### OPEN SESSION

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| 3:30 | **Consent Agenda**  
Motion: To approve or receive for information by consent items 1-6 below.                      |              |
| 3:35 | 1. Minutes of the 15 September 2014 Meeting                                                            | Decision     |
|      | 2. Report from Undergraduate Council                                                                  | Decision/Information |
|      | 3. Report of the President  
   a. Recognition and Commendation                                                                       | Information  |
|      | 4. Report of the Vice-President, Academic & Provost  
   a. Call for “University Professor” Nominations                                                       | Information  |
|      | 5. Reports from the Faculties                                                                         | Information  |
|      | 6. Committee Appointments                                                                             | Decision     |
|      | **Regular Agenda**                                                                                   |              |
| 3:45 | 7. Business Arising from the Minutes                                                                  |              |
|      |   a. Revision and Consolidation of Senate Bylaws                                                      | Second Reading|
| 3:55 | 8. WatCAR Presentation: Duane Cronin, Executive Director and  
      a. Professor of Mechanical & Mechatronics Engineering                                              | Information  |
| 4:05 | 9. Reports from Councils  
   a. Graduate & Research                                                                               | Decision     |
|      |   b. Undergraduate                                                                                    | Decision     |
| 4:15 | 10. Report of the President  
    a. Strategic Plan 2013-2018                                                                         | Information  |
    a. Report from the Fall Break Task Force                                                             | Information  |
|      |    b. Amendments to Policy 68 – Vice-President, University Research                                    | Decision     |
|      |    c. Degrees, Diplomas and Certificates [lists of graduands to be available for review online prior to the Senate meeting] | Decision     |
| 4:50 | 13. Report of the Vice-President, University Research                                                  | Information  |
| 5:00 | 14. Other Business                                                                                    |              |
|      | **CONFIDENTIAL SESSION**                                                                             |              |
| 5:05 | 15. Minutes of the 15 September 2014 Meeting                                                           | Decision     |
| 5:10 | 16. Business Arising from the Minutes                                                                  |              |
| 5:15 | 17. Other Business                                                                                    |              |
University of Waterloo  
SENATE  
Minutes of the Monday 15 September 2014 Meeting


Guests: Nello Angerilli, Mario Coniglio, Donna Ellis, Rayeh Kashef Al-Ghelea, Carlos Mendes, Cathy Newell Kelly, Chris Read, Ellen Réthoré, Daniela Seskar-Hencic, Allan Starr, Dave Wallace

Secretariat & Office of General Counsel: Logan Atkinson, Tracy Dietrich


*regrets

Organization of Meeting: Feridun Hamdullahpur, chair of Senate, took the chair, and Logan Atkinson, secretary of Senate, acted as secretary. Atkinson advised that due notice of the meeting had been given, a quorum was present, and the meeting was properly constituted.

OPEN SESSION

Hamdullahpur extended a welcome to the following new senators: Trevor Bechtel, CGR faculty representative; Shikha Gandhi, alumni representative. He also welcomed the following individuals, attending their first meeting of Senate in their new roles: Ian Orchard, vice-president, academic & provost; Jean Andrey, interim dean of environment; Jim Frank, interim associate provost, graduate studies; Wendy Fletcher, principal of Renison University College.

Consent Agenda  
Senate heard a motion to approve or receive for information by consent items 1-6 below.

In connection with materials related to Legal Studies in the report from Undergraduate Council, a question was raised about the calculation of cumulative overall averages, and the explanation was offered that the courses referred to are Legal Studies standalone courses. The request was made to ensure that the definition of “cumulative Legal Studies average of 70%” is clear in the calendar.

It was noted that the section of the report from Undergraduate Council titled “Double Counting of Courses” in the Faculty of Science is simply putting into words what has been the normal practice.
1. **MINUTES OF THE 16 JUNE 2014 MEETING**  
Senate approved the minutes of the meeting as distributed.

2. **REPORTS FROM COMMITTEES AND COUNCILS**  
**Graduate & Research Council.** Senate received the report for information.

**Nominating Committee for Honorary Degrees** [list of honorands for fall convocation at senators’ places]. Senate received the list for information.

**Undergraduate Council**
- **Anthropology, Faculty of Arts**
  - **Three-year General Anthropology.** Senate approved amendments to the Three-year General Anthropology plan as presented in the report.
  - **Four-year General Anthropology.** Senate approved amendments to the Four-year General Anthropology plan as presented in the report.
  - **Honours Anthropology.** Senate approved amendments to the Honours Anthropology plan as presented in the report.
  - **Honours Anthropology (Arts and Business, Co-op and Regular).** Senate approved amendments to the Honours Anthropology (Arts and Business, Co-op and Regular) plan as presented in the report.
  - **Joint Honours Anthropology.** Senate approved amendments to the Joint Honours Anthropology plan as presented in the report.
  - **Minor in Anthropology.** Senate approved amendments to the Minor in Anthropology plan as presented in the report.

- **Legal Studies, Faculty of Arts**
  - **Four-year General Legal Studies.** Senate approved amendments to the Four-year General Legal Studies plan as presented in the report.
  - **Honours Legal Studies.** Senate approved amendments to the Honours Legal Studies plan as presented in the report.
  - **Honours Legal Studies (Arts and Business, Co-op and Regular).** Senate approved amendments to the Honours Legal Studies (Arts and Business, Co-op and Regular) plan as presented in the report.
  - **Joint Honours Legal Studies.** Senate approved amendments to the Joint Honours Legal Studies plan as presented in the report.
  - **Minor in Legal Studies.** Senate approved amendments to the Minor in Legal Studies plan as presented in the report.

