor of arts and LLB with human rights law. Students in the four-year bachelor of arts honours taking a human rights minor will be eligible for this program. The program is expected to attract high caliber students interested in international human rights law. See attachment #2 for more information.

**Renison University College**

16. **Motion:** That Senate approve the following changes to the diploma in applied language studies, effective 1 September 2021.

**Background and Rationale:** The current Diploma in Applied Language Studies (APPLS) was designed for non-degree students and requires completion of eight courses: four APPLS courses and four courses in a language that is not the student's first language. This plan mirrors the APPLS Minor for degree students. New university regulations require all diplomas to consist of four to seven courses and be open to both degree and non-degree students; as a result, the proposed changes modify the APPLS Diploma to a four-course plan open to both degree and non-degree students.

The proposed changes will create differentiated APPLS plans for degree students who may now select between a four-course diploma and an eight-course minor. This will allow degree students to select the APPLS plan that best suits their interests and may attract more students to the APPLS courses.

Under the new regulations, non-degree students will not have access to a plan that is equivalent to the eight-course minor; they will not be required to complete the four courses in a language that is not their first. Although this may be seen as a disadvantage, in our experience, students who return to university to complete the APPLS Diploma already have second language learning experiences that make the APPLS courses attractive to them. These students bring a wealth of language learning and teaching experiences to the APPLS courses; eliminating the requirement to take second language courses will not prevent them from benefitting from the APPLS courses.

We are also taking the opportunity to eliminate the redundant listing of APPLS courses. The diploma requires four courses, and only four APPLS courses exist at this time, so there is no need to list them. On the other hand, if future APPLS courses are created, that would require adjusting the APPLS diploma (otherwise they would not count toward the diploma). If the (currently unlikely) situation arises where more APPLS courses are created and it is determined that some specific ones *must* be completed in order to obtain the APPLS diploma (while others serve as electives), then adjustment of the plan will take place at that time.

Revised calendar text below: (strike out = deleted text, bold = new entry)
_____

**Diploma in Applied Language Studies**
Students enrolled in any **degree program or** non- or post-degree academic plan may pursue the Diploma in Applied Language Studies. This diploma may be of particular interest to students who wish to explore issues of second or foreign language teaching and acquisition.

The Diploma in Applied Language Studies requires successful completion of a minimum of ~~four~~ **two** academic course units (~~eight~~ **four** courses) in APPLS ~~core and approved language~~ courses with a minimum cumulative average of 65%.~~, including:~~
• ~~APPLS 205R, APPLS 301/GER 301, APPLS 304R, APPLS 306R~~
~~• four approved language courses (all in one language that is not the student's first language, or two in each of two languages that are not the student's first language):~~
        ~~o ASL 101R, ASL 102R~~
        ~~o CHINA 101R, CHINA 102R, CHINA 120R, CHINA 200R, CHINA 201R, CHINA 202R, CHINA 301R, CHINA 302R, CHINA 310R, CHINA 320R, CHINA 390R, CHINA 391R~~
        ~~o CROAT 101, CROAT 102, CROAT 201, CROAT 202~~
        ~~o DUTCH 101, DUTCH 102, DUTCH 201, DUTCH 202~~
        ~~o EMLS 101R, EMLS 102R, EMLS 103R, EMLS 104R, EMLS 110R, EMLS 129R/ENGL 129R~~
        ~~o FR 101, FR 151, FR 152, FR 192A, FR 192B, FR 203, FR 250, FR 251, FR 252, FR 255, FR 351, FR 353, FR 355, FR 373, FR 392A, FR 392B, FR 400, FR 403, FR 452, FR 473~~
        ~~o GER 101, GER 102, GER 201, GER 202, GER 211, GER 212, GER 303, GER 304, GER 307, GER 308, GER 309, GER 331~~
        ~~o GRK 101/RS 101, GRK 102/RS 102, GRK 105, GRK 201/RS 223, GRK 202/RS 224, GRK 351, GRK 451~~
        ~~o ITAL 101, ITAL 102, ITAL 155, ITAL 201, ITAL 202~~
        ~~o JAPAN 101R, JAPAN 102R, JAPAN 111R, JAPAN 112R, JAPAN 201R, JAPAN 202R, JAPAN 301R, JAPAN 302R, JAPAN 391R~~
        ~~o JS 105A/RS 131, JS 105B/RS 132~~
        ~~o KOREA 101R, KOREA 102R, KOREA 201R, KOREA 202R, KOREA 301R, KOREA 302R, KOREA 391R~~
        ~~o LAT 101, LAT 102, LAT 201, LAT 202, LAT 351, LAT 451~~
        ~~o PORT 101, PORT 102~~
        ~~o RUSS 101, RUSS 102, RUSS 201, RUSS 202, RUSS 203, RUSS 301, RUSS 302~~

~~o SI 101R, SI 102R, SI 120R, SI 201R, SI 202R, SI 301R, SI 302R~~
~~o SPAN 101, SPAN 102, SPAN 201A, SPAN 201B, SPAN 301A, SPAN 301B, SPAN 401, SPAN~~
~~445~~

**Faculty of Science**
**Biotechnology/CPA**

17. **Motion:** That Senate approve the following changes to the honours co-operative biotechnology/chartered professional accountancy plan, effective 1 September 2021.

**Background and Rationale**: The restructuring of AFM courses and the requirement for only six versus eight AFM courses for CPA designation, form the basis for most of the changes to the Honours Biotechnology, Chartered Professional Accountancy plan in the Faculty of Science. As a result, one elective course and one SCBUS course can be added, resulting in a resequencing of required Science courses. Overall program unit requirements remain unchanged (22.0 units total). These program changes have been coordinated with the School of Accounting and Finance and are summarized as follows:

• AFM 101 and 102 are replaced by AFM 191 and 182, respectively, as these are now dedicated accounting courses for students seeking the CPA designation.
• AFM 401 and AFM 479 are removed as requirements because only six instead of eight AFM courses are needed for CPA designation (AFM 362, 382, 451, 462, 482 and 491).
     o AFM 382 was AFM 481 (renumbered)
     o AFM 451 was AFM 351 (renumbered)
     o AFM 373 and 491 change sequence
• AFM 311, an ethics course, is removed; ethics content will be covered via a newly added SCBUS 122 requirement and content changes within SCBUS 225.
• Students no longer select two of four 0.25-unit courses from AFM 205 (Financial Services), AFM 206 (Tax), AFM 207 (Analytics) and AFM 208 (Assurance); students must now take AFM 206 and 208 so they can have two accounting prep courses prior to co-op, resulting in no unit changes.
• ECON 221 is removed and statistic content will be covered via two new AFM requirements, AFM 113 and 121; As a result, program Note #1 is removed because it names STAT 202 as a suitable substitute for ECON 221 (this change is supported by Economics).
• SPCOM 111 is removed as there is already a dedicated Science Communication course (ENGL 193/SPCOM 193) requirement in the program (this change is supported by Communication Arts).
• AFM 112 and AFM 113 are added as two of three new required AFM courses. They are foundation courses for data analytics competency. AFM 113 becomes the statistical prerequisite for AFM 121.
• AFM 121 is the third of three new added AFM requirements, necessary as a prerequisite for a restructure AFM 273.
• ECON 101 and ECON 102 move to Year 2 to allow space in Year 1 for the three new added AFM course requirements (112, 113 and 121)
• The AFM 321, 362, 462 tax sequence replaces the AFM 362, 363, 462 tax sequence set.
• Chemistry requirements move to Years two and three to accommodate a newly added SCBUS 122 to Year 1; most Biology requirements are also re-sequenced around AFM and CHEM course sequence changes.
3. 1
• One elective is gained and added to Year two.
• The Year 1B term has six courses instead of five, and the Year 2A now has five courses instead of six.
• The Year 2B term has five courses rather than six, and the Year 3A term now has six courses rather than five
• AFM 231 is renumbered as AFM 335 because it will become a third-year course, but remains the law course for the plan
• Several AFM courses have new titles.

The program will be modified as follows based on the noted changes.

Revised calendar text below: (strike out = deleted text, underline = new entry)
……..
Continuing in the Honours Biotechnology, Chartered Professional Accountancy program requires a cumulative Science average of 65%, a cumulative Accounting average of 70%, and a cumulative overall average of 70%.

Successful completion of this program requires:

1. 22.0 total units distributed as follows:
        o 8.0 Science units distributed as follows:
                 4.75 BIOL units: BIOL 130, BIOL 239, BIOL 240, BIOL 240L, BIOL 241, BIOL 309, BIOL 331, BIOL 342, BIOL 432, and BIOL 443
                 2.75 CHEM units: CHEM 120, CHEM 120L, CHEM 123, CHEM 123L, CHEM 266, CHEM 266L, and CHEM 237
                 0.5 BIOL or CHEM elective unit chosen from: BIOL 345, BIOL 431, BIOL 434, BIOL 441, BIOL 442, BIOL 444, BIOL 483, CHEM 333, or CHEM 432
        o ~~10.5~~ 11.0 AFM units: ~~AFM 101, AFM 102,~~ AFM 206, AFM 208, AFM 112, AFM 113, AFM 121, AFM 191, AFM 182, AFM 212, ~~AFM 231,~~ AFM 273, AFM 274, AFM 321, AFM 335, AFM 291, ~~AFM 311,~~ AFM 341, ~~AFM 351,~~ AFM 362, ~~AFM 363,~~ AFM 373, AFM 382, AFM 391, ~~AFM 401,~~ AFM 433, AFM 451, AFM 462, ~~AFM 479, AFM 481,~~ AFM 482, and AFM 491
        o ~~0.5 AFM unit chosen from: AFM 205, AFM 206, AFM 207, and AFM 208~~
        o ~~1.5~~ 1.0 ECON unit~~s~~: ECON 101~~,~~ and ECON 102~~, and ECON 221~~
        o ~~0.5~~ 1.0 SCBUS unit: SCBUS 122 and SCBUS 225
        o 0.5 ENGL unit: ENGL 193/SPCOM 193
        o ~~0.5 SPCOM unit: SPCOM 111~~
        o One elective
2. Co-operative program requirements that include:
        o Four work terms: COOP 1, COOP 2, COOP 3, and COOP 4.
        o A minimum of three work-term reports: one as part of PD 11, WKRPT 200S, and WKRPT 300S.
        o Four Professional Development courses: PD 1, PD 11, and two other PD courses.

Notes
1. ~~STAT 202 can substitute for ECON 221.~~
2. Fees for this program are higher than some honours BSc programs because it is a high-fee plan.

Recommended Course Sequence

Year One
Fall
~~AFM 101 Introduction to Financial Accounting~~
AFM 112 Analytical Methods for Business 1
AFM 191 Foundations for Financial Reporting
BIOL 130 Introductory Cell Biology
BIOL 240/BIOL 240L Fundamentals in Microbiology/Microbiology Laboratory
~~CHEM 120/CHEM 120L General Chemistry 1/General Chemistry Laboratory 1~~
SCBUS 225 Organizational Behaviour in Scientific and Technical Workplaces
~~One of ENGL 193/SPCOM 193 Communication in the Sciences~~

Winter
AFM 102 Introduction to Managerial Accounting
AFM 113 Analytical Methods for Business 2
AFM 121 Introduction to Global Capital Markets
AFM 182 Foundations for Management Accounting
BIOL 239 Genetics
CHEM 123/CHEM 123L General Chemistry 2/General Chemistry Laboratory 2
ECON 101 Introduction to Microeconomics
SCBUS 122 Management of Business Organizations
One of ENGL 193/SPCOM 193 Communication in the Sciences
SPCOM 111 Leadership, Communication, and Collaboration

Year Two
Fall
AFM 212 Financial Analysis and Planning
AFM 273 Managerial Finance 1
BIOL 240/BIOL 240L Fundamentals in Microbiology/Microbiology Laboratory
BIOL 309 Analytical Methods in Molecular Biology
CHEM 120/CHEM 120L General Chemistry 1/General Chemistry Laboratory 1
ECON 101 Introduction to Microeconomics
CHEM 266/CHEM 266L Basic Organic Chemistry 1/ Organic Chemistry Laboratory
ECON 102 Introduction to Macroeconomics

Two of:
AFM 205 Introduction to Financial Services
AFM 206 Introduction to Tax
AFM 207 Introduction to Analytics
AFM 208 Introduction to Assurance

Spring
AFM 231 Business Law
AFM 274 Managerial Finance 2
AFM 291 Intermediate Financial Accounting 1
BIOL 309 Analytical Methods in Molecular Biology
BIOL 241 Introduction to Applied Microbiology
CHEM 123/CHEM 123L General Chemistry 2/General Chemistry Laboratory 2
CHEM 237 Introduction Biochemistry
ECON 102 Introduction to Macroeconomics
ECON 221 Statistics for Economists
One elective

Year Three
Fall
AFM 273 Managerial Finance 1 Financial Instruments and Capital Markets
AFM 321 Personal Financial Planning
AFM 341 Accounting Information Systems
AFM 362 Taxation 1 – Foundations
AFM 373 Cases and Applications in Corporate Finance
AFM 391 Intermediate Financial Accounting 2

BIOL 342 Molecular Biotechnology 1
CHEM 266/CHEM 266L Basic Organic Chemistry 1/ Organic Chemistry Laboratory

Spring
AFM 274 ~~Managerial Finance 2~~ Introduction to Corporate Finance
AFM 335 Business Law for Financial Managers
~~AFM 311 Connections to Ethical Context~~
~~AFM 351 Audit Strategy~~
AFM 362 ~~Taxation 1- Foundations~~ Taxation 1- Corporate Taxation
~~AFM 363 Taxation 2 – Integration~~
AFM 451 Audit Strategy
~~AFM 481 Cost Management Systems~~
~~BIOL 241 Introduction to Applied Microbiology~~
CHEM 237 Introduction Biochemistry

Year Four
Winter
AFM 373 Cases and Applications in Corporate Finance
AFM 382 Cost Management Systems
AFM 433 Business Strategy
~~AFM 491 Advanced Financial Accounting~~
BIOL 331 Advanced Cell Biology
BIOL 432 Molecular Biotechnology 2
~~BIOL or CHEM elective (0.5 unit)~~

Fall
~~AFM 401 Accounting Theory~~
AFM 462 ~~Taxation 3 – Tax Planning Topics~~ Advanced Taxation
~~AFM 479 Cases~~ and Applications in Finance II
AFM 482 Performance Measurement and Organizational Control
AFM 491 ~~Advanced Financial Accounting~~ Intermediate Financial Accounting 2
BIOL 443 Fermentation Biotechnology
BIOL or CHEM elective (0.5 unit)


**TEMPORARY ACADEMIC PROGRAMMING ADJUSTMENTS WINTER -FALL 2020**

**Offices of the Registrar and the Associate Vice-President, Academic**
**Summary of Winter 2020 Faculty Rule Changes**

18. **Motion:** That Senate approve items 3 and 7 below and receive the remainder of the changes for information.

List of rule changes being reported:
1. Academic Progression Rules
2. Co-op requirements rules
3. Term Dean's Honours List rules (Math = for approval)
4. Declaration of Major rules
5. CR grades and prerequisites
6. Communication Requirement rules

7.   50% rule (for approval)

The majority of changes indicated in this document do not require changes to the text in the Undergraduate Calendar. These changes, which impact certain cohorts only or are temporary for one term, are treated like mass petitions/exceptions to existing rules. Exceptions are noted.

1.   Academic Progression Rules

This winter 2020 term, there will be CR/NCR grades on some students' records. Instructors may have changed the course grading basis and/or students may have elected to have numeric grades changed to CR/NCR as a result of COVID-19 impacts on course delivery and assessment. The AP rules will have to be applied, for most students, with less numeric grade information. This is an extraordinary time served by compassionate, student-centric approaches. COVID-19 transcript text will be added to all student records for the term.

In all faculties (except Engineering), students with prior term INCs (winter 2019, spring, 2019, and fall 2019) resolved to numeric grades in winter 2020 may also request conversion to CR/NCR.

**A)   Faculty of Applied Health Sciences**

| Normal rules | Winter 2020 |
|---|---|
| Students with a conditional standing are normally given only one additional term to attain a satisfactory standing. | A second conditional standing will apply for all students to provide them with 1 additional term to meet minimum average requirements for the plan. |
| Failure to meet minimum average requirements for the plan may result in a conditional standing or a failed decision (FLGR or FL3). | Students with an FLGR standing will receive a conditional standing for 1 term to increase their grades to stay in their original plan. Students with an FL3 standing will receive a deferred standing for 1 term. All students will have the option to change their grades to CR/NCR. |
| Students with a conditional or failed standing may, in consultation with their academic advisor, choose to enrol voluntarily in the Foundation Term. | Students with a conditional or deferred standing will have the option to enrol in the Foundation Term. |

**B)   Faculty of Arts**

| Normal rules | Winter 2020 |
|---|---|
| Students who begin the term in conditional standing must raise their plan and/or overall averages or they may be advised to proceed to an alternate plan or required to withdraw. | All students up to 3A who began Winter 2020 in conditional standing and whose standing does not improve as a result of Winter 2020 grades will be allowed to continue in conditional standing for the next academic term. We will also consider an additional conditional term for students in 3B or higher. |

**C)   Faculty of Engineering**

**Engineering plans (including students on reduced load and on a repeat term)**

| Normal rules | Winter 2020 |
|---|---|
| A "failed-required to repeat" (FLR) | Automatically be converted to a "failed-required to |

| term decision | repeat, no penalty" (FLRN) decision. |
|---|---|
| See table below | It the term has only CR/NCR grades, or there's a mixture of CR/NCR and numeric grades (numeric are mapped to CR/NCR for purposes of academic standing): <br>• No term averages will be calculated <br>• If grades are all CR, the term decision is "promoted" (PROM). <br>• If there are one or two NCR grades, the decision depends on the "to be cleared (TBC)" count: <br>    • if the TBC count is under 3, the term decision is "promoted (conditional)" (PRMC) <br>    • if the TBC count is at least 3, the term decision is "may not proceed" (MNP) <br>• If there are three or more NCR grades, the term decision is "failed-required to repeat, no penalty" (FLRN). <br>From the point of view of allowing supplementary exams, any grade of NCR should be interpreted as a 49%. |

**Normal rules (based on previous term's standing decision):**

| **Previous Decision** | **Term average greater than or equal to 60 and:** <br>1. **No failed courses** <br>2. **Full-load term, one or two failed courses, and less than three TBC courses** <br>3. **Reduced-load term, one failed course, and less than three TBC courses** <br>4. **TBC courses more than two, and term 2A or higher** | **Term average greater than or equal to 60 and either** <br>1. **full-load term and more than two failed courses, or** <br>2. **reduced-load term and more than one failed course, or** <br>3. **term average greater than or equal to 50 but less than 60** | **Term average less than 50** |
|---|---|---|---|
| Promoted | 1. Promoted <br>2. Promoted (conditional) <br>3. Promoted (conditional) <br>4. May Not Proceed | Failed - required to repeat | Failed - withdrawal required |
| No previous term | 1. Promoted <br>2. Promoted (conditional) <br>3. Promoted (conditional) <br>4. May Not Proceed | Failed - required to repeat | Failed - withdraw from 1A |
| Failed - required to repeat | 1. Promoted if no failed courses <br>2. (any failed courses) Failed - withdrawal required <br>3. (any failed courses) Failed - withdrawal required <br>4. Failed - withdrawal required | Failed - withdrawal required | Failed - withdrawal required |

**2019-2020 Undergraduate Calendar changes:**
On page: http://ugradcalendar.uwaterloo.ca/page/ENG-Examinations-and-Promotions-Rules
        "See amendments page (insert date) for rule changes applicable to the winter 2020 term."

On amendments page:
1. If the term has only numeric grades, apply the usual rules.
   Exception: A "failed - required to repeat" (FLR) term decision will automatically be converted to a "failed - required to repeat, no penalty" (FLRN) decision.
2. It the term has only CR/NCR grades, then no term average is reported, the cumulative average is not affected, and
   a. If grades are all CR, the term decision is "promoted" (PROM).
   b. If there are one or two NCR grades, the decision depends on the "to be cleared (TBC)" count:
      i. if the TBC count is under 3, the term decision is "promoted (conditional)" (PRMC)
      ii. if the TBC count is at least 3, the term decision is "may not proceed" (MNP)
   c. If there are three or more NCR grades, the term decision is "failed - required to repeat, no penalty" (FLRN).
3. If the term has a mixture of numeric and CR/NCR grades, then map, only for the purpose of promotion considerations, all numeric grades to CR or NCR, and apply the rules from rule 2. No term average is reported, and the cumulative average is not affected.
4. From the point of view of allowing supplementary exams, any grade of NCR should be interpreted as a 49%.