- **Double Counting of Courses, Faculty of Science.** Senate approved the new regulation on double counting of courses in the Faculty of Science as presented in the report.
• English Language Proficiency Requirement, Faculty of Science. Senate approved amendments to the faculty regulation on English language proficiency requirements as presented in the report.

• Letters of Permission, Faculty of Science. Senate approved amendments to the faculty regulation on letters of permission as presented in the report.

The remaining item in the report was received for information.

3. REPORT OF THE PRESIDENT

Recognition and Commendation. Senate received the report for information.

4. REPORTS FROM THE FACULTIES, CONRAD GREBEL UNIVERSITY COLLEGE AND RENISON UNIVERSITY COLLEGE

Senate received the reports for information.

5. COMMITTEE APPOINTMENTS

Senate approved the following appointments:

• Executive Committee: Maryam Shahtaheri as graduate student senator representative (replacing Coleen Even), term to 31 December 2014.

• Long Range Planning Committee: Wendy Fletcher as AFIW faculty senator representative (replacing Glenn Cartwright), term to 30 April 2015, and Coleen Even as graduate student senator representative (replacing Maryam Shahtaheri), term to 31 December 2014.

6. REPORT OF THE COU ACADEMIC COLLEAGUE

Senate received the report for information.

Richter and Jowhari. Carried.

Regular Agenda

7. BUSINESS ARISING FROM THE MINUTES

Confucius Institute. A request was made for further information on the status of the Confucius Institute. Hamdullahpur informed Senate that the Confucius Institute would continue in its current format for the time being. All existing agreements have been reviewed, and discussions are underway with Nanjing University on continuation of the institute. The university will soon host a delegation from Nanjing to continue discussions. The university community will be consulted before any decision is made on what to do with this project on a long term basis, the university will exercise due diligence and come to a position based on the best interests of the university, and any decisions related to renewal or re-establishment of the institute at the University of Waterloo will come to Senate for approval.

8. REPORTS FROM COMMITTEES AND COUNCILS

Executive Committee

• Revision and Consolidation of Senate Bylaws. Senate heard a motion to give first reading to the consolidated Senate Bylaws 1, 2, 3, and 4 as presented in the report.

Hamdullahpur and Wray.
Senators raised several questions, including: whether the bylaws ought to point out that senators in a conflict of interest ought not to vote on relevant motions; whether it ought to be expressed that motions are carried on an ordinary majority in most cases; if the composition of Senate committees and councils, especially with respect to *ex officio* members, is justifiable; whether the timing of notice to various constituencies during election periods is fair. The secretary agreed to review these matters and advise.

The motion carried.

**Graduate & Research Council**

- **Optometry & Vision Science, Faculty of Science.** Senate heard a consolidated motion to address the following matters:
  - **Accelerated Master of Science in Vision Science.** To approve amendments to the accelerated Master of Science in Vision Science program as presented in the report.
  - **Master of Science in Vision Science.** To approve amendments to the Master of Science in Vision Science program as presented in the report.
  - **Accelerated Doctor of Philosophy in Vision Science.** To approve amendments to the accelerated Doctor of Philosophy in Vision Science program as presented in the report.
  - **Doctor of Philosophy in Vision Science.** To approve amendments to the Doctor of Philosophy in Vision Science program as presented in the report.

Frank and Leat. Carried.

- **Sub-specialization in Community Research Methodology, Sociology and Legal Studies, Faculty of Arts.** Senate heard a motion to approve the proposed cancellation of the Sub-specialization in Community Research Methodology.

Frank and O’Connor. Carried.

**Undergraduate Council**

- **Political Science, Faculty of Arts.** It was noted that motions numbered 1, 2 and 16 in the report from Undergraduate Council distributed to Senate are to be deferred.

Senate heard a consolidated motion to address the following matters:
  - **Honours Political Science.** To approve amendments to the Honours Political Science plan as presented in the report.
  - **Joint Honours Political Science.** To approve amendments to the Joint Honours Political Science plan as presented in the report.
  - **Honours Political Science Co-op.** To approve amendments to the Honours Political Science Co-op plan as presented in the report.
  - **Minor in International Studies.** To approve amendments to the Minor in International Studies plan as presented in the report.

Peers and Busch.
Discussion followed on the appropriateness of the requirements to receive a Joint Honours Political Science degree. Peers replied by saying that the proposed changes are part of the standardization of programs in the Faculty of Arts, and that joint honours programs are to be encouraged for interdisciplinarity and depth. Some caution was expressed about the relative value of programs with lower course requirements for majors and the impact this has on entry into graduate school. Peers suggested that the two disciplines in a joint honours degree tend to be complementary, and this makes graduates more attractive for graduate school entry. Further, we are equipping students for many pursuits, including graduate school but also a number of others. We are envisioning in arts both a more entrepreneurial degree based in skills development, and a proper preparation for graduate school.

The question was called, and the motion carried.