**Architecture plan**

| Normal rules | Winter 2020 |
|---|---|
| May Not Proceed - the student may not proceed to the next academic term. In the case of a failed studio, the student must repeat and pass the studio prior to continuation in the program. In the case of other failed core courses, the student will be given an Academic Advice Hold and must make arrangements with the undergraduate officer to retake the core courses. In the case of incomplete courses, these must be completed before the standing decision will be changed. | It the term has only CR/NCR grades, or there's a mixture of CR/NCR and numeric grades (numeric are mapped to CR/NCR for purposes of academic standing):<br>• If grades are all CR, the term decision is "promoted" (PROM).<br>• If one and only one NCR grade is recorded, and that course has no more than 0.5 unit weight, the term decision is "promoted" (PROM).<br>• Otherwise the term decision is "may not proceed" (MNP). |

**2019-2020 Undergraduate Calendar changes:**
On page: http://ugradcalendar.uwaterloo.ca/page/ENG-Architecture-Academic-Decisions
"See amendments page (insert date) for rule changes applicable to the winter 2020 term."

On amendments page:
1. If the term has only numeric grades, apply the usual rules.
2. It the term has only CR/NCR grades, then no term average is reported, the cumulative average is not affected, and...
   a. If the grades are all CR, the term decision is "promoted" (PROM).
   b. If one and only one NCR grade is recorded, and that course has no more than 0.5 unit weight, the term decision is "promoted" (PROM).
   c. Otherwise the term decision is "may not proceed" (MNP).

3. If the term has a mixture of numeric and CR/NCR grades then map, only for the purpose of promotion considerations, all numeric grades to CR or NCR, and then apply the rules from rule 2. No term average is reported, and the cumulative average is not affected.

## D) Faculty of Mathematics

No changes to current rules. To introduce a new standing for all students in Business Administration/Math or CS double degree plans only: PROM (defined as "promoted; may proceed"). The implication of PROM standing will be similar to the "deferred" (DEF) standing, except that deferred standings need eventually to be resolved. The intent with PROM standing, in contrast, is that it will be applied permanently to the winter 2020 term.

Rationale/Background: When AP runs for the Winter 2020 term, we anticipate that we will have no grade information for WLU courses. Further, we anticipate that when the WLU grades do become official, there should be no failing grades (since any student with a failing grade will have the option of changing it to WD). Since we will not have sufficient information to determine appropriate standings, but we have agreed that we will not remove any student from a double degree plan following the winter 2020 term, the intent is to defer the next meaningful standing decision until after the spring 2020 term.

## E) Faculty of Science

**Bachelor of Science Academic Plans**

| Normal rule or standing | Winter 2020 |
|---|---|
| Failed attempt counts | • NCR will appear in the student record but be cleared from the program fail count<br>• For stated limits to the failed attempt count of a course, the NCR will not count as a failed attempt. |
| Conditional Standing | Student will have an additional term to clear this standing |
| FLP, FLH, FLG Standing (Unsatisfactory – eligible for…) | Conditional standing (student remains in academic plan) |
| FL3 Standing (Failed – Required to Withdraw) | Deferred standing (1 term)[1] |
| FRW Standing (Required to withdraw – may not continue in Faculty) | Deferred standing, if triggered by average(s)<br>OR<br>FRW, if triggered by fail count |

**Doctor of Optometry**

| Normal rule or standing | Winter 2020 |
|---|---|
| Failed attempt counts | • NCR will appear in the student record but be cleared from the program fail count<br>• For stated limits to the failed attempt count of a course, the NCR will not count as a failed attempt. |
| Conditional Standing (CNDX) | Student will have an additional term to clear this standing |
| MNP Standing (May not proceed) | No change (revised NCR rule applies) |

| | |
|---|---|
| FRW Standing<br>(Failed - Required to withdraw) | MNP rules apply (revised NCR rule applies) |
| FLO Standing<br>(Failed – May not Continue in Optometry) | MNP rules apply, if triggered by repeat course failure<br>OR<br>FLO, if triggered by fail count |

**2019-2020 Undergraduate Calendar changes:**

May Not Proceed
A student receives this standing if,
- the student achieves a term average of 60% or better but has failed two courses in a term.
- the student, at the end of the third year, has not successfully completed all Optometry courses in the first three years.
- **during the winter 2020 term, would have received a Failed – Required to Withdraw standing or a Failed – May not Continue in Optometry standing (if triggered by failure of a repeated course).**

A student will be required to leave the program until the next term the courses are offered. A student clearing failed courses under this rule must achieve a passing grade in the courses; otherwise the student will receive a Failed standing from Optometry. Only after the failed courses are cleared will the student be permitted to proceed to the next degree term.

**Doctor of Pharmacy**

| Normal rule or standing | Winter 2020 |
|---|---|
| Failed attempt counts | <ul><li>NCR will appear in the student record but be cleared from the program fail count</li><li>For stated limits to the failed attempt count of a course, the NCR will not count as a failed attempt.</li></ul> |
| Conditional Standing (CNDX) | Student will have an additional term to clear this standing |
| MNP Standing (May not proceed) | No change (revised NCR rule applies) |
| FRW Standing<br>(Failed - Required to withdraw) | MNP rules apply (revised NCR rule applies) |
| FRWP Standing<br>(Failed – May not Continue in Pharmacy) | MNP rules apply, if triggered by repeat course failure<br>OR<br>FRWP, if triggered by fail count |

**2019-2020 Undergraduate Calendar changes:**

May Not Proceed
Results if a student achieves a minimum term average of 60% but fails a maximum of two term courses**, or during the winter 2020 term, would have received a Failed – Required to Withdraw standing or a Failed – May not Continue in Pharmacy standing (if triggered by failure of a repeated course)**. The

failed courses must be cleared (passed) before the student is permitted to proceed to the next academic term.

Notes
A student with only one failure per term may be permitted to proceed to the next term; however, any failed course must be cleared. The student must make arrangements with the course instructor as to the mechanism for clearing the failed course.

1. In the event that the failed course is a prerequisite for a course in the following academic term, and it is not cleared before the start of the term, the student must obtain the appropriate approvals by completing a Course Override Form. This form should be accompanied by a statement of the arrangements made with the instructor to clear the failed course. If the instructor of the subsequent course does not approve the course override, the student will be required to clear the failed course before proceeding to the next academic term. Due to the limited scheduling of Pharmacy courses, this will typically result in the student falling behind and extending the time required for program completion.
2. In the event that the next term is a co-op work term, the student will be permitted to begin the co-op work term. Depending on individual circumstances, the School of Pharmacy may contact the student's employer, who may elect to terminate the student's employment. For work terms that continue to completion, the student will be required to submit the appropriate evaluations and the work term report.

2. Co-op requirements rules
   A) **Faculty of Applied Health Sciences**

| Normal rule | Spring 2020 |
|---|---|
| To be eligible to receive a co-op designation at the time of graduation, students in the Faculty of Applied Health Sciences who are unemployed during the Spring 2020 work term must successfully complete:<br>• A minimum of four professional development (PD) courses: PD1, PD12, and two additional PD course of the student's choice<br>• A minimum of four work reports<br>• A minimum of four work terms | To be eligible to receive a co-op designation at the time of graduation, students in the Faculty of Applied Health Sciences who are unemployed during the spring 2020 work term must successfully complete:<br>• A minimum of three professional development (PD) courses: PD1, PD12, and one additional PD course of the student's choice<br>• A minimum of three work reports<br>• A minimum of three work terms |

   B) **Faculty of Arts and Faculty of Environment**

| Normal rule | Spring 2020 |
|---|---|
| Number of co-op work terms is dependent on program | For unemployed students: The minimum number of required work terms, work reports, and PD courses in a co-op program is being reduced by one. |

   C) **Faculty of Mathematics**

| Normal rule | Winter 2020 |
|---|---|
| Students on a co-op in winter 2020 are expected to complete a work report during this term unless they have already met their work-report requirement. | Flexibility has been added:<br>• students may request a one-month extension and may submit a non-confidential report without an employer's evaluation if getting |

|  | • one will be difficult in the current circumstances.<br>• If a student feels that they cannot complete a report at all this term, it may be deferred to their next co-op, though the number of required work reports has not changed. |
|---|---|

| Normal rule | Spring 2020 |
|---|---|
| Students on a co-op in spring 2020 are expected to complete a work report during this term u nless they have already met their work-report requirement. | These students will not be expected to complete a work report during the term if they are unemployed, though the number of expected work reports to be completed has not been reduced across the faculty.<br>• In most math programs, students have 5-6 work term opportunities and need to complete 4 work reports, so missing one report in spring 2020 should not affect most student's ability to complete co-op degree requirements.<br>• Math/CPA students only have 4 scheduled work terms, and already have a calendar fallback, in extreme circumstances, to graduate with a co-op degree with only three co-op terms and three work reports. This process will be used for these students. |

3. Term Dean's Honours List rules
   A) **Faculty of Engineering**

| Normal Term DHL rules | Winter 2020 |
|---|---|
| To achieve this designation for a particular term, students must meet the following criteria for the term in question:<br>  1. They must be unconditionally promoted at the end of that term (standings and official grades are available on Quest as specified in the Calendar of Events and Academic Deadlines).<br>  2. They must have term decisions of Excellent and have received no penalties under Policy 71 during the term.<br>  3. Their term averages minus their percentile ranks from the tops of their classes for that academic term must be greater than or equal to 80.<br>  4. They must be in cohorts with 10 or more students.<br>  5. Their course loads must equal or exceed the minimum number of academic units specified by their plan for that term. | Students who elect CR/NCR grades in the winter 2020 term are not eligible for the Term Dean's Honours List as they cannot have "Excellent" decisions. |

| | |
|---|---|
| This designation will be reflected on students' transcripts. Students not in the top 10% of their classes are normally not eligible. | |

**B) Faculty of Mathematics (spring 2020 = for approval)**

| Normal Term DHL rules | Winter 2020 and Spring 2020 |
|---|---|
| In recognition of outstanding academic achievement in an academic term, the designation "Term Dean's Honours List" is awarded to undergraduate Math students who satisfy all of the following criteria for the term:<br>• registered in an honours plan with a term average (TAV) of at least 87%;<br>• normally enrolled in at least 2.5 units of courses with numeric or letter grades;<br>• no failed or excluded courses;<br>• no INC, IP, or UR grades;<br>• at least 2.5 units of courses without a grade of WD. | To more closely align with the approved changes starting fall 2020, awarding the Term DHL award if a student has 1.0 unit of numeric or letter grades (for average determination), and any student that would satisfy the conditions for "Term Distinction" as per the 2020-21 Undergraduate Calendar be given that honour if they not have the Term DHL honour. |

**2019-2020 Undergraduate Calendar changes:**
In recognition of outstanding academic achievement in an academic term, the designation "Term Dean's Honours List" is awarded to undergraduate Math students who satisfy all of the following criteria for the term:
• registered in an honours plan with a term average (TAV) of at least 87%;
• normally enrolled in at least 2.5 units of courses with numeric or letter grades **(for winter and spring 2020, at least 1.0 unit must have numeric or letter grades)**;
• no failed or excluded courses;
• no INC, IP, or UR grades;
• at least 2.5 units of courses without a grade of WD.

**For the winter and spring 2020 terms, a student is eligible to receive "Term Distinction" based on their average in all courses taken during a term while in a degree-granting program. In order to receive "Term Distinction", the following must be true:**
• **The term must have at least one alpha/numeric grade in the average.**
• **A minimum term average of 80.0% must be achieved.**
• **An academic standing for the term of Promoted, Good, or Excellent.**
• **The term cannot have an INC, IP, MM, or UR. When these grades are resolved to alpha/numeric grades, the term's average will be reviewed for eligibility.**
**Note: Students may be deemed ineligible at the discretion of the associate dean –undergraduate studies.**

4. Declaration of Major rules
   **A) Faculty of Arts**
   Students who enter the University in Honours Arts or Honours Arts and Business are normally admitted to majors based on their grades at the end of their 1B term. We admit to major with the same requirements of cumulative minimum overall and major averages for continuation in plans. Those levels are stipulated in the first sentence of each major plan description in the Calendar, where they apply to continuation in the

plan.
Because of the events of the winter 2020 term, the following accommodations will be made:

1. We will allow students to be admitted to Major Plans at average levels that are up to two percent below what the Calendar requires. This will be applied for both Co-op and Regular plans.
2. Students who are admitted to a major with an average below what is stipulated in the Calendar will be informed that they need to raise their averages by the end of their next academic term.
3. In the event that a student has no numeric grades in courses within the major, their admission to the major will be determined on an individual basis.

## 5. CR grades and prerequisites

**A) Faculty of Mathematics**

CR grades acquired in winter 2020 will satisfy grade-based prerequisites where the required grade is 70 or below. Some courses, particularly in the School of Computer Science, require a minimum grade in a previous course of 85 or 90. For these courses, CR grades will not satisfy the prerequisite.

## 6. Communication Requirement rules

**A) Faculty of Mathematics**

CR grades acquired in winter 2020 will be deemed sufficient to meet the Communication Requirement rules. Note that the Registrar's Office applies the UCR1 and UCR 2 milestones upon satisfactory completion of the first and second courses, and so CR grades acquired in winter 2020 will also be deemed sufficient for the application of these milestones.

## 7. 50% Rule

**A) University-wide rule (for approval)**

Any CR/NCR grades on a student's winter 2020 term record, whether determined by the instructor or student-initiated, will count as numerical grades for the purpose of 50% rule. This means some plans may be completed with less than 50% of the academic units being counted in the average.

- The new campus-wide rule applies to students studying fall 2020 and beyond.
- Students completing their degree in winter or spring 2020 should see their faculty-specific text in the 2019-20 Undergraduate Calendar.

**2020-21 Undergraduate Calendar (and beyond) changes:**
At least 50% of the academic course units required to be awarded a degree, major, minor, option, or specialization must have numeric grades that are included in its average(s).
**Note: Any numeric grades converted to CR/NCR grades on a student's winter 2020 term record, whether determined by the instructor or student-initiated, will count as numerical grades for the purpose of the 50% rule. This means some plans may be completed with less than 50% of the academic units being counted in the average.**

**Offices of the Registrar and the Associate Vice-President, Academic**
**Process for Approving Temporary Adjustments to Academic Programming in Response to COVID-19**

19. **Motion:** That Senate endorse the use of the below described processes for making necessary adjustments, exceptions and waivers to academic programming in response to the wide-spread impact of COVID-19 and the shift to remote learning, effective Spring 2020, Fall 2020 and, if on campus instruction has not yet resumed, Winter 2021.

**Background and Rationale:** Due to the COVID-19 global pandemic, all of the Spring 2020 courses will be offered remotely, and many of the experiential learning components will not be available or will require modification. The University does not yet know what modes of delivery will be offered for each course in Fall 2020. With transparency and flexibility in mind, Senate Undergraduate Council (SUC) has considered and agreed to recommend that Senate endorse the use of the below described, existing processes for making and communicating adjustments, exceptions and waivers to academic programming requirements, rather than bringing these temporary changes through the SUC and Senate, and requiring updates to the academic calendars.

**Process and Range of Application:** The organization-wide shift to remote instruction requires a number of adjustments to academic programming to facilitate students' ability to progress though their programs while not substantially negatively impacting the ability of students completing the program to achieve the program's learning goals.

In consultation with associate deans, the following types of temporary adjustments were determined to be ones that may be necessary during this period:
1. For programs with experiential components (placements, co-operative education, field work, studio), resequencing the program or adjusting the component to allow impacted students to fulfill those requirements at another time or in another way (within the standards of any accreditation requirements for that program).
2. For co-op programs, in particular, changing the number of required work terms, PD courses, or work reports required for affected student cohorts (within the University's accreditation requirements).
3. Temporary changes to programs or courses, such as changes in course sequencing, adjustments in prerequisites, addition of new course types (e.g., SEM to LEC), changes to number of required electives, move of components such as labs from one course to another in later term, reduction to the unit weights for a course, restrictions on courses counting as program requirements (e.g., whether students can count courses taken on a Letter of Permission), and adjustments to lists of required courses for programs/specializations/etc.
4. Waiving desirable but not essential requirements for impacted students that are difficult to implement remotely, such as whether a final exam is required for a course, participation in a field trip, or that a course is required to be delivered on campus rather than online.
5. Temporary changes to requirements to meet milestones (e.g. to take account of increased number of CR/NCR grades in Winter 2020).
6. Minor changes to timelines for inter-faculty transfers and applications to foundation terms.

Some of the above adjustments require no approval at the Faculty level or above, because the decision, for example, to offer a course in a given term is at the discretion of those offering the course. Many of the above changes, if intended to be permanent and apply to all students, would require approval by the responsible Faculty committees and SUC, because they represent course and minor plan changes. None of the proposed adjustments qualify as major modifications requiring Senate approval, however, there are a few regulations impacted, which if intended to be changed on a permanent basis would require Senate approval. Changes intended to be ongoing and generally applicable are reflected in the academic calendar in the year in which they take effect.

Since, at this time, there is no intention to make any of the adjustments contemplated in response to COVID-19 permanent, those responsible for academic programming would like to rely on existing approval mechanisms for allowing temporary adjustments and waivers to be made to academic requirements. These adjustments or waivers are currently made on a time or cohort restricted basis by or after consultation with departments, academic advisors, associate deans and the Registrar's Office. Some of the language in the calendar is already flexible enough to permit exceptions to be made on a discretionary basis. Where the language is stricter, there are formal processes such as the petitions process or forms that can be submitted to the Registrar's Office to request a temporary exception or adjustment. These types of adjustments are communicated to those impacted and not included in the academic calendar.

Because the shift to remote instruction has impacted every program, the adjustments that may be required are on a larger scale and for a greater length of time than usually managed through these processes. As a result, those involved in decision-making re: temporary exceptions and adjustments to academic programming will look for evidence of discussion and approval of the proposed adjustments at the Faculty level before agreeing to an exception or waiver. They will also flag any proposed adjustment that will be made permanent for redirection to the regular academic governance process. Although SUC is not generally involved in granting temporary exceptions, waivers and adjustments, this body could act as fora for discussion and issue-identification during this exceptional time, as it did for the Winter 2020 rule changes presented above.

*/rmw*                                                     David DeVidi
                                                                  Associate Vice-President, Academic

# UNIVERSITY OF WATERLOO

# UNDERGRADUATE PROGRAM PROPOSAL

## OF

## BACHELOR OF ARTS

## IN

## COMMUNICATION ARTS AND DESIGN PRACTICE

**Submitted to the**
**Ontario Universities Council on Quality Assurance**

## VOLUME I - PROPOSED BRIEF

### NOVEMBER 2019

Proposed Program – Bachelor of Arts in Communication Arts and Design Practice

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Proposed Program – Bachelor of Arts in Communication Arts and Design Practice

1.       **INTRODUCTION**

The Department of Communication Arts at the University of Waterloo offers an ideal site for the analysis, investigation, and interrogation of the relationship between theories of embodied communication and critical design practices. Our faculty pursue distinct and overlapping areas of research and creative activity in digital arts communication, performance theory and practice, and communication as the process by which people make meaning in communities. As a leader in higher education innovation, particularly in the area of outward-facing experiential education, the University of Waterloo is ideally placed to support this undergraduate program's commitment to shared research, community, and professional projects concerned with knowledge-production for social change and experiential learning for students. These values are also central to Faculty of Arts programs, and thus the proposed new program aligns strongly with Faculty of Arts commitments. The proposed undergraduate program will be unique in Canada because of the ways in which it combines theory and practice and combines three distinct intellectual areas of inquiry: performance, communication, and digital arts.

**1.1      Brief Listing of the Program**

The Bachelor of Arts in Communication Arts & Design Practice will be a major plan available through the entry programs, Honours Arts (HA) and Honours Arts and Business (HARBUS). HA and HARBUS require a 60% overall cumulative average, 20.0 academic course units, and breadth requirements. All Major plans in HA and HARBUS require 8.0 units of required courses and a 70% major average in addition to the program requirements. Admissions requirements for HA and HARBUS are established by the University and, within that framework, by the Faculty of Arts for its programs. Admission to the major plan normally occurs at the end of the second term. Admission to an Honours major plan normally requires a 70% average in two courses in the disciplines. For the Communication Arts and Design Practice plan, admission will require a minimum overall average from 5.0 academic units taken in the first two terms of 60%, and 70% in the required first-year disciplinary courses. Both HA and HARBUS are available in co-op options.