- **Sociology, Faculty of Arts.** Senate heard a consolidated motion to address the following matters:
  - **Three-year General Sociology.** To approve amendments to the Three-year General Sociology plan as presented in the report.
  - **Four-year General Sociology.** To approve amendments to the Four-year General Sociology plan as presented in the report.
  - **Honours Sociology.** To approve amendments to the Honours Sociology plan as presented in the report.
  - **Honours Sociology (Arts and Business, Co-op and Regular).** To approve amendments to the Honours Sociology (Arts and Business, Co-op and Regular) plan as presented in the report.
  - **Joint Honours Sociology.** To approve amendments to the Joint Honours Sociology plan as presented in the report.
  - **Minor in Sociology.** To approve amendments to the Minor in Sociology plan as presented in the report.

Peers and O’Connor. Carried.

- **Deactivations, Faculty of Arts.** Senate heard a consolidated motion to address the following matters:
  - **Honours Anthropology Co-op, Anthropology.** To approve the proposed inactivation of the Honours Anthropology Co-op plan.
  - **Diploma in Management Studies, Management Studies.** To approve the proposed inactivation of the Diploma in Management Studies plan.
  - **Specialization in Criminology, Honours Legal Studies/Sociology, Legal Studies.** To approve the proposed inactivation of the Specialization in Criminology plan.
  - **Specialization in Criminology, Honours Sociology/Legal Studies; Specialization in Business and Technology; Specialization in Crime and Deviance, Sociology.** To approve
the proposed inactivation of the Specialization in Criminology plan, Specialization in Business and Technology plan and Specialization in Crime and Deviance plan.

Peers and Richter.

It was observed that the deactivation of the Honours Anthropology Co-op plan ought to be justified in terms of the university’s strategic plan. In response, it was confirm that low enrolments are the key to this proposed deactivation, and anthropology students have access to co-op through arts and business.

The motion carried.

9. REPORT OF THE PRESIDENT

The president presented a wide ranging report, including the following: observations on recent orientation activities, with over 7000 new and transfer students, and 1800 new graduate students; congratulations offered to the Graduate Student Association for the graduate students’ orientation; sadness at the loss of three students over the summer and into orientation week; there are 77 new faculty and contract faculty; Executive Council served a free lunch to over 3000 students; the university welcomed a dynamic new company to the area, Square, coming here specifically because of our engineering students; the university opened the new Velocity Foundry, and officially opened the renovated Health Services building; a new Minister of Training, Colleges and Universities has taken office, a former academic and researcher, and he has added the Ministry of Research and Innovation; all strategic mandate agreements are now public; a call for proposals on major capital expansion has been made, our letter of intent has been submitted, and our formal proposal will go in on or before 26 September, with one proposal for science and one for engineering; comments on the proposed Canada First Research Excellence Fund – $1.5B anticipated over the next ten years, with approvals pending at the cabinet level; we anticipate four months to prepare our letter of intent on this matter, with a further four months to submit a final proposal if the letter of intent is accepted; the idea is that successful proposals must be game changers and increase Canada’s position on a global scale, with four to seven awards likely; five mini town halls on strategic plan implementation have been held, with three more to be done this fall; the university has been awarded 5+ stars, the highest level of achievement possible and in the top 10 percentile, by the QS Stars ranking, developed through volunteer participation with many categories and participants; the Shanghai ranking was recently released and was not as successful for us, although the basis of the ranking has been changed to our detriment; the top three schools based on most hires in software engineering in California have been announced, with UC Berkeley #1, UCLA #2, and the University of Waterloo #3; a status report was provided for executive searches currently underway, including those for four deans, and the vice-president, university relations.

10. Q&A PERIOD WITH THE PRESIDENT

There were a number of comments and questions emerging from the president’s report. Concern was expressed about institutional memory when so many positions on Executive Council turn over at the same time, with the view that this is an argument to promote internal candidates while keeping in mind that we want to appoint the best person available for each position.

On the strategic mandate agreements, senators asked about their real impact, whether funding decisions will actually be made on the strength of these documents, and whether differentiation has any real meaning when the SMAs tend to look and feel the same. The president responded by saying that the University of Waterloo is in a good position if the SMAs have the impact they were intended to have, given that our SMA is consistent with who we are and with the ambitions outlined in our strategic plan. Funding decisions may in fact follow the SMAs, given the fiscal constraints facing the
province. The idea of satellite campuses is not a strong attraction for the University of Waterloo, given challenges with student support at those locations and continuing questions about sustainability.

In response to a question, the president commented on the challenges of rising tuition, but tied this issue with the quality of education available at this institution. This is directly based in the ability to hire more faculty, and this requires investment. Government funding is decreasing, meaning we must find ways to generate funds necessary to guarantee a high quality education. At the same time, we will never turn away a student based on financial exigency, and the university is making every effort to ensure that students are aware of available support.

There was discussion of the value of rankings, and how rankings relate to our goals of delivering excellence in everything we do. The president responded by pointing out that if we do not participate we will be ranked anyway, meaning we ought to do whatever we can to show the university in the very best light. Rankings affect our recruitment of both faculty and students.

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

Delegation of Authority re: Decanal Nominating Committee Chairs. Senate heard a motion to grant the vice-president, academic & provost authority to delegate the role of chair of the Dean of Applied Health Sciences Nominating Committee and the Dean of Environment Nominating Committee.

Orchard and Frank.

This motion is intended as a policy exception for these two searches, and not as a permanent change. Delegations will be published in the Daily Bulletin and updated on the Secretariat & Office of General Counsel web pages.

The motion carried.

Repeal of Policy 58 – Search and Nominating Committee for Director Guelph-Waterloo Centre for Graduate Work in Chemistry. Senate heard a motion to repeal Policy 58 – Search and Nominating Committee for Director Guelph-Waterloo Centre for Graduate Work in Chemistry, effective immediately.

Orchard and McNamara.

Policy 58 has been used in the past for the appointment, but it is unnecessarily onerous given the outcome. In the last appointment of a director, the policy was followed. There will not be a new policy, but there will be a new practice in place coincident with repeal of the policy. Changes have already been provided for at the program level. The point was made that there appears to be a gap – when the policy is repealed we do not have a Senate-approved process to replace the policy, but it was observed that this is simply a matter of administrative responsibility.

The motion carried.

12. REPORT OF THE VICE-PRESIDENT, UNIVERSITY RESEARCH

Dixon advised that in July and August the university submitted research funding applications worth approximately $130M in the following areas: CFI grants, Ontario Research Fund: Research Excellence and Ontario Research Fund: Research Infrastructure.
He reiterated that for the Canada First Research Excellence Fund, the university will have about four months to respond to the call for letters of intent, and then a further four months to submit final proposal if the letter of intent is accepted.

Regarding management and funding of high performance computing in Canada, Compute Canada, on instructions of CFI, will have a much greater role in management of allocation of resources and integration and efficiencies in the use of high performance computing across Canada. Compute Ontario has emerged as a result of these activities, attempting to integrate the four main bodies that provide high performance computing in Ontario.

The new president of NSERC is Dr. Mario Pinto who is currently completing his second term as vice-president, research at Simon Fraser University.

The president of SSHRC, Dr. Chad Gaffield, has stepped down to resume his position as professor at the University of Ottawa. Dr. Jack Mintz became interim president of SSHRC on 1 September 2014. The search for a new president is just beginning.

There is a new Mitacs program called Globalink Research Award intended to provide an opportunity for faculty at Canadian universities to strengthen existing international research collaborations and connect with colleagues around the world through the mobility of senior undergraduate and graduate students.

13. OTHER BUSINESS

Report from Undergraduate Council. With respect to the original motions 1 and 2 in the report from Undergraduate Council in the regular agenda, motions in a different form will be brought forward to address the contemplated program changes.

Senate convened in Confidential Session.

Logan Atkinson
University Secretary & General Counsel

16 September 2014
Senate Undergraduate Council met on 13 May 2014 and 9 September 2014, and on behalf of Senate approved new courses, course changes, course inactivations and other minor curricular and regulation changes. Council agreed to forward these items to Senate for information. As well, council has forwarded to Senate items related to a new regulation and a change to an existing regulation for approval. Council recommends that these items be included in the consent agenda. The items recommended for inclusion in the regular agenda are contained in a separate report.

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

FOR APPROVAL [effective 1 September 2015]

NEW FACULTY REGULATION

Faculty of Science
Faculty Information and Regulations

1. Motion: To approve the new Faculty rules for sixth and seventh courses as described.

Science Regulations Governing 6th and 7th course enrolments/term

1. The maximum allowable per term lecture enrolment in the Three-year General BSc plan is 2.5 lecture units (five courses).

2. The normal allowable per term course load in Honours BSc plans is five lecture courses and their associated labs. Enrolment will be capped at 3.25 units per term unless it occurs as part of the published course sequence of a Science plan.

- Students are advised not to enroll in six lecture courses per term and, normally, will be required to drop one course unless their cumulative overall average is above 80%.
- Students wishing to exceed 3.25 units by enrolling in:
  - Any combination of lectures or labs, involving less than seven lecture courses, will:
    - Submit a unit load override request to their program advisor for consideration, within the course selection period.
  - Seven lecture courses, will:
    - Normally, have a 90% cumulative average.
    - Submit a petition for consideration by the Science Petitions Committee. The petition must be delivered to the Science Undergraduate Office and include the 70A form, supporting rationale or documentation, as well as comments from their program advisor. Petitions must be submitted at least one month before the start of the term (April 1 for Spring, August 1 for Fall, and December 1 for Winter).

Rationale: This regulation clarifies how students may proceed when seeking to enroll into sixth or seventh courses in a given term, or the equivalent thereof.
CHANGES TO FACULTY REGULATIONS

Faculty of Science
Faculty Information and Regulations

2. Motion: To approve amendments to the Faculty rules for repeated courses as described.
(underline = new text)

Rules for Students enrolled in Faculty of Science plans

Repeating Courses

In cases where a failed course is repeated, all grades will be used in calculating cumulative averages.

When courses are taken twice but passed once, both grades are included in average calculations regardless of whether the failure occurred on the first or second attempt. In such cases, both a credit and a failure are recorded.

Courses, or their equivalents, which have already been passed, will neither be counted for credit a second time nor counted in any averages.

Third attempts in previously failed courses, or their equivalent, are allowed in some plans in Science but not all. Where it is not allowed, the information is outlined in the program/plan section of the undergraduate calendar. Students uncertain of the rules for their program/plan should contact an Undergraduate Advisor before starting a third attempt. Fourth attempts are not allowed.

Rationale: This regulation provides students with a clear understanding of how repeated courses shall be treated with regard to academic records and the calculations therein.