**1.2      Method Used for Preparation of the Brief**

The Department struck a "Department-level Undergraduate Plan Committee" in Winter, 2017. This committee was chaired by Robert Danisch, and included: Jennifer Roberts-Smith, Glenn Stillar, Kim Nguyen, Shana MacDonald, and Andy Houston (at various points several of these faculty members were on leave and while on leave did not participate in committee meetings). This committee has been responsible for drafting this brief and reporting back to the Department. After a year of consultation on the design and rationale for this program, the Department (in December, 2017) recommended that the committee prepare the brief and submit the program to the Ontario Universities Council on Quality Assurance.

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**1.3     Objectives of the Program (QAF 2.1.1)**

The aim of this plan is to integrate theoretical reflection on how multimodal forms of representation make meaning with critical practices of design and production. Students will learn to: 1) understand the production of meaning, and the implications of meaning-making, in a variety of contexts; 2) investigate the multimodality of representation; and 3) produce effective performative and communicative phenomena for the public good. Existing faculty expertise, research, creative work, and pedagogical practices in the Department support this program by attending to the demands and possibilities of embodied and mediated performance, communication, and representation in a variety of public settings. The program focuses on theoretically-informed practice; project-based, interdisciplinary and collaborative pedagogy; and experiential learning. Its combination of interests and commitments make the program unique within the Faculty of Arts and give it the potential to recruit students interested in attending other Ontario universities. This new program uses the resources of the Department to their fullest potential; brings complementary and symmetrical interests together; and supports the broader movement toward interdisciplinary studies that facilitates innovative research opportunities and appeals to students.

This plan aligns with the University of Waterloo's mission and Strategic Plan in the following ways:

First, the Communication Arts & Design Practice plan aligns with the foundational strengths of the University outlined in the strategic plan. Communication Arts & Design Practice furthers the University's commitment to outstanding academic programming by melding the strengths of the three distinct units in the Department of Communication Arts in ways that complement student interest in interdisciplinarity and that promote *experiential learning* outside of the classroom. Through course offerings that explore embodied and mediated performance, communication, and representation in a variety of public settings, students in Communication Arts & Design Practice will have an enhanced understanding of the multimodal applications, uses, and frameworks of communication both as a field of study and as a tool for meaning-making. As such, students will be *uniquely prepared to address the challenges and opportunities* of new communicative technologies, networks, and forms. While students already learn to speak and write in a wide array of public settings within the departmental units, students will learn how to *speak and write* in *innovative* ways that transform disciplinarity and that explore the changing embodied and mediated conditions of *the 21$^{st}$ century*.

Second, the Communication Arts & Design Practice plan enables students to produce a global outlook by promoting scholarly inquiry between three different units as well as across student cohorts. Student interaction across the different units will enrich their learning as well as expand occasions for intercultural and intellectual exchange for and about the public good. Inquiry about critical practices of design and production and its implications for the public good across the departmental units will help students situate, create, and analyze performance, communication, and representation for *an increasingly*

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*integrated, global environment.* The Communication Arts & Design Practice program is committed to the pursuit and discovery of knowledge that enables communicative *literacy* for the global context and integrates theoretical reflection on how students engaged in multimodal forms of representation may *improve the world*.

Third, we believe the Communication Arts & Design Practice plan will produce a vibrant student experience by enriching student engagement and skill development in teamwork, leadership, conflict management, cross-cultural communication, workplace communication, and relationship building. Through project-based, interdisciplinary, and collaborative pedagogy, students across the three academic units will be positioned in an environment where their intellectual potential and success can thrive in *partnership* with their peers and in *connection* with our faculty as they pursue scholarly inquiry about how to *contribute to society and lead change*.

Fourth, the Communication Arts & Design Practice plan will deepen the Faculty of Arts' (and the broader University's) *robust* commitment and success in innovation and engaging industry outlined in their Strategic Plan. Already, our Department's unique design and practice-based approach to the field of communication, theatre and performance, and digital arts is one-of-a-kind in the country, and establishing the Communication Arts & Design Practice program is a product of our collective commitment and insight to achieve our fullest potential.

In addition to the ways in which this program broadly aligns with the University's strategic directions, Communication Arts & Design Practice will also clearly deliver the Undergraduate Degree Level Expectations (UDLEs). The UDLEs will be met by having students develop an understanding of theories of communication, performance, and design. This will include detailed knowledge of these three broad academic fields of inquiry, the cultivation of analytical skills inside and outside these fields, the development and practice of methodologies from each of these three fields, and the use of experiential learning. A summary of the ways in which the program will meet the UDLEs can be found in Appendix A.

The name "Communication Arts & Design Practice" is consistent with similar degree programs in the U.S. and highlights the fact that this program will include hands-on, experiential, project-based learning.

### 1.4     **Admission Requirements (QAF 2.1.2)**

The admission requirements of the Faculty of Arts are the same as the General Admission Requirements of the University. Admission requirements for part-time students are the same as for full-time students. Once in Honours Arts or Honours Arts & Business, students can declare a Communication Arts & Design Practice major at the end of their 1B term if they have completed at least one course required by the program.

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**1.5      Structure ([QAF 2.1.3](#))**

Continuation in this academic program requires a cumulative overall average of 60% and a cumulative minimum Honours Communication Arts & Design Practice major average of 70%.

Eligibility for graduation in the Honours Communication Arts & Design Practice academic program includes successful completion of the following requirements:

1.   Appropriate Program-level requirements. See [Bachelor of Arts Degree Requirements](#).
2.   Communication Arts & Design Practice Program-level requirements:
     • a minimum [major average](#) of 70%
     • at least eight academic course units (16 courses) including:

     Two Required Courses:
             SPCOM 101 – Theories of Communication
             SPCOM/THPERF 149   - Introduction to Critical Design Practices
     Foundational Courses - Four of:
             DAC 201/ENGL 203, DAC 202/ENGL 204, DAC 203/ENGL 304, DAC 204,
             SPCOM 100, SPCOM 223, SPCOM 227, THPERF 102, THPERF 200, THPERF
             220/SPCOM 220
     Intermediate Courses - Five of:
             DAC 302, DAC 305, DAC 308, DAC 309, SPCOM 226, SPCOM 228, SPCOM
             323/ENGL 309E, SPCOM 335, SPCOM 339, THPERF 246, THPERF 282, THPERF
             300, THPERF 301, THPERF 366
     Advanced Courses - Five of:
             DAC 300/ENGL 303/SPCOM 300, DAC 329/SPCOM 329, DAC 400/ENGL 403,
             SPCOM 401, SPCOM 402, SPCOM 420, SPCOM 430/LS 492, SPCOM 433,
             SPCOM 440/THPERF 440, SPCOM 475, SPCOM 490, SPCOM 491, THPERF
             331, THPERF 374, THPERF 376, THPERF 378, THPERF 379, THPERF 490,
             THPERF 491

     Note:
     Students are expected to complete at least four DAC courses, four THPERF courses, and four SPCOM courses.

**Arts and Business (Co-op and Regular)**
Students may combine the Honours Communication Arts & Design Practice academic program with Arts and Business. In addition to the Communication Arts & Design Practice requirements, students must also complete the Arts and Business requirements.

**Honours Double Majors**
Honours Communication Arts & Design Practice may be taken in combination with most Arts majors in which an Honours major is offered or with many Honours majors in other

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faculties. This academic program cannot be taken in combination with any programs in Digital Arts Communication, Speech Communication, or Theatre and Performance.

The structure of the Communication Arts & Design Practice program is designed to meet the following three main learning outcomes:

1. **Understand the production of meaning, and the implications of meaning-making, in a variety of contexts by:** Bringing a variety of disciplinary perspectives to bear on the interpretation of meaning, negotiating the relationships among agency, constraint, and implication in the production of meaning; and analyzing the collaborative processes of meaning-making in specific communities. This learning outcome meets UDLEs 1, 2, 4, 5, and 8 from above.

2. **Investigate the multimodality of representation by:** Exploring intersectionality in identity construction, understanding the mutually constitutive relationships among embodied, mediated, and conceptual representations, interrogating how a range of mediated channels and forms impact the interpretative process. This learning outcome meets UDLEs #1, #4, #5, and #8 from above.

3. **Produce effective performative and communicative phenomena for the public good by:** Developing expertise in practice-based methods for generating knowledge; collaborating effectively with diverse student teams and other stakeholders; developing a language and imagination for the public good; creating communication practices capable of generating change given existing conditions of possibility.  This learning outcome meets UDLEs 2, 3, 6, 7, and 8 from above.

**1.6     Program Content (QAF 2.1.4)**

The Communication Arts & Design Practice program is unique in Canada due to its emphases on the connection between communication and embodied performance; on critical and creative competencies in terms of both face-to-face communication and digital media; and on the public good and engagement with social issues. Our program focuses on the production of mediated forms of representation to intervene in the larger social and political world. We are a unique Department in Canada because of the combination of interests in Communication, Performance, and Digital Design. That combination of interests has influenced the development of this plan, and has been guided by the following three broad departmental objectives:

In relation to exploring the significance of making meaning, the program (and the Department) pursues three primary objectives that offer interdisciplinary approaches to the learning outcomes described above: 1) to examine agency and implication; 2) to support the development of critical and creative competencies; and 3) to encourage a language and imagination for the public good. Pursuing these three objectives makes this program unique in Canada.

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**Agency** refers to the ways in which individuals, situated in communities and social structures, use power to sustain, resist, and alter the contexts in which they live. Implication points to the ways we are all embedded within structures; we are always situated in relationship to a variety of individuals, communities, and publics. An examination of agency and implication reveals the ways in which discursively constructed conditions constrain and produce possibilities for action within systems of power. Understanding the significance of meaning making through attention to agency and implication foregrounds the ability of students to make a difference in the world in which they live; and the ways in which human interests, desires, and actions are necessarily bound up with the lives of others. A degree in Communication Arts & Design Practice will allow students to see themselves as agents implicated within structures. **Critical competencies** allow for the recognition and interrogation of the power and politics that underlie all forms of discursive and material production. **Creative competencies** recognize the open-ended and indeterminate character of the future, and encourage the development of communication practices capable of generating change given existing conditions of possibility. An awareness of implicated agency, paired with creative and critical competencies, leads to an ethical and creative praxis. A degree in Communication Arts & Design Practice aims to study, practice, and teach communication as a set of critical and creative competencies that form the foundation for ethical leadership; that show how discursive practices hold the potential for living with difference; that allow individuals to effectively negotiate power; and that open up possibilities for dialogue, understanding, and social change. **The public good** refers to practices through which institutions value engagement; quality of life (in regard to families and communities, education, employment, meaningful work, health care, aesthetic expression, etc.); and the well-being of, and reduction of suffering among, social groups. A language for the public good supports the identification of the components and communicative practices central to these values. An imagination for the public good will ensure that students can envision a different articulation of social relationships and power, and move from critique to reconstitution of public and communicative practices. Communication Arts & Design Practice will allow students to intervene in their world in new ways and change the conditions of their existence.

Following these three broad objectives is a way of imagining interdisciplinarity and constructing a program that is intentionally interdisciplinary in its structure and outcomes. This is consistent with how this Department has approached work. For example, the following was highlighted within the Faculty of Arts responses to the 2016-17 strategic program: "Drama and Speech Communication offered three fall courses with the shared theme "arresting rape culture;" the courses resulted in the winter term performance *Unconscious Curriculum*, an expert panel *Gendered Violence on Campus: Institutional Policy and Practice*, and an interactive art installation." This is characteristic of the kind of interdisciplinary work that our Department is capable of and that this program will foster. This is also an example of the ways the three broad objectives outlined above are materialized.

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**1.7      Mode of Delivery ([QAF 2.1.5](#))**

Courses in the Communication Arts & Design Practice program are structured as seminars and/or workshops at all levels (with one exception: SPCOM 101, which is a lecture course). Assignments are typically project-oriented, frequently requiring collaboration among students to articulate and execute a design concept, and frequently including public presentations of student work. Student learning is normally scaffolded in the following ways, often used in combination:

- Explicit instruction and/or demonstration, in which an instructor shows and explains to students how to do a learning task;
- Guided discovery, in which an instructor responds to student learning needs as they arise in the completion of a project;
- Implicit instructor modeling of the competencies and behaviours that students are expected to develop, including as collaborator-mentors;
- Organizing student activities in progressively challenging sequences;
- Engaging students in iterative activities, in which they deepen their engagement with each iteration;
- Active, instructor-guided, self- and peer analysis.

The approach to instruction in the Communication Arts & Design Practice program is student-centred, in that it focuses on the development of students' agency to continue to learn independently after the end of any course and after graduation.

**1.8      Assessment of Teaching and Learning ([QAF 2.1.6](#))**

Since students will be producing academic work in both traditional and creative modes, we will use the following major approaches to student assessment:

- Qualitative, instructor-led, rubric-centred approaches (well-suited to individual traditional and creative work), in which students receive qualitative formative rubrics along with assignment instructions, and summative, qualitative feedback accompanied by numerical grades, based on expectations outlined in the formative rubric
- Blended qualitative, instructor-led rubric/critique approaches (well-suited individual and collaborative creative work), in which students receive formative rubrics along with assignment instructions, as well as qualitative, verbal feedback from one or more instructors at milestone moments during assignment development; summative, qualitative feedback on final presentations accompanied by letter grades
- Qualitative, instructor-led, examination-based approach, in which students complete summative examinations based on course material; these may be written (normally short answer and essay but not multiple choice) or oral (in structured conversation with an instructor)
- Guided, formative, qualitative self- and peer-assessment approaches (well-suited to the development of independent student learning strategies both individually and

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as groups), in which students respond to prompts to reflect on their learning
process

A detailed breakdown of the UDLES to courses and associated evaluation methods can be
found in Appendix A.

We will collect and archive examples of the best, average, and poor student work at all
levels of the program.  These examples will serve as guidelines for future students and can
be used by external reviewers as necessary. We will also collect and report on indicators of
student achievement (such as awards, creative projects, publications, graduation rates,
and professional affiliations). The examples of student work that we collect will be
matched to the UDLEs, and the Department will develop a rubric for evaluating the level of
performance of students related to the UDLEs.  The combination of the sample pieces of
student work and the rubric for evaluation will allow the Department to demonstrate
student achievement.


**2.      HUMAN RESOURCES (QAF 2.1.7)**

The Department currently has 18 tenure-track faculty and lecturers that will support the
design and delivery of this program (information on the quality of these faculty members
follows below). This proposal does not contain any requests for new resources. The
courses that will support the undergraduate program are already being offered within the
Department (with the exception of one new course that has been designed and will be
created). In addition, the Department currently has studio space, classroom space, and
performance space that will be used for student work.


**2.1      Resources for Undergraduate Programs (QAF 2.1.9)**

The Department of Communication Arts currently has 2 Full Professors, 9
Associate Professors, 8 Assistant Professors, and 7 Lecturers (with 2 Associate Professors
set to retire in 2019).  All of these faculty members would contribute to the delivery of this
academic program.  Adjunct faculty may play a role in the delivery of the program to the
extent that some adjunct faculty currently teach existing courses and students in this
program may take some of those existing courses to complete the program. We anticipate
class sizes to remain consistent with current departmental practices – classes in the
Department are generally around 20-30 students, which makes project-based, experiential
learning possible.

CVs of all faculty members in the Department are included with this brief in Volume II.

In addition to those CVs, the following qualitative description of faculty interests as
teachers/scholars/artists provides a summative assessment of the faculty in the
Department that will participate in the design and delivery of this program:

**Robert Danisch**, Department Chair, has a PhD in Communication from the University of
Pittsburgh (2004).  He also holds a BA in History and Philosophy from the University of

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Virginia, where he was an Echols Scholar.  His research interests concern rhetorical theory and public communication within democratic societies.  He has written extensively about the relationship between American Pragmatism and rhetoric.  He is currently finishing a SSHRC-funded project titled "Sociologies of Rhetoric" which describes how to build effective deliberative cultures.

**Anders Bergstrom**, Lecturer, is a film and media scholar, with a background in literature, composition, and critical theory. He completed his PhD in Film Studies in 2016. He has an MA an BA in English literature. Anders spent two years in Thailand teaching high school and exploring South East Asia. His research and teaching interests have involved communications and writing, continental philosophy and spirituality, transnational and Asian cinemas, and film genres including science fiction and horror.

**Kevin Carey** is an interdisciplinary teacher-scholar (English/Rhetoric PhD, Russian Literature MA, Philosophy BA) whose work focuses on higher education and its discontents. Drawing on rhetorical theory, institutional histories, critical pedagogy, and philosophy, his research examines tensions between progressive aims and conservative functions of higher education. He has written about critical thinking discourses as constitutive rhetoric, and he is currently investigating the materialist underpinnings of liberal arts discourses.

**Paul Cegys** has an MSc in Sustainability Science and Environmental Studies, a BA in Drama, and significant expertise in theatre design with a specialty in lighting design. He has worked abroad in India, Sweden, Denmark, Belgium and Poland, and for such theatre companies as the Canadian Stage Company, Soulpepper, Theatre Aquarius, and La Monnaie (Royal Opera House, Brussels). Paul also has a rich knowledge related to design aesthetics and new lighting and projection technologies. His research interests focus on sustainable practices in the performing arts and sustainable design for the theatre.

**Bill Chesney** has worked in the professional theatre as a set and costume designer and scenic artist for more than thirty years. Recent work includes set and costume designs for Theatre & Co. in Kitchener, Theatre Aquarius in Hamilton, Lighthouse Theatre Festival in Port Dover, Victoria Playhouse Petrolia, Carousel Players on tour, as well as productions for the Drayton Theatre Festival, the Centaur Theatre and Just for Laughs Theatre in Montreal and 20+ year creative association with the Manitoba Theatre for Young People (MTYP) in Winnipeg. A master scenic artist, Bill was the Head Scenic Painter for the Pantages Theatre and touring Canadian productions of The Phantom of the Opera, repainted the interior scenic murals in the restored Capitol Theatre in Port Hope, ON, and designed and executed an interior mural entitled Change is Gradual for the Guelph Community Health Centre.

**Karen Collins** was Canada Research Chair in Interactive Audio and Chair of the Advisory Board of the Games Institute at the University of Waterloo. She is cross-appointed to English Language and Literature and adjunct in Computer Science at the University Ontario Institute of Technology for the purposes of graduate supervision. Her work focuses

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primarily on sound and music in games, and explores how new technologies impact our audio experience. This research has included studies of sound on smart tables (horizontal computers), mobile phones, video games, and how sound is used in slot machines to manipulate players.

**Jordana Cox's** scholarship bridges communication studies, performance history, and the public humanities. Her current focus is the relationship between news and theatrical performance in American public culture; she is at work on a book project called Staged News: In conjunction with her research on political performance, Jordana has a keen interest in community-engaged teaching and public programming. Prior to joining Waterloo in 2017, she was the Postdoctoral Fellow in Public Humanities at the University of Richmond (2016-17), and the Postdoctoral Associate at the University of Florida's Center for the Humanities and the Public Sphere (2015-16). Jordana earned an Interdisciplinary Ph.D. in Theatre and Drama with a Graduate Certificate in Rhetoric and Public Culture from Northwestern University (2015).

**Shannon Hartling** has a PhD in English (2003) and an MA and BA in English from the University of Waterloo.  Her interests include the history and theory of rhetoric, cultural studies, aesthetic theory, moral philosophy, and the eighteenth-century novel.  She has written about the moral implications of polite language in depictions of death in sermons and novels, and she has delivered several conference papers reflecting her research into the social functions and abuses of polite language.  She is interested in public and interpersonal communication and the function of language in creating community, particularly in difficult contexts.

**Andy Houston** earned his BA in Drama and Sociology from the University of Guelph (1989), where he was awarded a College of Arts Medal; in 1992 he completed a MA at the University of Alberta, with his thesis focusing on the dramaturgy and theoretical paradigms of playwright Howard Barker. In 1994 he was awarded a Commonwealth Scholarship to pursue a Ph.D. at the University of Kent at Canterbury (UK), where he completed a dissertation on postmodern dramaturgy in the work of three companies, DV8, Forced Entertainment, and Brith Gof in 1999.

**David Janzen** has a PhD in cultural studies from the University of Alberta and an MA from the Centre for the Study of Theory and Criticism at the University of Western Ontario. His research and teaching focus on environmental communication.