FOR INFORMATION

CURRICULAR MODIFICATIONS

A change consisting of a new course was approved on behalf of Senate for the Faculty of Science (science) effective 1 January 2015.

Changes consisting of new courses were approved on behalf of Senate for the Faculty of Science (chemistry; pharmacy; physics) effective 1 May 2015.

Changes consisting of new courses, course changes, course inactivations and minor plan amendments were approved on behalf of Senate for the Faculty of Arts (anthropology; arts and business; digital arts communication; drama & speech communication; East Asian studies; economics; English language & literature; fine arts; French studies; Germanic and Slavic studies; history; Native studies; religious studies; peace and conflict studies; sexuality, marriage and family studies; social development studies) and the Faculty of Science (biochemistry; biology; biotechnology/chartered professional accountancy; earth and environmental science; materials and nanosciences; mathematical physics; physics; science; science and business) effective 1 September 2015.
ACADEMIC PROGRAM REVIEW REPORTS

Augmented Final Assessment Report – Computer Science – Please see Attachment #1.

Senate Graduate & Research Council met on 14 April 2014 and Senate Undergraduate Council met on 13 May 2014, and agreed to jointly forward this item to Senate for information.

Faculty of Mathematics - Augmented Program in Computer Science

On behalf of Senate, both councils approved an augmented academic review of the programs in computer science offered by the David R. Cheriton School of Computer Science in accordance with the university’s Institutional Quality Assurance Framework. Based on the material presented in the Final Assessment Report, and the report of the reading subcommittee formed by each council to review the self-study and program materials in depth, request additional information and provide recommendations, the programs were found to be of good quality.

Final Assessment Report – Music – Please see Attachment #2.

Final Assessment Report – Sociology – Please see Attachment #3.

/MG

Mario Coniglio
Associate Vice-President, Academic
Final Assessment Report
Computer Science (BCS, BMath(CS), BCFM, MMath, PhD)
February 2014

Review Process

The review covers three undergraduate programs: the Bachelor of Mathematics in Computer Science (BMath(CS)), the Bachelor of Computer Science (BCS) and the Bachelor of Computing and Financial Management (BCFM) and two graduate programs: the Master of Mathematics (MMath) and the PhD. Some other smaller programs partly administered by the David R. Cheriton School of Computer Science are included in separate reviews. The Master of Health Informatics CS stream will be reviewed along with the Applied Health Sciences stream. The Master of Quantitative Finance will be reviewed with the graduate programs in Statistics, and the options in Quantum Information (a collaborative program) will be reviewed separately. The double degree BCS-BBA (operated jointly with Laurier) will be reviewed in two years along with the BMath-BBA. The undergraduate Software Engineering program is being reviewed along with other Engineering programs. The various undergraduate Minors and Options offered are not “programs” as defined by the IQAP (i.e. are not stand-alone qualifications which can be used to lead to a degree in the absence of a Major or Honours program), and are hence not included.

The self-studies of the BCS, BMath(CS), MMath and PhD programs were combined in a single augmented review. Co-ordinating such a large review required team input. The review was led by the Directors of Undergraduate Studies and of Graduate Studies in the School. The review was discussed with the School’s Executive Committee, the Graduate and the Undergraduate curriculum committees, and at monthly School Council meetings. The Director of Undergraduate Studies also met periodically with the Director of the BCFM program (who is based in the School of Accounting and Finance) and with the Director of Software Engineering. The learning outcomes were developed at a mini-retreat, to which all faculty members, lecturer-advisors and Instructional Support Coordinators were invited. An alumni survey was also undertaken. Over 6000 alumni were contacted, and 850 responded, of whom 672 provided complete responses. Note that some of this Final Assessment Report draws verbatim from the self-study documents.

The self-study for the BCFM program was written separately, and involved a team of the two School Directors (Cheriton School and School of Accounting and Finance), the Director of Undergraduate Studies in the Cheriton School, and the two co-Directors and Program Manager from the School of Accounting and Finance. Feedback for this self-study was obtained from students at program events, and from alumni through surveys.

The review was undertaken by Dr. Anne Condon, Department Head and Professor of Computer Science, University of British Columbia, and Dr. Ken Jackson, Professor, Department of Computer Science, University of Toronto. The site visited occurred on January 13 and 14, 2014. The internal reviewer was Dr. Robert Park, Department of Anthropology.
The previous undergraduate review of the BCS and BMath(CS) (2006) resulted in a set of 14 recommendations. These ranged from advice regarding student/TA ratios, to making course evaluations available online, to providing courses in effective writing for students, and a variety of other topics. Many of these recommendations have been implemented over the period since the review, with the exception of some which required more instructional resources than could be made available, and others (such as establishing an Industrial Advisory Board) where it was felt that an alternate mechanism (good liaison with Co-op employers) was preferable. There has been no previous review of the BCFM, which began in 2006.

The previous graduate review (2007) ranked the undergraduate program as among the best in the world, and the graduate program as among the two or three finest in Canada. No recommendations were made (other than not to name one of the fields “Information retrieval” but to choose an updated name), and the program was rated as “Good Quality”. The reviewers were also concerned that the School should put together a plan to achieve the planned increase in graduate enrolment. The School did in fact achieve their set target, growing from 265 to 327 graduate students by 2010.