**Naila Keleta-Mae** holds a PhD in Theatre Studies from York University (2012), an MFA in Theatre from York University (2005) and a BA with Distinction from Concordia University (2001). Her research interests are in performance, gender studies, critical race theory and autoethnography. Prior to her appointment at the University of Waterloo she was a Faculty Advisor in the MFA in Interdisciplinary Arts program at Goddard College.

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**Sarah Klein's** research centers on how methods travel across time and space. Her current research is on experimental practice in cognitive science. She brings together approaches from Communication, Science Studies, and Performance Studies to describe how experiments are designed, performed, and understood by their subjects and researchers. She takes an ethnographic and ethnomethodological approach to everyday practice and multi-modal interaction. Her work on experimental practice bridges art and science by treating experiments as performances with material, embodied, situated, and aesthetic features indivisible from their empirical structure, and by collaboratively designing experiments/performances with scientists.

**Shana MacDonald** holds a PhD in Communication and Culture (2013) and an MA in Cinema and Media Studies (2005) from York University.  She also completed a BFA in Image Arts (2001) from Ryerson University.  Her scholarship focuses on the intersection of feminist politics, performance, experimental media and public art practices. She has published on contemporary intermedial art and the history of feminist experimental film and media. Her research is closely aligned with her art practice. As an artist-scholar Shana explores the community-building potential of practice-based, site-specific art interventions in public space.  She is founder and director of the 'Mobile Art Studio' (MAS), a transitory creative lab space that brings art out of the gallery and into public participatory spaces.  In addition, Shana is an internationally screened filmmaker, curator and installation artist committed to finding new aesthetic forms for abandoned and undervalued materials, experiences and histories

**Sorouja Moll** has a PhD in Humanities (Concordia) specializing in the fields of Communication, English, and Art History. She also holds a BA and MA in English from the University of Guelph. Sorouja's research interests include sovereignty, nation, and memory, which involve, among other areas, indigeneity in Canada, adaptations of Shakespeare, as well as mass and alternative media. She is both a creative and academic writer.

**Lennart Nacke** is an Associate Professor, the Associate Director Graduate Studies for Stratford campus, and the Director of the HCI Games Group at the University of Waterloo's Games Institute. Professor Nacke teaches User Experience, Human-Computer Interaction, and Game Design at the University of Waterloo. As part of the Games Institute, he is researching cognitive and emotional elements of player experience in video games, immersive VR environments, and gameful applications, often using physiological measures together with surveys and player interviews. Professor Nacke has served on the steering committee of the International Game Developers Association Games User Research Special Interest Group in the past, is the chair of the CHI PLAY conference steering committee since 2014.

**Kim Hong Nguyen** has a PhD in Communication Studies from The University of Iowa (2008). She is interested in media and rhetorics that inspire questions about cultural identity and values, memory, and violence. She is currently working on a number of

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projects including: 'mean girl' ethos in neoliberalism and Laura Bush's global feminism initiative.

**Tim Paci** holds a bachelor's degree in English and history and a master's degree in English from McMaster University; he also completed doctoral coursework and comprehensive examinations in the University of Waterloo's Department of English Language and Literature before turning to teaching full-time. Among Tim's primary interests are the democratic classroom and the influence of stories and language on meaning-making.

**Jennifer Roberts-Smith** holds a PhD in English (2007) and an MA in Drama from the University of Toronto. Her research and creative practice focus on performance and digital media, with particular emphasis on theatre, history, archives, and interfaces. Jennifer is Principal Investigator of two multi-institutional research projects: *The Simulated Environment for Theatre (SET)* and *The Stratford Festival Online: Games and Virtual Learning Environments for Education and Audience Engagement*. She also leads the Virtual Reality Development cluster of the *Digital Oral Histories for Reconciliation (DOHR)* research project. Her work has been supported by SSHRC, MITACS, and the Canada Council for the Arts, and recognized by an Ontario Early Researcher Award.

**Glenn Stillar** is an Associate Professor in the Digital Arts Communication program in the Faculty of Arts, University of Waterloo. His research explores both the theory and practice of 'how we tell stories' with digital media to entertain, inform, persuade, and involve viewers. He is particularly interested in the constantly evolving role of video in communications, given communicating via video is now as important as, and nearly as widespread as, text-based communications. Analogizing from 'literacy,' Professor Stillar researches and teaches new forms of 'visualacy.' He has directed and produced a wide range of film, video, and audio productions, ranging from research documentation to feature films to multimedia art installations.

**Henry Adam Svec** holds a PhD and an MA in Media Studies from the University of Western Ontario and a BA in English Literature from Mount Allison University. His research interests include media archeology, popular music, authenticity, and digital culture, and he has published articles in such venues as the Canadian Journal of Communication, Celebrity Studies, and Popular Music & Society. His first book, American Folk Music as Tactical Media (Amsterdam UP, 2018), explores the rich diagrams of communication and media littered across the long American folk revival, from Alan Lomax's digital "Global Jukebox" to Bob Dylan's noisy typewriter. Before moving to the University of Waterloo in 2018, Henry worked at Millsaps College in Jackson, Mississippi, and at the University of New Brunswick in Fredericton.

**Imre Szeman** holds a PhD in Literature (Duke University), an MA in Theory and Criticism (University of Western Ontario) and a BA in Philosophy (Queen's University). His main areas of research are in energy and environmental studies, social and political philosophy, and critical theory and cultural studies. From 1999-2009, he taught at McMaster

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University, and from 2009 to 2016 he worked the University of Alberta. Szeman is the recipient of the John Polanyi Prize in Literature (2000), the Petro-Canada Young Innovator Award (2003), the Scotiabank-AUCC Award for Excellence in Internationalization (2004), an Alexander von Humboldt Fellowship (2005-7), the President's Award for Excellence in Graduate Supervision at McMaster (2008), and a Killam Research Professorship (2013). In 2015, he was awarded the J. Gordin Kaplan Award for Excellence in Research, the U of Alberta's most prestigious award recognizing research excellence in humanities, social sciences, law, education and fine arts.

**Gerald Voorhees** earned a Ph.D. from The University of Iowa (2008) and holds a B.S. in Speech Communication from the University of Texas at Austin, where he was a Senior Fellow in the Honors Program of the College of Communication. His research focuses on games and new media as sites for the construction and contestation of identity and culture. He is also interested in public discourse pertaining to games and new media, as well as rhetorics of race and ethnicity in mediated public discourse. Gerald is co-editor of Continuum's Approaches to Game Studies book series, a member of the Executive Board of the Digital Games Research Association, and a former co-chair of the Game Studies area of the Popular Culture Association/American Culture Association Nation Conference.

**Vershawn Ashanti Young** is a trans-disciplinary scholar and teacher. He often integrates his training in multiple areas of arts and humanities into his published work and instruction. He has been writing about his sociolinguistic concept code-meshing, about African American English, about intercultural communication, about performances of masculinity, and about representations of race in art, film, and literature. He frequently collaborates with his colleagues and students, and has authored or co-authored seven books. He has served as a high school drama/English/speech teacher, an elementary school principal, a supervisor of itinerant theater teachers in Los Angeles, and a school board administrator. He is a solo performance artist and actor. In 2010, he won "best performance in a play" in Cedar Rapids, IA, for his portrayal of the brain-damaged Gabriel in August Wilson's Fences. He also regularly tours his one-man show, Your Average Nigga, based on his first book of the same name.

3.      **PHYSICAL AND FINANCIAL RESOURCES (QAF 2.1.7)**

We plan to use existing Department of Communication Arts space and financial resources. Initially, when the program is launched, we will use space in existing courses to maximize enrollment numbers in those courses. This means that there will be no immediate financial burden to the Faculty of Arts for mounting additional sections of courses. We will also use existing financial resources related to both the Theatre & Performance program and Digital Arts Communication for the resources necessary for student work. This will include existing digital technology used for creating student work, as well as existing studio and design space in the Department.

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The Department has been planning to submit a budget request for 2020/21 that includes additional equipment needs. We anticipate that this will be a one-time budget request, and we believe this equipment is essential for both the delivery of our existing curriculum (including our UCOI courses) and this new academic program. In addition, we have already determined a space for storing the equipment in the Modern Languages (ML) Building and a method for loaning it out. The space and loaning process will be managed by our Department's existing co-op student. We presently loan out-dated cameras, tripods, and other equipment to faculty members for their teaching, and we can easily expand this to students that need to work on specific projects for courses. We need the funds to purchase new equipment because so much of our equipment is now out-of-date, the purchase of new equipment is absolutely necessary for the success of this plan. We anticipate a one-time budget request of approximately $50,000-$60,000 to meet our resource needs.

### 3.1    Library Resources

*Level of support summary:*
The Library provides a high level of support for the existing programs and courses offered through the Department of Communication Arts in the Faculty of Arts and anticipates that this high level of support will extend to the proposed Bachelor of Arts in Communication Arts and Design Practice. Students and faculty members in the proposed program will be encouraged to make use of the teaching, learning and research support services and expertise the Library offers. Current collection strengths would support the new program. No new collections are needed at this time. Should new subject areas emerge or if research intensity develops in subject areas currently outside of collection priorities, the Library is committed to engaging in discussions to articulate collection needs and assess funding implications.

*Strengths of support provided*
The University of Waterloo Library curates a collection encompassing the Department's three subject areas: Theatre and Performance, Speech Communications, and Digital Arts Communication. This collection includes research databases, full text journals, online videos, and monographs. Some of the research databases of particular interest to these subject areas include MLA International Bibliography, Communication & Mass Media Complete, Asian American Drama, Black Drama, North American Theatre Online, and Theatre in Video. In addition to the local collection, the University of Waterloo Library partners with other Ontario and Canadian universities to further expand access to relevant resources. Such collaborations include the Tri-University Group consortium (University of Waterloo, University of Guelph, Wilfrid Laurier University), the Ontario Council of University Libraries (OCUL) and the Canadian Research Knowledge Network (CRKN). Of special note is the LW Conolly Theatre Archives at the University of Guelph.
The Communication Arts Liaison Librarian is available to provide research, teaching and learning support for students and faculty. Instructional support includes the development of online modules and research guides as well as the preparation of classroom sessions

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and outcomes-based workshops. The Librarian also offers research consultations with individuals to support coursework, research publications, research data management, meeting open access requirements, and copyright.

### *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 provenance*
Library report written by *Sandra Keys,* Liaison Librarian for Communication Arts, skeys@uwaterloo.ca

Reviewed by Kathy MacDonald, Department Head, Information Services and Resources, Dana Porter Library, kamacdonald@uwaterloo.ca

Approved by Jennifer Haas, Department Head, Information Services and Resources, j2haas@uwaterloo.ca and Beth Sandore Namachchivaya, University Librarian, bsnamachchivaya@uwaterloo.ca

### 3.2    Laboratory Resources
Students in this program will not require any specialized laboratory resources.

### 3.3    Computer Facilities
Students in this program will have  access to computer equipment that is standard for all Faculty of Arts students. In addition, students will use computers in ECH while in some digital arts communication classes. These computers are older, but they will be replaced by the Faculty of Arts along the normal timeline for replacement.

### 3.4    Space
The Department currently has access to several spaces that will be critical to the delivery of this program: We have three rehearsal and performance spaces: The Theatre of the Arts, Arts Lecture (AL) AL6, and Hagey Hall (HH) HH-180.  Each of these spaces are used by students engaged in the kinds of experiential learning described here.  In addition, we have a sound lab, a video lab, and a fully equipped digital classroom (ML-117) that we presently use for our courses. These spaces will also be critical for the continued delivery of the curriculum. We currently also have video, lighting, and sound equipment, a costume shop, and a construction shop which are all used by faculty, staff, and students.

One additional need for this program would be the conversion of some existing space to a "messy space" that could incorporate a range of design-related projects. A "messy space"

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is a classroom or lab space that can be used by students for constructive, hands-on projects including digital sound or film production and other material making practices. We have plans in place to make a one-time budget request for 2020-21 for a small renovation to ML-117 in order to create a "messy space." And a faculty member in the department will be submitting a CFI grant to request a renovation of AL-6.

*ML-117* - This space needs a simple renovation. The existing flooring needs to be removed and the video cameras (which are out-of-date) need to be removed (along with the wiring in the floor). The flooring needs to be replaced with tile so that the space can be used as a "messy" lab for design projects. Existing screens, projectors, computer, and tables/chairs can be retained. ML-117 was designed to be used for our interviewing class (and connected to ML-101 for viewing interviews), but the set-up no longer works for that class. We have a work order that has already been submitted for an estimate on this renovation. We believe a reasonable estimate for a simple renovation of ML-117 so that it is more useful for current teaching will be about $25,000.

*AL-6* - This space is more complicated than ML-117. The major problems include a lack of proper ventilation, asbestos, and improper layout and equipment. In order to renovate properly, asbestos removal would be required. We have one forthcoming CFI grant and this space will be included in that application. The application will request updated equipment for the space (including an editing computer, new display screens, and some other digital equipment). If the grant is successful, the space will serve as both a digital design research lab for faculty projects and a teaching space.

## 4. CURRICULUM

### 4.1 The Intellectual Development and the Educational Experience of the Student

Students' intellectual development in the Communication Arts & Design Practice program is accomplished by engaging them throughout their studies in experiential, reflective knowledge-production. The program meets its goals (understanding the production of meaning and the implications of meaning-making in a variety of contexts; investigating the multi-modality of representation; and producing effective performative and communicative phenomena for the public good) by taking an innovative approach to design pedagogy. In Communication Arts & Design Practice, technical training arises out of and is integrated with conceptual, intellectual, and creative work. Rather than beginning by teaching students a set of decontextualized foundational technical skills, the program's two required, core first-year courses contextualize reflective practice by introducing students to major theories and methods in communication arts and design. Subsequent courses develop and deepen students' capacities as thinkers and makers in specific design projects that serve well-articulated objectives for the public good; these often engage stakeholders from outside the Department and the University. Students' technical skills to execute course projects are developed as need arises, in coursework and extra-curricular workshops. Students also have the opportunity to select courses and workshops that support specialization in particular media or methods of practice, according to their own

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interests. In summary, over the duration of the program, students in Communication Arts & Design Practice become dexterous in articulating the intellectual and creative objectives of design projects, and selecting among and engaging a wide range of means to accomplish them effectively. This approach emphasizes students' agency as learners, and aligns particularly well with Honours-level Undergraduate Degree-level Expectations and Waterloo UDLE 7 (Experiential Learning).

The Department of Communication Arts deploys an experiential pedagogy that blends theory and practice in ways that are intellectually relevant to students and enable student reflection and engagement. The program's cross-unit interdisciplinarity fosters student learning by providing a range of contexts, tools, and modes for discovering the relationship between their coursework and the public good and for articulating new visions to make a difference for the public good. In addition to the pedagogical approach taken in coursework, students' learning experiences are enhanced by:

- Regular workshops offered at the departmental level for developing competencies relevant to students' coursework including, for example, safety certification, research ethics, the use of particular software or other computer technologies, particular design methods, etc.;
- Regular opportunities to engage with extra-departmental stakeholders in public-facing projects including, for example, university or community members expert in areas relevant to project work, university or community organizations who may benefit from students' project work; audiences for public presentations of student work, etc.;
- The Department of Drama and Speech Communication annual guest speaker series and regular research symposia;
- Semi-annual student orientation and "town hall" events;
- Peer and faculty engagement opportunities in Department events featuring student work from course offerings; and
- The Department's thriving student intellectual and creative culture, fostered by two strong student societies.

**4.2    Program Regulations**

This program will follow all of the Honours Arts admissions standards and policies, as well as the basic course requirements, language requirements, milestones, and residence regulations of all other Honours Arts programs.

**4.3    Part-time Studies**

Students may apply to the Faculty of Arts for part-time study, which means 1-2 courses per academic term. Students that are part-time in the Faculty of Arts are able to pursue this degree program by following the same requirements as full-time students. Additionally, students may switch to part-time status at any point, following standard Faculty of Arts protocols.  Some classes are offered in the evenings and are, therefore, conducive to part-

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time study (although the whole degree program could not be completed in evenings only). Evening courses are a normal part of Department offerings and fit into the normal workload of faculty and the normal course-load of full-time students.  Part-time students would be expected to participate in experiential learning in the same ways as full-time students.

### 4.4    Curriculum

Students will take two required courses: First, SPCOM 101 our existing "Theories of Communication" course. Second, a new course called "Introduction to Critical Design Practice" which will introduce students to practice-based methods of generating knowledge. Students will then take courses organized into "foundational," "intermediate," and "advanced" streams (all from existing course offerings from the three distinct units in the Department). We intend this program to be unique in Canada based on the combination of commitments to practice-based learning and theories of embodied performance, communication, and digital arts.

Students will choose their "foundational," "intermediate," and "advanced" courses from the following lists:

Foundational Courses - Four of: SPCOM 100, SPCOM 223, SPCOM 227, DAC 201, DAC 202, DAC 203, DAC 204, THPERF 102, THPERF 200, THPERF/SPCOM 220

Intermediate Courses - Five of: SPCOM 226, SPCOM 228, SPCOM 323, SPCOM 335, SPCOM 339, DAC 302, DAC 305, DAC 308, DAC 309, THPERF 246, THPERF 282, THPERF 300, THPERF 301, THPERF 366

Advanced Courses - Five of SPCOM 401, SPCOM 402, SPCOM 420, SPCOM 430, SPCOM 433, SPCOM 440, SPCOM 475, SPCOM 490/491, DAC 300, DAC/SPCOM 329, DAC 400, THPERF 331, THPERF 374, THPERF 376, THPERF 378, THPERF 379, THPERF 490/491

A detailed description of each course can be found in Appendix B.

### 4.5    Collateral and Supporting Departments

This program will not include any involvement or participation with other departments.

### 4.6    Organizational Structure

The Department of Communication Arts currently has two Associate Chair – Undergraduate Advisor positions. This program will be the responsibility of the Associate Chair – Undergraduate advisor for Speech Communication. The Faculty of Arts will be the sole Faculty responsible for the delivery of the program and all courses will be delivered by the Department of Communication Arts.

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5.        **PROJECTED ENROLMENT**

Communication Studies is the fastest growing Liberal Arts Undergraduate Major in North America. Communication Studies programs like those at Wilfrid Laurier University and Concordia University admit anywhere from 160-200 students per year. Currently, the Speech Communication program admits about 35 students per academic year. This is relatively small by comparison to other Communication programs in Canada and North America. This is, in part, because of a lack of visibility for the program. Issues related to visibility are currently being addressed within the Department in several ways. The new Department name "Communication Arts" will help communicate more clearly the values and commitments of programs like Speech Communication. In addition, several faculty members are working on public-facing research/creation projects to help improve the Department's visibility. All of these efforts will help recruit students to both the Speech Communication program and the new Communication Arts & Design Practice program. This is especially true given that the new Communication Arts & Design Practice program will be able to attract new groups of students that frequently look elsewhere for Communication degree programming. Because of the high standards for admission in the Faculty of Arts we anticipate modest growth and enrolments compared to comparable programs. But those comparable programs do clearly show a need for, and interest in, the kinds of programming offered by this program. At the same time, those comparable programs do not emphasize critical design practice and do not give students the kinds of experiential education that this program will provide.

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## Table 1

| Academic Year | FULL-TIME | | | | PART-TIME | | | |
|---|---|---|---|---|---|---|---|---|
| | Year One Intake | | Total FT Enrolment | | Year One Intake | | Total PT Enrolment | |
| | Domestic | International* | Domestic | International | Domestic | International | Domestic | International |
| 2021/22 | 20-25 | 0 | 35-45 | 0 | 0 | 0 | 0 | 0 |
| 2022/23 | 25-30 | 0 | 70-75 | 0 | 0 | 0 | 0 | 0 |
| 2023/24 | 30-35 | 0 | 100-110 | 0 | 0 | 0 | 0 | 0 |
| 2024/25 | 30-35 | 0 | 100-110 | 0 | 0 | 0 | 0 | 0 |
| 2025/26 | 30-35 | 0 | 100-110 | 0 | 0 | 0 | 0 | 0 |
| 2026/27 | 30-35 | 0 | 100-110 | 0 | 0 | 0 | 0 | 0 |
| 2027/28 | 30-35 | 0 | 100-110 | 0 | 0 | 0 | 0 | 0 |

*Projected Student Intake and Enrolment*

* International fee-paying students

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### 6. FINANCIAL PLAN

Institutional Analysis & Planning (IAP) has reviewed the Bachelor of Arts in Communication Arts and Design Practice new program proposal, and has not identified any significant financial challenges to this proposal proceeding.  IAP has completed a Financial Viability Analysis (FVA) for the proposed program, which demonstrated that the expected revenues from the proposed student enrolment will sustain the allocated expenditures in salaries and a proration of indirect support unit costs in the near future.  The FVA for this proposed program was approved by Provost Jim Rush on June 25th, 2019.

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**Appendix A – Summary of Learning Outcomes Mapped to Courses and Assessment Methods**

| Specific UDLE and Associated Learning Outcomes | Courses | Assessment Methods |
|---|---|---|
| **1. Depth and Breadth of Knowledge:** Students will develop an understanding of theories of communication, performance, and design. This will include detailed knowledge of these three broad academic fields of inquiry, and the cultivation of analytical skills inside and outside these fields. | SPCOM 101, DAC 201, DAC 204, DRAMA/SPCOM 220, DRAMA 200, DRAMA 300, SPCOM 228, SPCOM 401, SPCOM 402, SPCOM 430, SPCOM 475 | Written assignments, exams, peer feedback, collaborative creative work, digital design production work, public speaking and presentation assignments. |
| **2. Knowledge of Methodologies:** Students will develop and master methods of inquiry and creative activity as communication experts, performers, and designers. | SPCOM 100, SPCOM 223, SPCOM 323, SPCOM 420, DAC 202, DAC 203, DAC 302, DAC 305, DAC 308, DAC 309, DAC 329, DAC 400, DRAMA 246, DRAMA 301, DRAMA 366, DRAMA 331, DRAMA 374, DRAMA 490/491 | Written assignments, exams, peer feedback, collaborative creative work, digital design production work, public speaking and presentation assignments. |
| **3. Application of Knowledge:** Students will develop the ability to critically use a range of different communication, performance, and design techniques. | SPCOM 227, SPCOM 323, SPCOM 335, SPCOM 401, SPCOM 402, SPCOM 420, DAC 202, DAC 203, DAC 302, DAC 305, DAC 329 DRAMA 376, DRAMA 378, DRAMA 379 | Written assignments, exams, peer feedback, collaborative creative work, digital design production work, public speaking and presentation assignments. |
| **4. Communication Skills:** Every course in the curriculum will create opportunities for students to communicate in a variety of settings and through a variety of modes. Courses will emphasize writing and speaking, as well as multi-modal forms of communication. | SPCOM 100, SPCOM 223, SPCOM 227, DAC 201, DAC 202, DAC 203, DAC 204, DRAMA 102, DRAMA 200, DRAMA/SPCOM 220, SPCOM 323, DAC 302, DAC 305, DAC 308, DAC 309, DRAMA 246, DRAMA 282, DRAMA 300, DRAMA 301, DRAMA 366, SPCOM 401, | Written assignments, exams, peer feedback, collaborative creative work, digital design production work, public speaking and presentation assignments. |

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| | SPCOM 420, SPCOM 440, SPCOM 490/491, DAC 300, DAC/SPCOM 329, DAC 400, DRAMA 331, DRAMA 374, DRAMA 376, DRAMA 378, DRAMA 379, DRAMA 490/491 | |
|---|---|---|
| **5. Awareness of Limits of Knowledge:** Students will learn about their own limits as designers and as communicators through a focus on audience and the ambiguity of meaning in different contexts. SPCOM 101, which all students will take, centrally addresses why and how communication often fails. | SPCOM 227, DAC 203, DAC 204, DRAMA 102, DRAMA 200, DRAMA/SPCOM 220, SPCOM 226, SPCOM 228, SPCOM 323, SPCOM 335, SPCOM 339, DAC 302, DAC 305, DAC 308, DAC 309, DRAMA 246, DRAMA 282, DRAMA 300, DRAMA 301, DRAMA 366, SPCOM 401, SPCOM 402, SPCOM 420, SPCOM 430, SPCOM 440, SPCOM 475, DAC 300, DAC/SPCOM 329, DAC 400, DRAMA 331, DRAMA 374, DRAMA 376, DRAMA 378, DRAMA 379 | Written assignments, exams, peer feedback, collaborative creative work, digital design production work, public speaking and presentation assignments. |
| **6. Autonomy and Professional Capacity:** Students will be expected to develop their skills as communicators, performers, and designers in project-based settings that require initiative, personal responsibility, collaboration, and decision-making.These opportunities will appear in every course in the curriculum given that all of the courses will require project-based work (with little to no emphases on exams). | SPCOM 100, SPCOM 223, SPCOM 227, DAC 201, DAC 202, DAC 203, DAC 204, DRAMA 102, DRAMA 200, DAC 302, DAC 305, DAC 308, DAC 309, DRAMA 246, DRAMA 282, DRAMA 300, DRAMA 301, DRAMA 366, SPCOM 401, SPCOM 402, SPCOM 420, SPCOM 430, DAC/SPCOM 329, DAC 400, DRAMA 331, DRAMA 374, DRAMA 376, DRAMA 378, DRAMA 379, DRAMA 490/491 | Written assignments, exams, peer feedback, collaborative creative work, digital design production work, public speaking and presentation assignments. |
| **7. Experiential Learning:** Students will have ample opportunities to apply what they are learning in | SPCOM 100, SPCOM 223, SPCOM 227, DAC 201, DAC 202, DAC 203, DAC 204, DRAMA 102, DRAMA 200, | Written assignments, exams, peer feedback, collaborative creative work, digital design |

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| assignments that focus on practice-based, experiential learning.  This kind of learning will be a central feature of all of the classes in this program (and is already a central feature of all of the classes in our Department). In DAC courses students will be expected to design video, design sound, design interactive games, and design digital presentations. In SPCOM courses, students will be expected to actively engage in decision-making as groups or teams, construct projects that intervene in real social or political problems, and practice forms of communication learned in class.  In Theatre and Performance courses, students will be expected to make all aspects of performance art. | DRAMA/SPCOM 220, SPCOM 226, SPCOM 228, SPCOM 323, SPCOM 335, SPCOM 339, DAC 302, DAC 305, DAC 308, DAC 309, DRAMA 246, DRAMA 282, DRAMA 300, DRAMA 301, DRAMA 366, SPCOM 401, SPCOM 402, SPCOM 420, SPCOM 430, SPCOM 440, SPCOM 475, SPCOM 490/491, DAC 300, DAC/SPCOM 329, DAC 400, DRAMA 331, DRAMA 374, DRAMA 376, DRAMA 378, DRAMA 379, DRAMA 490/491 | production work, public speaking and presentation assignments. |
| **8. Diversity:** Students will be expected demonstrate an understanding of the intellectual, social, cultural, and political diversity of the world in which we live through the ways in which the curriculum will attend to and intervene in questions about the public good. The public good refers to practices through which institutions value engagement; quality of life (in regard to families and communities, education, employment, meaningful work, health care, aesthetic expression, etc.); and the well- | SPCOM 100, SPCOM 223, SPCOM 227, DAC 201, DAC 202, DAC 203, DAC 204, DRAMA 102, DRAMA 200, DRAMA/SPCOM 220, SPCOM 226, SPCOM 228, SPCOM 323, SPCOM 335, SPCOM 339, DAC 302, DAC 305, DAC 308, DAC 309, DRAMA 246, DRAMA 282, DRAMA 300, DRAMA 301, DRAMA 366, SPCOM 401, SPCOM 402, SPCOM 420, SPCOM 430, SPCOM 440, SPCOM 475, SPCOM 490/491, DAC 300, DAC/SPCOM 329, DAC 400, DRAMA 331, DRAMA 374, | Written assignments, exams, peer feedback, collaborative creative work, digital design production work, public speaking and presentation assignments. |

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| being of, and reduction of suffering among, social groups. A language for the public good supports the identification of the components and communicative practices central to these values. An imagination for the public good will ensure that students can envision a different articulation of social relationships and power, and move from critique to reconstitution of public and communicative practices.  This is one of the central goals of all of the programming and curriculum within the Department of Drama and Speech Communication. | DRAMA 376, DRAMA 378, DRAMA 379, DRAMA 490/491 | |

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**Appendix B - Course Descriptions**

| **SPCOM 100 LEC 0.50** | Course ID: 004666 |
|---|---|
| **Interpersonal Communication** | |
| Focuses on the one-to-one, face-to-face communication in both the personal and professional realms. Such topics as verbal and non-verbal interactions, listening, and the better management of interpersonal communication will be studied. | |
| **SPCOM 101 LEC 0.50** | Course ID: 014532 |
| **Theories of Communication** | |
| This is an introductory course addressing the major theoretical issues in, approaches to, and applications of communication. Theories from various branches of communication, including interpersonal, group/organizational, rhetorical, mass and cultural, will be explored in-depth. Historical, current, and practical critiques of each theory will be conducted. Coursework is designed to encourage students to give critical consideration to the place of theory within the field of Speech Communication and within everyday life. | |
| **SPCOM 220 WSP 0.50** | Course ID: 012417 |
| **Performance Studies** | |
| This workshop course in performance studies explores performance as a way of knowing. It investigates performance as artistic practice and as a means of understanding historical, social and cultural practices, including drama/theatre texts, poetry, narratives and texts of everyday life. | |
| **SPCOM 223 LEC 0.50** | Course ID: 004665 |
| **Public Speaking** | |
| Theory and practice of public speaking. A workshop course involving design and delivery of various kinds of speeches, and the development of organizational, vocal, listening and critical skills. Students will be videotaped. | |
| **SPCOM 226 LEC 0.50** | Course ID: 012411 |
| **Introduction to Intercultural Communication** | |
| This course introduces the basic theories and practices for communicating among people of different racial, ethnic and cultural backgrounds. This class provides an opportunity for discussion of variations within and among cultures and encourages students to examine their cultural heritage. | |
| **SPCOM 227 WSP 0.50** | Course ID: 010342 |
| **Leadership** | |
| A workshop course in leadership combining theoretical and experiential perspectives. Students will develop and apply knowledge, skills and attitudes necessary to be effective and perceptive communicators in a leadership position. | |
| **SPCOM 228 LEC 0.50** | Course ID: 012410 |
| **Public Communication** | |
| This course introduces a theoretical framework for understanding the nature and significance of public communication. Strategies and techniques typically employed | |

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| in political and commercial contexts are examined. | |
| **SPCOM 323 LEC 0.50** | Course ID: 005137 |
| **Speech Writing** | |
| The analysis, writing, and editing of speeches. Analysis will focus on the reading and viewing of several famous 20th-century speeches using theories of communication. Writing and editing will focus on implementing oral/aural communication strategies. | |
| **SPCOM 335 SEM 0.50** | Course ID: 015100 |
| **Power, Agency, Community** | |
| This course examines the ways in which individuals and institutions communicate to enact agency and build communities situated within power relations. Students will develop their understanding of what power and agency are, the relationship of each to communication, and how each constitutes community life. | |
| **SPCOM 339 SEM 0.50** | Course ID: 015099 |
| **Media, Images and Communication** | |
| This course investigates how distinct modes of communication impact the creation of messages, dissemination or knowledge and reception of meaning. Students will examine aural, textual, and visual communication in the context of print, electronic, and digital media. | |
| **SPCOM 401 LEC 0.50** | Course ID: 012412 |
| **Gender, Communication and Culture** | |
| In this course students examine multiple relationships between communication and gender. The class emphasizes how communication creates gender and power roles and how communicative patterns reflect, sustain and alter social conceptions of gender. | |
| **SPCOM 402 LEC 0.50** | Course ID: 012413 |
| **Advanced Intercultural Communication** | |
| This course is designed to study the intersection of communication and culture. In this course, culture is defined broadly to include a variety of contexts, such as race, ethnicity, nationality, gender, age and class. Students gain theoretical and practical understanding of the opportunities and obstacles that exist as individuals and communities communicate within and across cultures. | |
| **SPCOM 420 SEM 0.50** | Course ID: 013571 |
| **Persuasion** | |
| This course examines the communicative, psychological, and sociological aspects of persuasion and persuasive messages, with attention to interpersonal contexts, the role of images, and persuasion in the media and public discourse. This course will explore the ways in which the sending and receiving of persuasive messages involve cognition, emotions, and social norms in everyday contexts. | |
| **SPCOM 430 SEM 0.50** | Course ID: 013570 |
| **Communication and Social Justice** | |
| An examination of the ways in which communication on the part of individuals, | |

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Proposed Program – Bachelor of Arts in Communication Arts and Design Practice

| groups, and institutions contributes to fostering justice in social contexts. Areas of focus include communication and justice in interpersonal, workplace, community, and national/international contexts. | |
|---|---|
| **SPCOM 433 WSP 0.50** | Course ID: 010345 |
| **The Organizational Consultant** | |
| This workshop course will examine the communication skills necessary for the organizational consultant. Participation in videotaped simulations will allow students to explore consulting styles and training interventions by developing the communications expertise and knowledge specific to the consulting professional. | |
| **SPCOM 440 LEC, SEM, WSP 0.50** | Course ID: 011906 |
| **Performance Inquiry and Practice** | |
| This course explores how to create, perform and analyze performance texts, here defined as including drama/theatre texts, poetry, narratives, and the texts of everyday life. Through readings and creative investigation, students will explore the links between the participant, the researcher, the site and the impulse of inquiry. | |
| **SPCOM 475 SEM 0.50** | Course ID: 013573 |
| **Communication Ethics** | |
| An examination of the interplay between communication and ethics from historical and pragmatic perspectives. Issues discussed include communication in a variety of settings, such as intrapersonal, interpersonal, organizational, public, and intercultural interactions as they relate to personal development, values, meaning making, and ethical ways of communicating. | |
| **DAC 201 LEC 0.50** | Course ID: 011680 |
| **Designing Digital Images and Interaction** | |
| This course draws on multiple theoretical perspectives to introduce students to the fundamental principles of multi-modal communication design in its social context. Students will analyze, design, and produce images and interactivity for use in a variety of digital platforms, including e-learning and business applications. | |
| **DAC 202 LEC 0.50** | Course ID: 011681 |
| **Designing Digital Video** | |
| This course introduces students to the principles of designing time-based multi-modal communication in a social context. Students will analyse, design, and produce video for use in a variety of digital platforms, including e-learning and business applications. | |
| **DAC 203 LEC 0.50** | Course ID: 013106 |
| **Designing with Digital Sound** | |
| In this course, students will be introduced to sound analysis and production. Students will learn to record, edit, and implement sound in a variety of linear and non-linear media forms, with emphasis on film and video games. | |
| **DAC 204 LEC 0.50** | Course ID: 015490 |
| **Introduction to Game Design** | |
| This course explores the fundamentals of game design. It focuses on the essentials | |

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Proposed Program – Bachelor of Arts in Communication Arts and Design Practice

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| shared by all games that are fundamental for a game designer working in any medium, from sports to board games to computer and video games. Although the focus of the course is on designing, prototyping, and testing non-digital games, digital games will be discussed in class to provide students with a broad theoretical and conceptual understanding of the field of game design and development along with practical exercises to train for creating a game. | |
| **DAC 302 LEC 0.50** | Course ID: 014124 |
| **Digital Storytelling** | |
| This course teaches students the principles and practices of telling stories using Machinima: 2D and 3D computer game engines used to design and produce short movies. Students will learn to develop and present story ideas, create storyboards, write short scripts, and then render their narratives using a variety of digital techniques and tools. | |
| **DAC 305 LEC 0.50** | Course ID: 013325 |
| **Design and User Experience of Interactive Games** | |
| This course introduces fundamental design skills for two-dimensional interactive video games and provides the theoretical knowledge of the emotional and cognitive effects of video game play. Students will understand the importance of user experience assessment for video games as part of iterative design and development. Students will learn to theorize, design, prototype, and test digital games with a special focus on exploring the impact that video games have on human experience. | |
| **DAC 307 LEC 0.50** | Course ID: 014125 |
| **Digital Display Systems** | |
| This course focuses on the creative, technical, and artistic challenges inherent to creating visual content (film, photos, graphics) for the increasingly ubiquitous out-of-home digital displays. The size, configuration, placement, and functions of these public digital displays require new artistic and technical techniques to fully exploit their capabilities. In the course, students will explore the design affordances of several types of public digital display as well as produce dynamic, interactive content for them. | |
| **DAC 308 LEC 0.50** | Course ID: 014126 |
| **Cinematic Art and Practice** | |
| This course explores cinematic representation from an audio-visual production perspective. Students will learn an explicit and replicable theoretical vocabulary for analyzing cinematic technique, as well as engage in practice by creating videographic "essays" that analyze, interrogate, and extend forms of cinematic representation. Students will engage in production workshops and have access to video and audio editing software. | |
| **DAC 309 LEC 0.50** | Course ID: 014521 |
| **User Experience Design** | |
| This course introduces students to the theory and practice of user experience design as it applies to the design of interactive digital media. Topics will include | |

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Proposed Program – Bachelor of Arts in Communication Arts and Design Practice

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| user-centred design, personas, iterative testing, prototyping, information gathering interviews, and contextual inquiry. | |
| **DAC 329 LEC 0.50** | Course ID: |
| **Digital Presentations** | |
| In this course, students will be introduced to design and production of digital business presentations. They will develop specialized digital materials and contribute work to their Digital Portfolio. | |
| **DAC 400 PRJ 0.50** | Course ID: 011683 |
| **Digital Design Research Project** | |
| Students work in small groups under the supervision of a faculty researcher on an ongoing, large-scale, digital design project. | |
| **DRAMA 102 WSP 0.50** | Course ID: 004662 |
| **Introduction to Performance** | |
| This workshop course introduces students to the creative processes of performance in a range of formal and informal settings. Emphasis is placed on the student's development as a performer. Prior performance experience is not required. | |
| **DRAMA 200 LEC 0.50** | Course ID: 004660 |
| **Theatre and Performance in Context** | |
| Students experience, analyze, and interpret a range of works of theatre and performance. Close attention is paid to the original circumstances in which these works were produced, the ways in which they have reflected and influenced the communities that produced them, and their relevance to current performance practice and research. | |
| **DRAMA 246 SEM 0.50** | Course ID: 014897 |
| **Design for Performance** | |
| Students explore historical and current perspectives on the principles of design for performance. | |
| **DRAMA 282 SEM 0.50** | Course ID: 014884 |
| **Gender and Performance** | |
| Students explore representations of gender on stage, in the media, and in politics. | |
| **DRAMA 300 SEM 0.50** | Course ID: 014887 |
| **Theories of Theatre and Performance** | |
| Students study and critique a range of existing works of theatre and performance in the context of related commentary, paying close attention to concepts of knowledge, experience, and positionality. | |
| **DRAMA 301 WSP 0.50** | Course ID: 004678 |
| **Performance Creation** | |
| Students study, apply, and critique a range of processes for making theatre and performance, paying close attention to the relationship between the approach to creation and the significance of works in the communities where they are performed. | |

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Proposed Program – Bachelor of Arts in Communication Arts and Design Practice

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| **DRAMA 366 WSP 0.50** | Course ID: 014900 |
| **Writing for Performance** | |
| Students explore techniques for analyzing, interpreting, and creating texts for theatre and performance. | |
| **DRAMA 374 SEM 0.50** | Course ID: 014890 |
| **Sustainability in Performance** | |
| Students explore the interchange between artistic practice and current topics in sustainability research. | |
| **DRAMA 376 SEM 0.50** | Course ID: 011182 |
| **Political Theatre and Performance** | |
| Students explore the relationships among form, political engagement, culture, and agency in theatre and performance. | |
| **DRAMA 378 SEM 0.50** | Course ID: 014891 |
| **Black Theatre and Performance** | |
| Students explore the relationship of black theatre and performance to artistic and public life in North America. | |
| **DRAMA 379 LAB, SEM 0.50** | Course ID: 014892 |
| **Virtual Theatre and Performance** | |
| Students explore and create theatre and performance in virtual reality. | |
| **DRAMA 490 SEM, WSP 0.50** | Course ID: 004723 |
| **Selected Seminars in Drama & Theatre Arts** | |
| Seminars in special areas of drama and theatre. | |
| **DRAMA 491 SEM, WSP 0.50** | Course ID: 010105 |
| **Selected Seminars in Drama & Theatre Arts** | |
| Seminars in special areas of drama and theatre. | |

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**UNIVERSITY OF WATERLOO**

Created on: Oct 29, 2019
By (Name, Dept): Surabhi Kulshrestha, WI
Updated (Name, Date):

## University of Essex- School of Law
### Essex, United Kingdom

### Institution Biography:

The University of Essex is a public research university located in Essex, England. It was established in 1963, welcomed its first students in 1964 and received its Royal Charter in 1965. Essex has collaborative partnerships with 18 institutions around the world. UK partnerships include Kaplan Open Learning (provider of University of Essex Online), Tavistock and Portman NHS Foundation Trust. International partnerships include a franchise arrangement with Kaplan Singapore and double and dual degrees with several universities in Europe and Asia. Essex has produced many notable alumni in several fields, including two Nobel Prize laureates, prominent scientists, artists, and politicians. Essex is also a member of the Young European Research Universities Network (YERUN) and Young Universities for the Future of Europe Alliance (YUFE). Times Higher Education rankings place Essex in the top 20 universities with the most international students and in terms of international outlook. Essex was ranked in the top 20 UK universities in the Research Excellence Framework (2014) based on research quality and impact in Philosophy and Art History. Essex has also been named the University of the Year in 2018 at the Times Higher Education Awards.