Characteristics of the Programs

The School is large and well established. It has offered a PhD since 1969, and undergraduate and Master’s degrees since shortly after the founding of the University in 1957. As of May 2013, the School had 70 tenured or tenure stream faculty and 9 lecturers, and 300 graduate students. As stated in the preceding paragraph, the School’s programs are considered to be excellent.

The relatively new BCFM is one of only two programs currently at Waterloo recognized as providing 70% of the Chartered Financial Analysis Candidate Body of Knowledge and emphasizing the CFA Institute Code of Ethics and Standards of Practice for the CFA designation. Waterloo was the second university in Canada to qualify for this recognition. The program has also been recognized under the Canadian Information Processing Society, which allows graduates to proceed towards two industry designations.

Academic Programs Offered

At the Bachelor’s level, the BCS is offered both as a regular and a co-op program, and the BMath(CS) (which has a more detailed grounding in mathematics) is likewise offered both as a regular and a co-op program. The co-op only BCFM is offered in conjunction with the School of Accounting and Finance. As mentioned in the introductory section, other programs offered, but not the subject of this review, include a double degree BCS-BBA with Wilfrid Laurier University and the co-op only BSE (Bachelor of Software Engineering) offered in conjunction with Engineering.

The graduate programs include a Master’s of Mathematics in Computer Science, which is offered in three different formats: thesis (the most popular format), research paper, and coursework only (students in this program are not funded). Students can also elect a co-op option. The School also offers a PhD.

Program Objectives

The mission of the David R. Cheriton School of Computer Science is to conduct high calibre research that is recognized nationally and internationally, provide first-rate undergraduate and graduate teaching and degree programs, and provide beneficial public service. The School’s goal is to conduct research and provide degree programs that cover the
breadth of computer science as well as interdisciplinary fields that combine computer science with important applications.

The objective of the two large undergraduate programs (BCS, BMath(CS)) is to provide a comprehensive grounding in Computer Science as a branch of mathematics. Students receive a world-class education including extensive mathematical foundations, and knowledge of the theory, systems, and applications of Computer Science. They are also exposed to the broader intellectual landscape of ideas beyond mathematics and Computer Science. The programs provide students with the knowledge and skills that enable them to pursue successful careers in industry, or proceed to graduate studies.

The BCFM aims to develop professionals that can bridge the gulf between the two disciplines of computer science and financial management. In addition to developing interdisciplinary expertise, students can further specialize in either computer science or finance to set themselves up for graduate studies or employment in computer science, finance, or business.

The MMath program has two objectives:
1. To prepare students for further studies at the PhD level, and
2. To prepare students for research and/or development careers in industry.
The program aims to provide the necessary background to demonstrate individual accomplishment at a high professional and academic standard.

Admission to the MMath program comes from a variety of undergraduate programs, but primarily from students with a background in computer science. A small number of students come from related disciplines such as electrical and computer engineering, and various areas of mathematics. Many of these students must take undergraduate courses in computer science in order to prepare them for the MMath program.

The objective of the PhD program is to train students to become independent research investigators. The PhD program aims at giving graduate students the required theoretical background and research methodology to demonstrate accomplishment of independent and original research work. The criteria for a successful PhD are the pursuit of knowledge and excellence as well as technical expertise. The PhD thesis consists of original research that provides significant contributions to knowledge. The PhD program prepares students for a University teaching and research career or for a high level research and development career in industry.

Specific Learning Outcomes

All three undergraduate programs reviewed here have seven core outcomes expected for all programs: program design and development, programming methodology and practice, computer systems and applications, communication skills, breadth of knowledge outside of CS, advocacy and stewardship, and personal disciplinary limitations. In addition there are two additional specific learning outcomes in mathematics for all three programs (mathematical foundations, and core algorithms and data structures), in which the expectations are higher for the BMath(CS). All co-op students are expected to attain two additional learning outcomes, professionalism, and workplace skills (see self-study document for curriculum maps).

For the BCFM, in addition to the learning outcomes required in the previous paragraph, the Learning Model adopted by all School of Accounting and Finance programs recognizes the following competency areas: functional competencies, understanding business, thinking and problem-solving skills, communication
skills, leadership and collaborative skills, learning how to learn, and ethical conduct. Learning outcomes have been identified within each competency area.

In the **MMath** program, learning outcomes are that:
1. Students demonstrate knowledge of computer science at an advanced level.
2. Students are familiar with a variety of research styles and methods.
3. Students are aware of the field's limitations and open problems.
4. Students critically assess current research publications and present the results to their peers.
5. Students synthesize a solution based on state-of-the-art knowledge of appropriate theoretical and technological bases to a specified research problem in their field of computer science.
6. Students display sustained and collaborative engagement with a significant problem using appropriate design and implementation skills.
7. Students communicate ideas effectively in written and oral form to their peers.
8. Students demonstrate ethical and professional behavior.

In the **PhD** program, learning outcomes are that:
1. Students demonstrate knowledge of computer science at an advanced level across the categories of Applications, Computing Technology, and Mathematics of Computing, as well as a deep understanding of a chosen area of research
2. Students a familiar with a variety of research styles and methods and have in-depth knowledge of one or more styles that are used in their own work
3. Students are aware of the limitations of their personal knowledge of computer science, and of the field's limitations and open problems.
4. Students critically assess the state of the art in a research field and present the results to their peers.
5. Students autonomously synthesize and analyze a solution that extends the state-of-the-art for a specified research problem in their field of computer science of a quality to satisfy peer review, and to merit publication.
6. Students display sustained engagement with a significant thesis problem over an extended period of time, thus developing new skills, tools, techniques, theories, or practices, as appropriate.
7. Students communicate complex and potentially ambiguous ideas effectively in both oral and written form.
8. Students demonstrate ethical and professional behavior.