### University of Essex - School of Law Overview

The School of Law is under the Faculty of Humanities which opened in the 1970s and 1980s. The School of Law has a global reputation for research in the areas of commercial law, human rights law and practice and public law. Staff members from the School of Law include legal practitioners who have worked with the United Nations, Amnesty International, Council of Europe, Ministry of Defense and the Foreign and Commonwealth Office. In order to gain practical legal experience, students have the opportunity of working at the Essex law Clinic and the Human Rights Centre Clinic. Essex's Human Rights Centre is one of the oldest academic human rights centres in the world and also where the research around human rights is conducted. The Human Rights Centre has over 2000 alumni and 100 members from 11 disciplines, fellows and partners. The Centre aims to identify emerging human rights challenges and play a leadership role in responding to these challenges through education, research and impact activities. Essex is one of four universities with a memorandum of understanding with the United Nations High Commissioner for Refugees, which highlights Essex's exemplary level of education. Essex Law students also have the opportunity to study abroad and complete their third year of a degree at a partner university in Europe, the United States, Australia and Hong Kong. Essex has been awarded the Queens Anniversary Prize for Higher and Further Education in 2009 for advancing the legal and broader practice of International Human Rights.

### University Overview:

**Website**: https://www.essex.ac.uk/about
**Established**: 1963
**Campuses**:
- Colchester Campus (Main campus and location of School of Law)
- Southend Campus
- Loughton Campus

**Student Numbers (across all three campuses):**
- 10,701 undergraduate students
- 2,493 postgraduate students
- 2,461 International Students from 140 countries

**Faculty and Staff Numbers**: 2100
**Research Strengths:** Economics, Politics, Human Rights, Artificial Intelligence and Data Science

**Faculties/ Programs:** Three Faculties comprising of 21 schools and departments (few mentioned below)

| Faculty of Humanities: | Faculty of Science and Health: | Faculty of Social Sciences: |
|---|---|---|

**Faculty of Humanities:**
- School of Law
- School of Philosophy and Art History
- Department of History
- Department of Literature, Film and Theatre Studies

**Faculty of Science and Health:**
- School of Computer Science and Electronic Engineering
- Department of Mathematical Sciences
- School of Biological Sciences
- Department of Psychology

**Faculty of Social Sciences:**
- Department of Economics
- Department of Government
- Essex Business School
- Department of Sociology

**Key Institutes:**
- Human Rights Centre
- Institute for Analytics and Data Science
- Institute for Social and Economic Research

**Essex Rankings:**

| | Overall Rank | National Rank | Top 3 Subject Ranks | | |
|---|---|---|---|---|---|
| **QS World Rankings (2020)** | | | **QS World Rankings (2019)** | | |
| **Essex** | #370 | #44 | Politics and International Studies #33 | Sociology #47 | Economics and Econometrics #101 - 150 |
| *Waterloo* | *#173* | *#7* | *#151 - #200* | *#201 - #250* | *#301 - #350* |
| **Shanghai Rankings (ARWU) (2019)** | | | | | |
| **Essex** | #501 – #600 | #37 - #43 | Political Science #28 | Economics #101 - #150 | Law #101 - #150 |
| *Waterloo* | *#151 – #200* | *#6-#9* | *Not Ranked* | *Not Ranked* | *Not Ranked* |
| **Times Higher Education (THE) (2020)** | | | **THE Higher Education Subject Rankings (2019)** | | |
| **Essex** | #251-#300 | #36 | Law #51 | Social Sciences #47 | Business and Economics #151 - #175 |
| *Waterloo* | *#201- #250* | *#9* | *Not Ranked* | *#151 - #175* | *#201 - #250* |

**Subject Rankings: Law**

| | QS Ranking (2019) | Shanghai Ranking (ARWU 2019) | THE Ranking (2019) |
|---|---|---|---|
| **World Rank (University of Essex)** | #151 -#200 | #101 - #150 | #51 |
| **National Rank (United Kingdom)** | #20 | #13 - #20 | #11 |

NOTE: These rankings are only for the "subject" of law – not necessarily "law schools".

**Research Output:**

**Incites Search (2015-2019):**

| Web of Science Documents | Times Cited | % Documents Cited | Category Normalized Citation Impact |
|---|---|---|---|
| 21,825 | 340,309 | 63.5% | 1.28 |

NOTE:

Web of Science Documents: Number of Web of Science Documents with joint publication

Times Cited: Number of times the set of publications has been cited

% Documents Cited: Percentage of publications that have been cited one or more times

Category Normalized Citation Impact: Citation impact (citations per paper) normalized for subject, year and document type

**Scopus - Recent Years Research Collaboration (2015-2019):**

| Research Collaboration Output<br>Scopus (affiliated search) | Essex & UW |
|---|---|
| Total Documents (2015-2019): | 2 |
| Top Areas: | |
| Psychology | 1 |
| Arts and Humanities | 1 |
| Social Sciences | 1 |

**Note:** The numbers above are numbers of publications with 'double counting' (publications categorized in more than one subject area).

| Research Output<br>Scopus (affiliated search)<br>(2015-2019) | | University of Essex's top 5 subject areas for research output | | | | |
|---|---|---|---|---|---|---|
| Institution | Total Publications | Social Sciences | Computer Science | Engineering | Medicine | Arts and Humanities |
| Essex | **5,145** | **1,482 (1$^{st}$)** | **1,070 (2$^{nd}$)** | **703 (3$^{rd}$)** | **637 (4$^{th}$)** | **627 (5$^{th}$)** |
| *Waterloo* | *21,097* | *2,310 (7$^{th}$)* | *4,909 (2$^{nd}$)* | *5,330 (3$^{rd}$)* | *2,877 (4$^{th}$)* | *721 (16$^{th}$)* |

The above table lists the top 5 subject areas by research output and compares UW's research output in those areas. The number in parentheses indicates what rank the respective subject is in terms of total research output by subject.
**Note:** The numbers above are numbers of publications with 'double counting' (publications categorized in more than one subject area).

**Agreements:**

| Type of Agreement | Status | Area of Focus | Date Signed |
|---|---|---|---|
| Joint Academic | Finalizing – New Agreement. Senate approval required. | Arts (Human Rights) | Pending Senate approval |

**Delegations:**

- Nov 6, 2019 at Waterloo.  Led by Professor Anthony Forster, Vice-Chancellor & President, University of Essex. Activities include overview of Undergraduate Studies, Graduate Studies, and Research with the Faculty of Arts and a Presidential discussion.

UNIVERSITY OF WATERLOO

University of Essex

**DRAFT**

**UNIVERSITY OF ESSEX**          (1)
**United Kingdom**

**and**

**UNIVERSITY OF WATERLOO**          (2)
**Canada**

**ARTICULATED ADMISSION,**
**TRANSFER CREDIT, AND**
**PROGRESSION AGREEMENT**

**THIS ARTICULATED ADMISSION, TRANSFER CREDIT, AND PROGRESSION AGREEMENT ("Agreement")**

**BETWEEN:**

(1)    **UNIVERSITY OF ESSEX**, a university established by Royal Charter in 1965, with its main campus located at Wivenhoe Park, Colchester, Essex CO4 3SQ, United Kingdom ("**Essex**");

**AND**

(2)    **UNIVERSITY OF WATERLOO,** a university established by an Act of the Legislature of the Province of Ontario, with its main campus located at 200 University Avenue West, Waterloo, ON, Canada, N2L 3G1, Canada ("**Waterloo**")

**1      Objectives**

1.1    Whereas, Essex and Waterloo (singularly a "Party", or collectively the "Parties") to this Agreement wish to establish a collaborative Joint Academic Undergraduate "Program", under which students will complete their first three (3) years of study in **Waterloo's Faculty of Arts** and then complete two (2) additional years in the **Essex Faculty of Humanities Essex Law School**, resulting in the awarding of a credential from each Party as set out at Section 9 below.

**2      Admission Criteria**

2.1    Essex agrees that students from Waterloo who meet the admissions criteria set out in Schedule 1 may be eligible for admission to degree courses at Essex (also known as program(s) at Waterloo, but referred to as course(s) throughout for clarity), subject to the following clauses:

     2.1.1    Each applicant from Waterloo shall provide written evidence of attainment of their academic qualifications and achievement in an English language test recognised by Essex (if applicable); and

     2.1.2    In each year of this agreement, Essex reserves the right to limit the number of applications from Waterloo, where Essex shall consult with Waterloo, in relation to such numbers.

**3      Tasks for each Party**

3.1    Each Party agrees to:

     3.1.1    Maintain regular and reasonable contact with the other Party, informing the other Party of any relevant changes or developments in relation to this Agreement;

     3.1.2    Obtain the other Party's consent before issuing any official media releases and/or marketing or promotional materials relating to this Agreement and/or incorporating the other Party's name or logo(s);

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3.1.3    Review this Agreement on an annual basis, providing the other Party with relevant information and statistics in relation to the objectives; and

3.1.4    Nominate a senior member of staff to be responsible for overseeing the implementation of this Agreement.

3.2    Waterloo agrees that it shall:

3.2.1    Inform its students of this Agreement in order to provide opportunity for eligible Honours Arts students to apply to the Essex law course and receive double degrees;

3.2.2    Use all relevant marketing and promotional materials subject to clauses 2.2, 5.1, and 5.2. Waterloo shall also provide no fewer than two draft copies of such material to Essex as part of the approval process; and

3.2.3    Grant students with transfer credits as specified in Schedule 3; inform Essex of any significant changes made to the details specified in Schedule 3; and award students who successfully complete the Agreement requirements with the corresponding Waterloo degree.

3.3    Essex agrees that it shall:

3.3.1    provide information to Waterloo including module (also known as course(s) at Waterloo, but referred to as module(s) throughout for clarity) outlines, module materials, learning outcomes, information on entry requirements and application procedures, student tuition fee requirements, information on living expenses and/or research materials;

3.3.2    inform Waterloo of any significant changes made to the details as specified in clause 3.3.1 above;

3.3.3    enroll suitably qualified students from Waterloo into the course as specified in Schedule 1; and

3.3.4    provide students who successfully complete the modules requirements with certification of completed modules and award them the corresponding Essex degree.

## 4    Costs

4.1    The Parties agree that each shall bear their own costs for any work under this Agreement, save and except as agreed in writing between the Parties. For the avoidance of doubt, each Party shall meet the travel, accommodation and subsistence costs of their own staff involved in visits associated with this Agreement.

## 5    Confidentiality

5.1    Each Party shall keep confidential and not disclose to any person or institution or organisation any confidential information acquired by each Party in connection with this Agreement including but not limited to the information, data, and personal data that may be exchanged, acquired, or shared in connection with any performance of the Agreement unless such information is already in the public domain, is required to

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be disclosed by law or any legal or regulatory authority, or the other Party has previously received the prior written consent of the Party for its disclosure. In the event of a legal requirement to disclose information, the disclosing Party shall make reasonable efforts to first notify the other Party of the requirement and legal process.

5.2     The obligations of the Parties under this clause 4 shall continue following the expiry or termination of this Agreement.

5.3     Waterloo acknowledges that Essex is subject to the requirements of the Freedom of Information Act 2000 (as amended from time to time) (the "FOIA") and Waterloo agrees it shall cooperate and provide all necessary assistance as may be reasonably requested by Essex (at its expense) to enable Essex to comply with its obligations under the FOIA, including but not limited to, providing Essex with such information in its possession or power as may be reasonably requested in order for Essex to comply with its obligations under the FOIA. In addition, Essex acknowledges that Waterloo is subject to equivalent freedom of information legislation and agrees that it shall cooperate and provide all necessary assistance as may be reasonably requested by Waterloo (at its expense) to enable Waterloo to comply with its obligations under the FOIA, including but not limited to, providing Waterloo with such information in its possession or power as may be reasonably requested in order for Waterloo to comply with its obligations under the FOIA.

## 6     Data Protection

6.1     6.1 Each party agrees to comply with its obligations as set out in Schedule 4.

## 7     Intellectual Property

7.1     Any intellectual property rights owned by a Party before the date of this Agreement and during the term of this Agreement will remain the property of that Party. Nothing contained in this Agreement will affect the absolute ownership rights of any Party in such Party's intellectual property rights. For the avoidance of doubt, no licences are granted under this Agreement.

7.2     Unless agreed otherwise between student and a Party, ownership of intellectual property created by exchange students as part of their enrolment at the host institution will be governed by that institution's policy on ownership of intellectual property, including in the case of Waterloo, Policy 73 Intellectual Property Rights.

7.3     Each of the Parties shall not publish any marketing material relating to this Agreement without the prior written consent of the other Party and undertake that the wording for any marketing materials shall be agreed jointly between the Parties prior to its use.

## 8     General

8.1     No person who is not Party to this Agreement shall have any right under the Contracts (Rights of Third Parties) Act 1999 to enforce any terms of this Agreement but this does not affect any right or remedy of a third Party which exists or is available apart from that Act.

8.2     Nothing contained in this Agreement shall be construed to imply a partnership, or employer and employee, or principal and agent relationship between any of the Parties. No Party shall have any right, power or authority to create any obligation

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express or implied on behalf of the other Party. Each Party shall have full discretion to enforce their policies and procedures with respect to the application of each student wishing to participate in the Program under this Agreement.

8.3     Any dispute arising in connection with matters referred to in this Agreement will be settled between the Parties in the spirit of friendship and mutual trust. If the Parties are unable to reach an amicable settlement then either Party may serve notice on the other, requiring the matter to be referred to the court in the jurisdiction of the Province of Ontario and this Agreement shall be interpreted according to the laws of the Province of Ontario and the applicable laws of Canada.

8.4     Each Party to this Agreement (an "indemnitor") shall indemnify the other Party to this Agreement and their governors, directors, officers, faculty, students, employees, alumni, independent contractors, agents, and volunteers (each being an "indemnitee") in respect of any claim, demand, action, cause of action, damage, loss, injury, cost, liability, or expense, which may be made or brought against an indemnitee or which an indemnitee may suffer or incur as a result of or arising out of: (i) a breach or non-fulfilment of any term, condition or obligation under this Agreement by the indemnitor, or (ii) any negligence or wilful misconduct on the part of the indemnitor or anyone whom it is responsible at law. The foregoing indemnity shall survive and continue in effect beyond any termination of this Agreement.

8.5     This Agreement constitutes the entire agreement between the Parties and supersedes all previous agreements, arrangements and/or understandings between the Parties, and may not be modified or amended except by an instrument in writing signed by the duly authorised representatives of the Parties.

8.6     No agreement or understanding varying or extending this Agreement, will be legally binding upon either Party unless in writing and signed by duly authorised representatives of both Parties.

8.7     Any Schedules or Appendices (if applicable) hereto shall be taken, read and construed as an essential and integral part of this Agreement.

8.8     Failure by either Party to enforce, at any time, any provision of this Agreement shall not be construed as a waiver of its right to enforce the breach of such provision or any of the provision in this Agreement or as a waiver of any continuing, succeeding or subsequent breach of any provision or other provision of this Agreement.

8.9     This agreement in no way restricts either Party from participating in similar activities or arrangements with others.

**9       Organizational contact**

The below named individuals are responsible for the development, maintenance and coordination of the Agreement. All notices or communications should be directed to the below named persons.

8.1     Sending organization:

Manager, International Agreements
Waterloo International
University of Waterloo
Phone: 519-888-4567, ext. 41589

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Email: international.agreements@uwaterloo.ca

8.2     Receiving organization:

International Partnerships Officer
University of Essex
Phone: 0044 1206 872098
Email: sally.day@essex.ac.uk

## 10      Commencement and Duration

10.1    This agreement commences on the date of signature by the appropriate officer of both Parties ("**Date of Commencement**"). Either Party may withdraw from this agreement or cease to pursue the objectives at any time during the term of this agreement by giving at least six months' notice in writing to the other Party. In such circumstances of withdrawal, cessation or the expiry of this agreement this shall be without prejudice to clauses 3, 4, 5 and 6 and provided that each Party shall permit all students currently enrolled in a course at its institution to complete same.

10.2    This agreement shall be in effect for **5 years** from the Date of Commencement. This period may be extended by written consent of both Parties.

## 11      Credential(s) to be granted on successful completion of all required components

10.1    Honours Bachelor of Arts (Four-Year degree) from University of Waterloo.

10.2    LLB Law with human rights law (Three-Year course) from University of Essex.

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## Signatories

In signing hereunder, the Signatories affirm their legal authority to bind their respective Parties into, and execute, this Agreement on the dates shown hereunder.

**UNIVERSITY OF ESSEX**

per: _____          date: _____
   Bryn Morris
   Registrar and Secretary

**UNIVERSITY OF WATERLOO**

per: _____          date: _____
   Dr. Feridun Hamdullahpur
   President and Vice-Chancellor

per: _____          date: _____
   Dr. Ian Rowlands
   Associate Vice-President, International

per: _____          date: _____
   Dr. Sheila Ager
   Dean, Faculty of Arts

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**Schedule 1**

Students from Waterloo will be considered for admission to Essex degree courses based on the following admissions criteria:

**Undergraduate arrangements**

| Arrangement type | Admissions criteria and English language entry requirements | Proposed course(s) |
|---|---|---|
| 3+2<br><br>(Level 5 entry) | Students will complete the following before being considered for admission to the second year of the LLB Law with Human Rights at Essex:<br><br>▪ 3 years of their Honours Bachelor of Arts (Four-Year degree);<br><br>▪ a Minor in Human Rights;<br><br>▪ their Breadth Requirements in the Faculty of Arts at Waterloo;<br><br>▪ should have an overall average of 77%; and<br><br>▪ meet the University of Essex English Language Entry Requirements as set out below (at Note 1). | Specified courses within the Essex School of Law<br><br>▪ LLB Law with Human Rights |

NOTE 1: English Language Entry Requirements
(**https://www.essex.ac.uk/undergraduate/applying-to-essex**)

| | |
|---|---|
| All first language English speakers. | No additional English language qualification required. |
| All nationals of majority English speaking countries (e.g. Canadian nationals). | No additional English language qualification required. |
| Applicants that are not nationals of majority English speaking countries or first language English speakers. | Essex will ask to see a copy of the English language qualification the student used to be admitted to Waterloo (if this information isn't already included on the application form).<br><br>Essex will ask them to obtain an additional English language qualification as part of their offer if:<br><br>▪ the student has not taken an English language qualification that Essex routinely accepts;<br><br>**or**<br><br>▪ they have taken an English language qualification that Essex accepts but haven't met the requirements. |

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**Schedule 2**

**Proposed course structure for LLB at Essex**

The course structure is indicative, and anticipates the upcoming changes to the regulatory control of qualifying law degrees in England & Wales which are due to be introduced in 2020. It may be subject to amendment before implementation and alternative optional modules may be introduced.