The two self study documents explain how these map to degree expectations, and to the components of the curriculum.

**Significant strengths of program**

The School is active in all major areas of computer science research and there are 17 fields offered in the graduate programs. The School is very well known for its applied research based on strong theoretical foundations leading to the development of practical systems. The WATFOR compiler, the MAPLE symbolic computation package, SPARSPAK (sparse matrix software), and the New Oxford English Dictionary project are some examples of software packages that were developed as a direct result of research work in the School of Computer Science. In the 2014 QS rankings, computer science and mathematics both were ranked 24th in the world (and second in Canada). No other Waterloo units ranked in the top 25 in the world. Waterloo ranked in the top 200 in accounting and finance and in the top 5 in Canada.
“Graduates from the undergraduate program are actively recruited by leading information technology firms, such as Amazon, Google and IBM. Although possibly a little less acclaimed, the graduate program in CS is also very strong. Graduates from the PhD program hold academic positions in virtually all computer science departments in Canada and many leading universities around the world, as well as many preeminent research laboratories such as Oak Ridge and Lawrence Livermore. In recognition of the strength of UW CS program, the School was recently awarded a Canada Excellence Research Chair (CERC) in Cryptography, Privacy and Security. This will allow the School to become an international leader in this area.” (Reviewers’ Report, 2014).

Since 1993, the Cheriton School has been an active participant in the ACM Programming Contest. Undergraduate teams from Waterloo have won the world championship twice, in 1994 and 1999, and have been North American champions in 1998, 2000, and 2005.

Faculty

The School had at the time of the review 80 faculty, of whom 71 are in the professorial rank, and the other 9 are Lecturers, either Continuing or Definite Term. Three positions were vacant. Only five are currently Assistant Professors. The School is consistently in hiring mode (it takes more than one year to fill positions), and with anticipated retirements averaging 3-4 per year, the hiring is likely to continue steadily. Approximately 50 courses per year are covered on a stipendiary basis. There are around 18 adjunct faculty, who do not teach, and four Research Professors, some of whom teach, as well as supervise graduate students.

The usual classroom teaching load for a faculty member in the School is three courses per academic year based on a notional load of four courses and a reduction for the teaching activity associated with graduate supervision or significant administration. New faculty are given a reduction of one course per year for the first two years in order to devote more time to establish their research programs. On average, each faculty member supervises four graduate students: three MMath and one PhD, with the average being somewhat less for newer faculty. A lecturer typically teaches four to six courses per academic year depending on his/her other duties.

The faculty hold many awards, including Fellow of the Royal Society of Canada (4), Fellow of the Associate of Computing Machinery (5), Fellow of the Institute of Electrical and Electronics Engineers (3), Killam fellowships (1), Steacie fellowships (1), Canada Research Chairs (2 Tier 1: 2 Tier 2), Outstanding Young Computer Science Researcher (3), in addition to numerous similar province-level awards.

Faculty in the Cheriton School bring in around $20m/year in research funding, one quarter from the Tri-Agency, half from the public sector, and the balance from the private sector. About 40% of this is related to the work of the Institute for Quantum Computing (IQC).

The School of Accounting and Finance has 31 professorial faculty, and 11 Lecturers/Continuing Lecturers, as well as stipendiary faculty.

Staff/Administration

The Cheriton School is large, and as such has 7 faculty members in administrative positions, and about 44 staff – 20 in the technical area, and 24 in administrative and program support areas. The School experiences difficulty in maintaining a full complement, since staff with computer-related expertise are
typically highly marketable, and the on-and-off staff hiring freezes at the University can impede replacement.

Students

Over the last 7 years, there have been on average around 500 non-co-op full-time, and 1200 co-op students in the BCS and BMATH(CS) programs (over all four years of the program), and the numbers have grown steadily over the period, from a total of 1647 full-time students in 2007/07 to 2014 full-time students in 2012/13, an increase of 24%. During the same time period, part-time regular and co-op students increased slightly from 130 to 141 students. Of these numbers, the BMATH(CS) program is about 10% of the total. The BCFM program is considerably smaller with first-year enrollments averaging approximately 35 students each year.

Entering averages have been increasing, and recently more than 80% of students have grades of 85% and above, especially in the co-op programs. The proportion of international students has increased to around 30% recently, while the proportion of women students has risen from around 10% in 2006, to around 16-20% currently. The BCFM program aims to admit 40 students per year; over three-quarters of these have Grade 12 averages of 85% and above. Around a third of students are international, and around a third are women, a somewhat higher proportion than in Computer Science.

Retention in CS programs between Year 1 and Year 2 during the review period averaged 84% for regular students and 92% for co-op students. From entering classes between 2004 to 2006, approximately 75% of students in each cohort obtained degrees, with up to almost one quarter earning their degrees in other programs. The retention statistics for more recent cohorts in the review period are not reported because of the high numbers of students still working towards degree completion. For the BCFM program, retention between Year 1 and Year 2 averaged 92%. The 2006 cohort of 44 students saw 82% of the students obtain degrees, with half of those degrees earned from completing other programs.