**Year 1**

| Autumn | LW103 Foundations of Public Law | LW104 Criminal Law | LW108 Foundations of Obligations | HU 200 Human Rights Organisations: International and Regional Institutions |
|---|---|---|---|---|
| Spring | | | LW101 Contract Law | HU201 Social Dimensions of Human Rights |

**Year 2**

| Autumn | LW303 Land Law | LW201 Tort Law | LW302 EU Law | HU300 Selected Issues in Human Rights |
|---|---|---|---|---|
| Spring | LW202 Equity & Trusts | Option (One HU300 level 15 credit) | | |

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**Schedule 3**

**Transfer Pathway Progression**

This Agreement articulates a reverse transfer credit pathway for Honours Arts students of the Faculty of Arts at Waterloo. Within five years these students will receive a Bachelor of Arts from Waterloo and LLB from Essex. A typical progression through this articulated transfer pathway for Waterloo students would be as follows:

**Waterloo students' progression**

| Academic Year: | 1 | | | 2 | | | 3 | | | 4 | | | 5 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Term: | F | W | S | F | W | S | F | W | S | F | W | S | F | W | S |
| Regular: | Waterloo ARTS | Waterloo ARTS | | Waterloo ARTS | Waterloo ARTS | | Waterloo ARTS | Waterloo ARTS | | Essex LLB | Essex LLB | | Essex LLB | Essex LLB | |
| Academic term: | 1A | 1B | Off | 2A | 2B | Off | 3A | 3B | Off | | | | | | |
| Units per term at Waterloo: | 2.5 | 2.5 | | 2.5 | 2.5 | | 2.5 | 2.5 | | 1.25 | 1.25 | | 1.25 | 1.25 | |
| Units total at Waterloo: | 2.5 | 5 | | 7.5 | 10 | | 12.5 | 15 | | 16.25 | 17.5 | | 18.75 | 20 | |

NOTE: Upon entry into their first fall term at Waterloo, students need to contact their Arts Academic Advisor / STP advisor to selecting modules to satisfy the Minor in Human Rights and Breadth Requirements. Four credit units at Essex = approximately 1.25 credit units at Waterloo.

**Admission and Progression Requirements**

1. Waterloo students would enrol in the Honours Bachelor of Arts (Four-Year degree) course.
2. Complete first three years of their Honours Bachelor of Arts (Four-Year degree), including completion of their minor in Human Rights, and completion of their Breadth Requirements.
3. Admission to the Essex 3-year LLB course requires the student be in satisfactory standing in their course (see Schedule 1). Students must also have no fails or incompletes in any modules in order to be admitted to the Essex course. *Admission is competitive. A minimum average does not guarantee admission to the Essex course.*
4. Students who meets the admission requirements of Essex LLB course (see Schedule 1) would transfer to Essex after their sixth academic term. The [application](application) for admission to the Essex degree course should be made during the second term (normally Winter) of the third year.
5. Students will be admitted directly into the second year of the Essex LL.B course in human rights law at the start of Essex's academic year in the fall term.
6. Students will complete the last two years of the LLB course at Essex.
7. Waterloo recognizes one year of transfer credits for the 8 modules completed at second and third years of LLB course at Essex.
8. After completing the LLB degree course successfully, Bachelor of Arts degree will be awarded at Waterloo's convocation ceremony and LLB degree at the Essex's convocation ceremony.
9. If the student does not complete the LLB course successfully, transfer credits will be considered on an individual basis for modules taken at Essex with a minimum grade of 52%*).

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**Academic Regulations**

Participating students must comply with the regulations of the university at which they are resident, including those governing academic and non-academic misconduct, and the ethical conduct of research. Acts of misconduct at Essex will be reported back to Waterloo.

**Transfer Credits**

Transfer credits will be awarded for the successful completion of the last two years of the Essex course as outlined below:

NOTE: Essex module information available here: https://www1.essex.ac.uk/modules/.

Students can choose an optional 15 credit 300 level module from Law option list.

The transfer credit assessment outlined in the chart below applies only to the pathway articulated in this Agreement. If students transfer to another plan at Waterloo, admission and transfer credits will be re-assessed and transfer credits may be reduced.

**Transfer credit requirements:**

Transfer credits, up to a maximum of five units, will be awarded for modules (listed below) in which a minimum grade of 52%* (lower-second class standing) has been achieved.

Credits that must be achieved at the receiving organization:
Credits are as outlined by the Faculty of Arts graduation requirements at Waterloo. All Faculty of Arts 4-year degrees require a minimum **of [40] modules of 0.5 unit credit weight, for a total of 20 units.**

*NOTE: A grade of 52% on a 40% pass/fail scale is equivalent to a 60% grade on a 50% pass/fail scale.

| Essex Module Code | Essex Module Title | Waterloo Module Code | Waterloo Module Title | Module Weight (units) |
|---|---|---|---|---|
| LW103 | Foundations of Public Law | LS 2XX | Miscellaneous Legal Studies | 1.0 |
| LW104 | Criminal Law | LS 2XX | Miscellaneous Legal Studies | 1.0 |
| LW108 | Foundations of Obligations | LS 2XX | Miscellaneous Legal Studies | 0.5 |
| LW201 | Tort Law | LS 2XX | Miscellaneous Legal Studies | 0.5 |
| LW202 | Equity & Trusts | LS 2XX | Miscellaneous Legal Studies | 0.5 |
| HU 200 | Human Rights Organisations: International and Regional Institutions | LS 2XX | Miscellaneous Legal Studies | 0.5 |
| HU201 | Social Dimensions of Human Rights | LS 3XX | Miscellaneous Legal Studies | 0.5 |
| Option (One HU 300 level 15 credit) | Selected Issues in Human Rights | LS 4XX | Miscellaneous Legal Studies | 0.5 |
| TOTAL UNITS TRANSFERRED UP TO A MAXIMUM OF: | | | | 5.0 |

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**SCHEDULE 4 DATA PROTECTION**

**DEFINITIONS**

Data Protection (DP) Laws means any law, enactment, regulation, regulatory policy, by-law, ordinance or subordinate legislation relating to the processing, privacy and use of Personal Data, as applicable to either Party, and includes any judicial or administrative interpretation of them, any guidance, guidelines, codes of practice, approved codes of conduct or approved certification mechanisms issued by any applicable regulator;

Data Controller, Data Subject, Data Processing, Personal Information and Security Breach have the meanings set out in General Data Protection Regulation (GDPR), which is Regulation (EU) 2016/679 of the European Parliament.

Purpose means the Purpose as defined in this Schedule.

**GENERAL REQUIREMENTS**

1.1    Each party shall comply with the DP Laws that are applicable to it.

1.2    The parties shall each be a Controller of the Personal Information and this schedule shall apply to that sharing of the Personal Information between the parties.

1.3    Each party shall, in relation to the Personal Information:

1.3.1   use the Personal Information only for the Purpose;

1.3.2   comply with its obligations under DP Laws, including without limitation:
(a) ensuring there is a lawful basis on which to process the Personal Information;
(b) ensuring that, where relevant and appropriate, privacy notices and/or policies are communicated to the relevant Data Subjects which explain how the Personal Information will be processed;

1.3.3   not do or permit anything to be done through act or omission which would cause the other party to incur any liability under the DP Laws;

1.3.4   promptly notify the other party in the event that it receives updates or corrections to any of the Personal Information;

1.3.5   be responsible for ensuring that it keeps the Personal Information secure and ensure that it only shares the Personal Information with the other party in a secure manner and using the agreed contacts set out in this schedule; other party from time to time;

1.3.6   provide reasonable assistance, information and co-operation where requested by the other party in respect of data protection matters

1.3.7   notify the other party immediately, and take into account any information and/or reasonable requests provided by the other party before responding publicly or to a regulator or any third party (provided that such information and/or requests are provided promptly and before any applicable response deadline):
(a) if it is contacted or approached in relation to any claim and/or exercise or purported exercise of rights by a Data Subject under the DP Laws; or

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(b) in the event of any investigation or enforcement activity the applicable regulator; or

(c) in the event of any Security Breach;

1.3.8   retain Personal Information in relation to the Data Subjects for such period as is necessary for the Purpose , and delete such data in a secure manner and in accordance with good industry practice following expiry of such period.

## DATA PROTECTION PARTICULARS (PURPOSE)

The data is shared in order to ensure that students can have conferred upon them the appropriate awards to which they are entitled, and to enable Waterloo to manage its reputation through potentially limiting the ability of students who commit offences going on to study on other exchange programs.

Waterloo will not provide or transfer any personal data to Essex. Students from Waterloo will apply to Essex through the direct admissions system, providing their own personal information as required.

The Data Subjects are the students who apply to, or are enrolled on the program.

Essex will provide to Waterloo:
•        Final marks/transcript grades of Waterloo students who are enrolled on to the program,

and, where applicable,

•        details of any offence committed by a student on the program the that leads to a penalty under either the University of Essex Code of Student Conduct, or the Academic Offences Procedures.

The data that will be shared will be:
• Full name, including preferred names and titles
• Gender
• Final marks, grades
• The nature and outcome (penalty imposed) of any Student Conduct or Academic Offence

Information will be shared through password protected attachments via email for the named contacts, who are:

Sacha Geer, PhD
Manager, International Mobility and Intercultural Learning
Student Success Office
Phone: +1 (519) 888-4567, ext. 40193

Email: sacha.geer@uwaterloo.ca

and

Sally Day
International Partnerships Officer

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Linkagreements@essex.ac.uk

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# Vice-President, Research and International
## Report to Senate
## June 2020

**Research Strategic Plan**

***Full plan attached as Appendix A for information.***

The Office of Research has led discussions and consultations to:

1. Identify Fundamental Thematic Areas at the University of Waterloo that underpin the research thematic areas identified in the University's Strategic Plan: *Advancing Research for Global Impact*
2. Elaborate on the research thematic areas in the University Strategic Plan
3. Identify key research priorities as articulated in the University Strategic Plan

These themes and priorities emerged through the many consultations that were held for the development of the University's Strategic Plan. There were also additional, extensive consultations held simultaneously within the Office of Research. These additional consultations, involving researchers and leaders from across the Waterloo community including, Deans, Associate Deans Research, Executive Directors of Centres and Institutes, Department Chairs, Research Chairs, students, the Innovation Ecosystem Council, the Research Equity Diversity and Inclusion Council, research staff across campus, external stakeholders, and others, enabled a detailed focus on key thematic areas and the identification of drivers of research excellence at the institution.

Waterloo research spans the continuum from fundamental, curiosity-based inquiry to the practical applications of new knowledge.  It is conducted in both a discipline-specific manner and by inter-and multidisciplinary teams.  A strong spirit of entrepreneurship underpins this research, giving rise not only to the development of new technologies, but their application and commercialization.

Waterloo's research strengths are deliberately aligned with important global challenges. This is in recognition of the critical role that technology coupled with reflective scholarship will play in meeting these challenges and understanding their human dimensions. Discoveries heralding transformative disruption that benefits society are a hallmark of Waterloo research.


**International Strategic Direction**

***Full Direction attached as Appendix B for information.***

This University of Waterloo's International Strategic Direction provides elaboration and focus of the international priorities of the University of Waterloo's 2020-2025 University Strategic Plan, *Connecting Imagination with Impact.*  It is built upon the Plan itself, as well as the consultations, white papers and deliberations leading to the formulation of the University's Strategic Plan.

The University of Waterloo promotes internationalization by bringing the world to life on campus, by connecting students, faculty and staff to other countries and cultures, and by developing

international connections through global alumni and stakeholders as well as partnerships with universities, research institutions, governments, businesses, and civil society organizations abroad. While internationalization helps University of Waterloo thrive, it is also beneficial to the world when Waterloo internalizes these objectives.

The three themes identified in the International Strategic Direction are informed by the identical pillars in the University's Strategic Plan, and captured to reflect the international aspects of our campus' strategic direction. Specifically, Global Talent Developed through Innovative Teaching, Learning, and Research; Research Aligned with Global Challenges; and Diversity on Campus and Beyond. The International Strategic Direction also incorporates the international focus of the strategic plans of the six Faculties at Waterloo.

This elaboration of Waterloo's International Strategic Direction was developed using a consultative process of meetings and deliberations. In 2019, a broad representation of faculty members and representatives in academic support units with international responsibilities was assembled, called the International Operations Council, and guided by Waterloo International in a series of monthly roundtable discussions and employing the institution's Strategic Plan's core elements surrounding internationalization.

These roundtables identified and focused on five broad strategic goals and objectives. Specifically, Enhance Waterloo's global impact and reputation through strategic international research and academic partnerships; Pursue international activities designed to advance University of Waterloo leadership in innovation and entrepreneurship; Position Waterloo International as a nexus for continued cross-campus collaboration on internationalization, enabling an impactful global presence that is aligned with our distinctive core strengths; Strengthen international experiences, both abroad and on Waterloo's campuses, by engaging the Waterloo community in sustained and impactful international activities to foster global perspectives; and, Promote internationalization in research, teaching, and campus operations that is aligned with Waterloo's *Environmental Sustainability Strategy* and *Sustainability Guide*.

Finally, after a series of presentations to the International Operations Council, Research Leaders' Council, and the Dean's Council, the International Strategic Direction received wide consensus. The statements herein identify Waterloo's focused efforts in the area of internationalization and also discuss the support that Waterloo International provides for driving these efforts.

To institutionalize these goals, Vice-President, Research and International will host annual meetings in May of Executive Council to consider metrics and targets and to assess progress and motivate cross-campus collaboration to achieve said goals in this International Strategic Direction.

**Year End Research Income**

Total research funding for the 2019-2020 fiscal year was approximately $250M, slightly lower than the previous year. After crossing the $200M mark in 2016-2017, the growth in research revenue over the last three years has been rapid, and revenue has held steady this year despite the COVID setbacks.

**Waterloo International**

- With the challenges facing Co-operative Education students in finding employment for the spring term, Co-op has been looking hard to additional opportunities for students to increase the number of positions that are available. The Aga Khan Foundation had offered up to 20 virtual international internships for University of Waterloo Co-op students but was unable to provide funding for these positions and as a result Co-op was concerned about being able to fill these positions. To make these roles more attractive to students Waterloo International has offered 20K which will result in $1000 in compensation to 20 Co-op students taking these positions.
- Funds from Waterloo International were provided to support eligible student travellers (up to $500 per student) who were outside Canada and had incurred extra costs as a result of COVID-19. From this offer of support, Waterloo International received over 386 requests from students and has to date approved 332 of these claims, declined 18 of them and is seeking additional information on the remainder of the claims. To date approximately $155,000 has been paid to student travellers.

**Intellectual Property and Commercialization**

Over the past several years there has been a confluence of factors prompting Waterloo to develop and implement a systematic capacity to capture Intellectual Property (IP) and commercialization metrics arising from the research enterprise.

First, in 2015- 2016, there was an audit conducted by the Ontario Auditor General Office (OAGO) of IP practices at the University of Waterloo (as well as at McMaster University and the University of Toronto) wherein the Auditor issued an actionable recommendation that Waterloo needed to more systematically catalogue and report on IP activities generated from government funding.

Concurrently, various university ranking agencies have expanded their criteria to include IP and commercialization metrics in their overall ranking assessment. As this is a strong area for Waterloo to differentiate itself with respect to rankings, it is important that the institution is enabled to tell its story effectively based on full data support.

In response to these external influences, the Office of Research developed and implemented an IP and Commercialization online reporting tool to document faculty member activities in the following areas: patents filed, copyright (focused on software) generated, start-up companies created, and license agreements executed. This reporting tool was launched in 2017 and faculty members were required to complete their disclosure as part of their annual performance review process.  Presently reporting compliance is at approximately 70% across all Faculties and communications and outreach activities are ongoing to raise compliance performance.

Cumulative data (2017-2019) representing faculty IP and commercialization activity are as follows:

- Patents: 1096 (65% from Engineering)
- Software: 147 (44% from Math)
- Start-ups: 111 (52% from Engineering)
- Licenses: 96 (65% from Science)

## Accelerator Centre

The Accelerator Centre (AC) has seen impressive innovation and success over the last several weeks related to number of clients and graduate companies that AC mentors and staff have actively supported and promoted. Highlights include:

- **InkSmith**: 3D printing and laser cutting face shields to distribute to healthcare workers
- **Mozzaz Care**: Launched a new COVID-19 virtual care platform to help hospitals increase capacity and response by delivering virtual care
- **Recess Guardians:** Developed an at-home "Recess" package for parents seeking resources for their children during COVID-19
- **TopHat**: Supporting educators and ensuring the least amount of disruption to students' education by making its platform free for classes needing to complete the rest of the semester online
- **Bonfire**: Developed the Bonfire COVID-19 Emergency Response Program to offer their platform for free to public sector organizations in North America
- **O2 Canada**: Has been selling approximately 2,000 respiratory masks a day since the spread of the coronavirus

**Appendix A – Research Strategic Plan**

# OUR CONNECTED WORLD

Research expands knowledge. Research explores new knowledge. Research solves problems, creates understanding, and provides rich connections between the academic world, the private sector, communities, and governments. Research is in the DNA of the University of Waterloo, both within and across its many Departments, Faculties, Centres, and Institutes.

Waterloo research spans the continuum from fundamental, curiosity-based inquiry to the practical applications of new knowledge.  It is conducted in both a discipline-specific manner and by inter-and multidisciplinary teams.   A strong spirit of entrepreneurship underpins this research, giving rise not only to the development of new technologies, but their application and commercialization.

Waterloo's research strengths are deliberately aligned with important global challenges. This is in recognition of the critical role that technology coupled with reflective scholarship will play in meeting these challenges and understanding their human dimensions. Discoveries heralding transformative disruption that benefits society are a hallmark of Waterloo research.

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# A. FUNDAMENTAL THEMATIC AREAS

## DEVELOPING TECHNOLOGIES FOR THE FUTURE

Innovative technologies are transforming the way we work, live and play. Researchers at Waterloo are not only creating these new technologies, they are probing the nature of human interaction with technology, uncovering the benefits it heralds as well as exposing and mitigating the risks it poses.

### SUB-THEMES

Advancements in big and small manufacturing
Autonomous systems for independence
Cybersecurity, cryptography and privacy
Intelligent systems and attendant paradigm shifts
Light and sound for improved vision and imaging
Technologies for connectedness
The quantum-nano revolution

## PUSHING THE FRONTIERS OF KNOWLEDGE

The very big and the very small shape humanity. Waterloo researchers are seeking to understand how. They are exploring the cosmos, probing the genetic code and the limits of complexity, discovering what shapes the interactions of humans with each other and the planet. They are searching for answers, for theoretical proof, for knowledge.

### SUB-THEMES

Abstraction, inference and proof
Classical and quantum information
Foundational principles and their application
Genetics and the origins of life
Knowledge discovery and representation
Limits of complexity and emergent phenomena
Origin and composition of the universe
The building blocks of matter

## UNDERSTANDING AND ENHANCING HUMAN EXPERIENCE

Waterloo researchers are exploring opportunities for social, artistic and cultural innovation in a rapidly changing world and the challenges this poses. They are looking for connection and commonality. They are exploring and promoting scholarship in the area of Indigenous culture. They are analyzing how technology and innovation can help knit humanity, with all its diversity, closer together.

### SUB-THEMES

Communication, technology and culture
Creative and scholarly innovation
Design of and experience with interactive media
Ethics, governance and politics
Human-centered technology
Identity: inclusivity, diversity, and equity
Risks, crises and conflicts of our time
Social impact of science and technology

## ACCELERATING SUSTAINABILITY

Through deliberate alignment of research strengths with global challenges, Waterloo is accelerating the development of technology and novel practices for enhancement of environmental sustainability. This research is guiding the formulation of principles, policies and paradigm shifts in global environmental governance for achieving local and regional  sustainability outcomes.

### SUB-THEMES

Integrated ecosystems approach to managing the natural environment
Clean and affordable energy
Clean technology and responsible production
Climate - resilient and low - carbon society
Sustainable cities, buildings and infrastructure
Sustainable water management

## ADVANCING HEALTH AND WELLBEING

Waterloo is poised to make major advances at the interface between technology and health. For example, new technologies being developed by Waterloo researchers have the potential to revolutionize the collection and interpretation of health data. This is complemented by innovative research on the social determinants of health, including healthy aging, lifestyles, and substance-use, that is giving rise to new paradigms for population health.

### SUB-THEMES

Biomedical/social determinants of health
Health care delivery
Health informatics and health technologies
Aging
Neuroscience
Mental health
Population health and health systems for communities
Vision science
Pharmaceutical science

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# B. ADVANCING RESEARCH FOR GLOBAL IMPACT

To maximize global impact, Waterloo has aligned its thematic research strengths with opportunities for new discoveries that are likely to shape approaches to global challenges. In doing so, the institution continues to build on established strengths in fundamental research, engage in applied research, and take a leadership role in commercializing new technology. That solutions to global challenges will be both technology-based and informed by an increased understanding of their human dimensions has prompted mobilization of complementary research strengths in several fields in the quest to develop and implement these solutions.

## QUANTUM SCIENCE, NANOTECHNOLOGY, CONNECTIVITY AND TELECOMMUNICATIONS

Pioneering basic and applied research in: quantum and materials science, quantum computing and quantum simulation for understanding physics and materials, nanotechnology, digital media, and telecommunications, is pushing the frontiers of knowledge and giving rise to new technologies. Waterloo researchers are also examining human interaction with these technologies and their potential for transformative impact on industrial, social, artistic, environmental and cultural landscapes. Developments that are having a transformative impact include:

- new quantum sensors with enhanced sensitivity
- smart functional materials
- advances in quantum security
- new developments in photonics
- nano sensors and electronics for lab-on-a-chip
- advances in network and satellite communication enabling increased connectivity and future expansion of the Internet of Things
- emerging technologies for social innovation
- social and ethical impacts of connectivity

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## WATER, ENERGY AND CLIMATE: SUSTAINABILITY, SECURITY, INFRASTRUCTURE

Waterloo research is facilitating the transition to a climate-resilient, low – carbon sustainable society. A cornerstone objective is sustainable use and management of space, land, water, and energy on a global scale. Developments that are having a transformative impact include:

- nanotechnologies for the delivery of clean water
- environmental and resource  economics and governance and the formulation of sustainable land and water-management policies
- next generation batteries, fuel cells and smart-grid infrastructure for the provision of clean, affordable, low - carbon energy
- digital and remote sensing technologies for environmental monitoring of air, land, water and the stratosphere, providing information that will shape pivotal environmental policies
- new paradigms of architectural and urban design for enhanced sustainability of cities, buildings and infrastructure

## INFORMATION TECHNOLOGY AND ITS IMPACT, INCLUDING INTELLIGENT SYSTEMS, HUMAN-MACHINE INTERFACES, CYBERSECURITY, PRIVACY AND DATA SCIENCE

Artificial intelligence and machine learning are enabling Waterloo researchers to develop systems that are ushering in a new era of automated, intelligent transportation.  The attendant challenges will test the mettle of human/machine interfaces.  Social scientists are studying the impact of these intelligent systems on the transportation industry and on domestic and international job markets.  Developments that are having a transformative impact include:

- autonomous scale cars with novel sensors enabling robust navigation without human inputs
- smart systems for hybrid and electric vehicles
- network and operational security for internet-connected systems and data
- quantum-safe cryptography
- blockchain technology for secure data storage, financial transactions and asset management
- societal implications of cyber risk, including cyber terrorism and global security
- ethical considerations of the applications of artificial intelligence

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## ROBOTICS AND ADVANCED MANUFACTURING

Through innovative research encompassing the use of advanced materials, advanced robotics and mechatronics, Waterloo is developing next-generation additive manufacturing. Robotics research at Waterloo is both fundamental and applied in nature and runs the gamut from designing robots for the service industry to those able to defuse land mines or perform surgery. New developments that are having a transformative impact include:

- human-robot interaction including its impact on cognitive function and development
- robot-assisted full cycle manufacturing in a factory setting
- custom-product development using next-generation additive manufacturing
- autonomous robots for detecting structural defects in bridges
- human-centered robotics and machine learning

## HEALTH TECHNOLOGIES

New technologies with the potential to reshape aspects of medicine are being developed at Waterloo. Research on the social determinants of health including healthy aging, tobacco control and substance use is having population-scale impacts. Development and deployment of digital health systems for improving population health are enhancing health - care outcomes. Enhanced understanding of human response to technical and policy interventions is helping to stem viral spreads and mitigate their impact on the most vulnerable. New developments that are having a transformative impact include:

- wearable devices for monitoring indices of health
- next generation contact lenses with drug-delivery potential
- soft-robotics for ocular treatment and surgery
- nanoparticles for targeted drug delivery
- high resolution imaging technology

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# C. RESEARCH ENHANCEMENT GOALS

The Office of Research has identified the following as key research priorities, as articulated in the University's Strategic Plan. These priorities emerged through the many consultations that were held for the development of the University's Strategic Plan. There were also additional, extensive consultations held simultaneously within the Office of Research. These additional consultations, involving researchers and leaders from across the Waterloo community including, Deans, Associate Deans Research, Executive Directors of Centres and Institutes, Department Chairs, Research Chairs, students, the Innovation Ecosystem Council, the Research Equity Diversity and Inclusion Council, research staff across campus, external stakeholders, and others, enabled a detailed focus on identification of drivers of research excellence at the institution.

The following tangible goals with their specific objectives will serve to enhance disciplinary and interdisciplinary research strengths and marshal these strengths to solve increasingly complex real-world problems. These goals will serve to support the University's Strategic Plan, as well as the Research Strategic Plan.

The Office of Research is committed to supporting activities related to these goals and objectives as they are pursued within the Faculties and other organizational units across the institution, including in the Office of Research itself.

## GOAL: ENHANCE RESEARCH EXCELLENCE

### OBJECTIVES

### ACCELERATE THE RESEARCH ENTERPRISE

- Attract and retain high-quality faculty
- Foster interdisciplinary collaboration through meaningful interactions and exchange of ideas across disciplinary boundaries
- Seize opportunities to lead in new and emerging research areas
- Develop sustainable support for the acquisition, maintenance and operation of state-of-the-art major equipment and shared facilities
- Explore opportunities to create cross-Faculty interdisciplinary research teams
- Incentivize strategic joint cross-Faculty appointments
- Address barriers to pursuing interdisciplinary research including funding constraints, narrow definitions of merit, and lack of space for co-locating researchers from different Faculties in cross-disciplinary communities

### ADAPT ACADEMIC PROGRAMMING

- Increase opportunities for diversified research experiences and participation in interdisciplinary research teams for graduate and undergraduate students
- Develop more flexible graduate programs including interdisciplinary and team Masters degrees

# GOAL: FULLY IMPLEMENT EQUITY, DIVERSITY AND INCLUSIVITY ACROSS THE RESEARCH ENTERPRISE

**OBJECTIVES**

## SUPPORT THE CULTURE

- Promote and support a culture of equity, diversity and inclusivity to ensure a dynamic research environment with different perspectives, fresh ideas and new approaches
- Ensure the research environment is equitable, welcoming and one in which everyone can flourish
- Promote and support indigenous research and Indigenous approaches to research including Indigenous ways of knowing
- Work with the Equity Office, Faculties and Departments to ensure broad awareness and implementation of the principles of equity, diversity and inclusion
- Foster a research and innovation ecosystem that attracts and retains outstanding, diverse faculty members who will enable Waterloo to thrive in a global setting

## EDUCATE FOR CHANGE

- Revise and expand unconscious bias, equity, diversity and inclusion training
- Increase accountability for improving representation of the Four Designated Groups (FDGs)
- Review policies and procedures regularly to ensure they continue to reflect equity, diversity and inclusion principles

# GOAL: REINFORCE WATERLOO'S DISTINCTIVE BRAND OF PREEMINENCE IN INNOVATION, ENTREPRENEURSHIP AND KNOWLEDGE MOBILIZATION

**OBJECTIVES**

## MAXIMIZE IMPACT

- Enhance the collective impact of Waterloo innovation and commercialization hubs: Velocity, the Conrad School of Entrepreneurship and Business, the Accelerator Center and WatCo
- Support the creation of new companies and the commercialization of transformative research
- Celebrate the innovation and entrepreneurship successes of faculty, alumni and students
- Provide opportunities for co-op students to present work-term projects and experiences related to innovation and commercialization
- Establish a fund to assist students and faculty with a strong entrepreneurial inclination to commercialize their IP
- Review strategies and procedures for enhancing innovation and commercialization of research on a regular basis and be nimble in adjusting as needed
- Adjust policies and procedures to ensure that performance criteria for tenure, promotion and salary adjustments for faculty include commercialization activity where appropriate

## SUPPORT INDUSTRY

- Engage with strategic business sectors of competitive importance to Canada where interdisciplinary research teams can help resolve problems of common interest
- Increase private-sector partnerships and develop new technologies that will enhance the competitiveness and innovation of Canadian business
- Spearhead policy development for new technologies at municipal, provincial and federal levels of government
- Share industry partnership prospects to build enhanced value for the partner, create incentives and opportunities for teamwork across the institution, and support Waterloo's innovation goals
- Establish interdisciplinary capstone projects to enable students to gain interdisciplinary research experience

## GOAL: ENHANCE THE GLOBAL IMPACT AND REPUTATION OF WATERLOO RESEARCH

### OBJECTIVES

## INCREASE CAPACITY TO LEAD GLOBALLY

- Increase research capacity, particularly Research Chairs, broadly across the Institution to seize leadership in new and emerging research areas
- Increase and diversify research funding
- Encourage the pursuit of "Big Research Problems" of major societal importance requiring an interdisciplinary approach
- Engage in research that threads technology and its impact into projects rooted in the social sciences and humanities

## SHARE RESULTS

- Encourage and support knowledge translation to inform business decisions, policy development by all levels of government, and members of society at large
- Promote awareness of Waterloo research achievements by encouraging publication in highly ranked dissemination venues and nominating faculty for national and international awards and honours
- Seize the opportunity for international leadership in the development and implementation of technologies at the interface between the physical sciences/engineering and medicine

# GOAL: STRENGTHEN NATIONAL AND GLOBAL RESEARCH PARTNERSHIPS

**OBJECTIVES**

## ENHANCE CONNECTIONS

- Enhance Waterloo's dynamic innovation ecosystem by connecting with global institutions and global-change initiatives
- Enhance digital connectivity in support of collaborative national and international research
- Provide incentives to enhance the global mobility of researchers (faculty, post-doctoral fellows, graduate students)

## DEEPEN RELATIONSHIPS

- Strengthen formal collaborations with research arms of government
- Increase the number and scope of national and international industry/business research collaborations through Faculty-based initiatives and through the Global Entrepreneurship and Disruptive Innovation office
- Establish and invest significantly in targeted international research partnerships in areas where Waterloo has recognized strengths

**Appendix B – International Strategic Direction**

## +Preface:

This statement of the University of Waterloo's International Strategic Direction provides elaboration and focus of the international priorities of the University of Waterloo's 2020-2025 University Strategic Plan, *Connecting Imagination with Impact.*  It is built upon the Plan itself, as well as the consultations, white papers and deliberations leading to the formulation of the University's Strategic Plan.   The three themes identified in the International Strategic Direction are informed by the identical pillars in the University's Strategic Plan, and captured to reflect the international aspects of our campus' strategic direction.   The International Strategic Direction also incorporates the international focus of the strategic plans of the six Faculties at Waterloo.  This elaboration of Waterloo's International Strategic Direction was developed using a consultative process of meetings and deliberations. In 2019, a broad representation of faculty members and representatives in academic support units with international responsibilities was assembled, called the International Operations Council, and guided by Waterloo International in a series of monthly roundtable discussions. These roundtables identified and focused the broad strategic goals and objectives herein. Finally, after a series of presentations to the International Operations Council, Research Leaders' Council, and the Dean's Council, the International Strategic Direction received wide consensus.  The statements herein identify Waterloo's focused efforts in the area of internationalization and also discuss the support that Waterloo International provides for driving these efforts.

# Waterloo's International Strategic Direction[1]

*Internationalization of Waterloo Talent, Research and Community*

## Waterloo Commitment to Internationalization

Internationalization is a process of imbuing a global perspective in universities' education, culture, and operations and is key to raising awareness of various cultures and societies, and to enrich the scholarly experience of the academic community. Internationalization allows employers to capitalize on intercultural skills among a rich talent pool, and to develop our academic community to be global citizens who are better integrated in diverse societies and aware of fast-moving global trends. In concert with implementation of the broader 2020-2025 University Strategic Plan, *Connecting Imagination with Impact*, this multidimensional strategic direction is supported by Waterloo International, Faculties, and Academic Support Units in their range of activities and initiatives. The University of Waterloo promotes internationalization by bringing the world to life on campus, by connecting students, faculty and staff to other countries and cultures, and by developing international connections through global alumni and stakeholders as well as partnerships with universities, research institutions, governments, businesses, and civil society organizations abroad. While internationalization helps University of Waterloo thrive, it is also beneficial to the world when Waterloo internalizes these objectives. This strategic direction integrates these thematic pillars by advancing internationalization as a core mission.

## Internationalization Themes

*Global Talent Developed through Innovative Teaching, Learning, and Research*

- Global experiences, technology-enabled learning, and experiential learning through cooperative education provide our community opportunities to gain valuable intercultural fluency and skills.
- Commercialization and new ventures through international cooperative-education provide opportunities, global mobility, and international research collaborations.
- Networks with industry and international employers of coop students underpin world-renowned work-integrated learning programs.
- Global leadership in mobilizing the pedagogical benefits of coop, lifelong learning, and promoting safe international mobility enhances experiential learning.

*Research Aligned with Global Challenges*

- Advancements in artificial intelligence, quantum and nanoscience, mathematics, and robotics allow us to address complexities in our world.
- Innovative technologies leveraging big data including machine learning are being used to address the challenges of assured population health, modeling pandemics, and environmental sustainability.
- Cybersecurity, cryptography and policy governance address citizen demands for data privacy,

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and international security concerns.

- Sustainability, technology, policy innovation, and governance tackle climate change, pandemics, and global energy and water insecurity.
- Advanced manufacturing, improved human-machine interfaces, autonomous and intelligent systems, light and sound for improved vision and imaging, and connectivity and telecommunications enhance global prosperity, robust supply chains, and population health.
- Critical understandings of the impacts of technology, belief-systems, and material conditions on social, cultural, and political actors are key to change and provide effective solutions to global challenges.

*Diversity on Campus and Beyond*

- Spirit of global citizenship and intersectionality are found in Waterloo research, teaching and learning.
- Engagement with local community and global audiences through inspiring virtual and on-campus events provide opportunities to learn about Waterloo research.
- Commitment to intercultural understanding, intersectionality, and opportunities for student, faculty, and staff international mobility.
- Commitment to leverage technology, where possible, to connect Waterloo community to colleagues around the world in the spirit of building intercultural understanding.

## Goals and Objectives

*Goal:* Enhance Waterloo's global impact and reputation through strategic international research, activities, programs and academic partnerships:

*Objectives*:

- Build, nurture and support international partnerships that elevate and propel Waterloo's global position.
- Strategically engage international partners with shared global outlooks and demonstrated excellence in research and higher education.
- Nurture talent for work of the future by engaging with international partners who are on the forefront of innovation.
- Empower Waterloo faculty, students, and staff to organically forge linkages with international partners through meaningful exchanges, outbound engagement, and impactful collaboration.
- Assist in diversifying study abroad and co-op beyond traditional destinations and experiences.
- Galvanize support for and tap into Waterloo alumni chapters to strengthen international student recruitment activities; enhance student work-integrated learning and exchange experiences, and engage international firms and organizations in sponsored research.
- Align and highlight international activities and strategy of faculty, students, and staff through marketing tools such as the Global Impact report.
- Support Waterloo Faculties and Research Centres and Institutes in their quest to incorporate internationalization into their strategies and achieve international research

and commercialization goals.

*Goal*:  Advance University of Waterloo international leadership in innovation and entrepreneurship:

*Objectives*:
- Engage with world leading innovation and entrepreneurship hubs to foster global talent development and mobility.
- Provide opportunities for Waterloo-led start-ups to tap into global markets and to partner with respective international counterparts for scale-up opportunities through collaboration and competitiveness.
- Attract and inspire global research and education leaders who are on the leading edge of their disciplines.
- Encourage global talent to study, collaborate, and work at the University of Waterloo.
- Foster an environment in which activities that enhance Waterloo's global impact are valued.
- Advance Waterloo's unique regional, national, and global position as a hub of innovation, commercialization, incubation, and entrepreneurship.
- Develop, incorporate, and share global best practices in experiential learning, work-integrated learning, lifelong learning, talent acquisition, and commercialization.
- Integrate international research and student partnerships with collaborative and innovative programming into the learning environment.
- Engage international industry partners in preparing world-ready, globally-literate graduates for the future of work.
- Utilize International Week to highlight Waterloo's commitment to talent, research, and community through meaningful events and activities that link people within our campuses to our Global Alumni Volunteer Network (GAVN) and co-op students on international work terms.
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*Goal*: Strengthen international experiences, both abroad and on Waterloo's campuses, by supporting and engaging the various support units that are undertaking sustained and impactful international activities that foster global perspectives

*Objectives*:
- Study how Waterloo can help improve the experiences of international students and post-doctoral fellows on campus and implement best practices that assist international students and post-doctoral fellows to feel that they belong and are welcomed.
- Break down intercultural barriers and share information about opportunities for internationalization with the Waterloo community.
- Diversify both enrollment of talented students, and recruitment of staff and faculty.
- Integrate shared experiences of Waterloo's domestic and international students in meaningful ways to nurture a sense of belonging for the campus community.
- Support campus stakeholders to improve international student experiences and help disseminate findings related to these experiences to the Waterloo community.
- Bring the world to campus life through food, festivities, and intercultural exchanges.
- Promote Waterloo's spirit of inclusivity, inquisitiveness, and academic excellence to the

world through targeted communication strategies.

- Improve internationalization initiatives by engaging with and seeking feedback from the Waterloo community on the value of outbound experiences.
- Strengthen the capacity of Waterloo International to increase awareness and provide support to the Waterloo community to assist in building global relationships.
- Support individual faculty members' creativity and academic freedom to pursue meaningful international collaborations.
- Engage Waterloo's extensive global coop employer network to increase interest in Waterloo graduates abroad.

*Goal*: Position Waterloo International as a nexus for continued cross-campus collaboration on internationalization, enabling an impactful global presence that is aligned with our distinctive core strengths:

*Objectives*:

- Advance Waterloo International as a hub for realizing the internationalization aspirations of individuals, academic support units, Faculties, and Research Centers and Institutes.
- Inform the Waterloo community about the range of services Waterloo International provides.
- Equip Waterloo International staff with the resources needed to advise campus stakeholders on how to pursue interests in global collaborations, international mobility, internationalization of research teams, and international learning environments.
- Promote best practices in internationalization through signature events.
- Formalize and coordinate the role of the International Operations Council to facilitate quarterly cross-campus communication and flow of information on campus-wide internationalization initiatives, supplementing existing committees across campus which also shares and promotes internationalization activities.
- Harness Canada's engagement in the world by supporting meaningful Waterloo initiatives that champion international development and have positive global impact.
- Encourage Waterloo community to register travel to facilitate safety abroad and to estimate University-related travel emissions, utilizing where possible Waterloo International's Business Process Manager (BPM) software. These estimates could then be used to assist Finance in footprint-tracking procedures and to support specific carbon-offsetting actions.
- Utilize Waterloo International's BPM software to support Finance's reporting of carbon emissions relating to university travel.

*Goal*: Promote alignment with Waterloo's *Environmental Sustainability Strategy* and *Sustainability Guide* as we internationalize research, teaching, and campus operations:

*Objectives*:

- Highlight Waterloo Faculties, Research Centres and Institutes' efforts to align research and

activities that address the myriad of the United Nations' Sustainable Development Goals (UN SDGs).

- Disseminate Waterloo's commitment to environmental sustainability and the UN SDGs in engagement with our global alumni virtual network and international partners to further internationalize our initiatives.
- In aligning with SDGs on climate action, sustainable cities and communities, and on responsible consumption and production, collaborate with Waterloo's Sustainability Office, Faculties, and Research Centres to explore tools and guidelines that would reduce university-related travel where feasible, encourage sustainable forms of transportation, and support green procurement.
- Encourage Faculty and Staff to use online conferencing for professional development in lieu of international travel where possible.
- Deepen Waterloo's global connections through virtual joint research institutes by leveraging appropriate technology to streamline processes that minimize international travel where possible.
- Support Co-operative Education's continued virtual initiatives in international work-integrated learning placements and cooperative education internships for our students. Support faculty-driven missions to creatively lower teaching and research related carbon footprint through alternative activities, such as acquiring appropriate technology for virtual international teams and class projects to help lower Waterloo's carbon footprint or to host virtual visiting scholars.
- Utilize Waterloo's Interdisciplinary Centre on Climate Change (IC$^3$), Waterloo Institute for Sustainable Energy (WISE), Water Institute, Waterloo Institute for Nanotechnology, the Living Lab and various leadership councils, such as the Council for Responsible Innovation and Technology (CRIT), to support Waterloo efforts to meeting UN SDGs in all aspects of Waterloo's international activities.
- Support on-campus climate action networks, such as Sustainable Development Solutions Network (SDSN), and student-led initiatives to encourage the campus community to find creative ways to broadly advance UN SDGs.
- Build and strengthen international collaborations that provide resources for Waterloo's ecosystem of innovative entrepreneurs to find sustainability solutions and build resilience to the myriad of global environmental challenges.

To institutionalize these goals, Vice-President, Research and International will host annual meetings in May of Executive Council to consider metrics and targets and to assess progress and motivate cross-campus collaboration to achieve said goals in this International Strategic Direction.