Three quarters or more of students in the three programs combined are in co-op, and receive excellent ratings from their employers. The School’s reputation has given co-op students an enviable advantage in excellent co-op placements, and in first jobs upon graduation.

The survey of over 6000 Bachelor’s graduates (mentioned in the initial section of the report) indicated that the large majority (over 75%) work in the private sector (12% were in the public sector, 2% in non-profits and the balance in “other” employment). 23% of graduates had gone on to further study (some were still in the process of further study), mainly at the Master’s level.

At the Master’s level, about 70 students/year are admitted. Over the period 2006/7-2012/3 the proportion of international students has increased from 15% to 45%, while the proportion of women has declined from about 25% to about 15%. The median completion time is two years for Master’s students, and about 90% do complete (a few withdraw due to job opportunities). Over the period, a rising proportion has been accepted to the course-based Master’s rather than the thesis-based or research-paper one. (Course-based students do not receive funding, whereas those in the research paper and thesis streams do). On average, faculty members supervise about 3 Master’s students and 1 Doctoral student.

Few students have opted to register in the Master of Quantitative Finance or the Master of Health Informatics from the Cheriton School, and the School is considering withdrawing its participation in both programs.
At the Doctoral level, about 30 students per year entered the program at the start of the period, a number which has fallen to closer to 25 per year currently, a source of concern to the School. The international proportion has increased from 35% to 50% over the period, and the proportion of female students has held steady at around 20%. Mean completion time for the PhD is six years which may be normal for computer science but is on the high side for STEM disciplines at University of Waterloo, and attrition rates are around 20% (some students cannot meet the standards required; while others get good job offers and opt not to complete). Those students who are within time limits (4 years) receive on average $36,000/year (note, this includes the value of the waiver of the international fee differential, which is standard for most international doctoral students).

Summary of programs’ strengths and challenges

Strengths
- Programs are in demand, challenging and attract high-achieving students
- Faculty are active in all major areas of computer science research and the School is very well known for its applied research based on strong theoretical foundations leading to the development of practical systems
- Graduates are highly sought after
- Broad course offerings in undergraduate and graduate programs
- CS faculty and staff members are proactive in developing and adopting efficient and user friendly mechanisms and software tools for managing program administration

Challenges
- The School of Computer Sciences is faced with the retirment of 18 faculty members over the next five years
- Gender balance – females are underrepresented in faculty as well as undergraduate and graduate student numbers
- Decreasing reliance on sessional instructors required to teach CS courses
- Graduate students identified infrastructure support (e.g., access to printers) and space as problematical issues
- Attracting more highly-qualified graduate students
- Average time to completion for PhD students (~5-6 years) is on the high side
- Well recognized best practices for introductory programming classes, such as pair programming and mechanisms for peer learning in the classroom, appear not to be widely adopted

Reviewers’ Recommendations/Departmental response regarding program enhancements

The reviewers commented fulsomely on the program strengths. They did however caution that the School cannot rest on its laurels, and noted four areas for work, namely faculty hiring, attracting high-quality graduate students, attracting more women students, and decreasing the use of sessional instructors (these are four of the five issues on which the School had sought advice). The fifth issue on which the School requested input, was on an appropriate strategy for online teaching, on which the reviewers also provided input. The reviewers provided a great deal of practical advice which will assist the School, the highlights of which are summarized in five key recommendations (taken verbatim from the review), as follows. The Departmental response is also provided, but abridged somewhat from the original.
Recommendations

1. Develop a hiring plan that takes into account what research areas are priorities for the School as well as how hiring more women faculty members might improve the learning environment for women students and how hiring more lecturers might reduce the need to hire as many sessional instructors and might also reduce class sizes.

Response: (Re research priorities) Because the School expects to have so many faculty retirements in the next five years, we have not done this. We agree that School-wide discussions about priorities in hiring are appropriate, but given the breadth of subfields of computer science in which our incipient retirements will occur, we are leery of such prioritization. We will, presuming a successful search for a Canada Excellence Research Chair, be prioritizing hiring in the area of privacy and security.

(Re women faculty) We will be working closely with the Women in Computer Science committee in upcoming years to build strategies to expand the number of women in our faculty complement.

(Re lecturers) We are quite concerned about the increased number of sessionals in our undergraduate program. However, three facts do need to be mentioned in this area.

First, the quality of our sessionals has been very high of late: Indeed, it is good enough that we tend to hire Lecturers from this pool.

Second, a worry with hiring Lecturers is that they are often highly sought by other universities. Hiring Lecturers to solve our sessional problem is clearly a good way to have excellent teachers in front of our classes, but we seem to hire them quite often, but not expand the actual pool very easily.

Third, we have a sense that hiring Lecturers brings a decline in the number of professorial-rank faculty that we are allowed to hire. Given the daunting wave of retirements we are facing in that set of faculty, we are loath to move faculty “slots” from the “Professor” category into the “Lecturer” category.

2. Appoint a senior faculty member to work closely with the Directors in developing bold new strategies to attract women at the undergraduate, graduate, postdoctoral and faculty levels.

Response: With the upcoming change of leadership in the School, we are planning to identify appropriate strategies of this sort with the chair of the Women in Computer Science committee, who will be returning in the 2014/2015 academic year. Early plans include changes to admissions (to be discussed later in this document) and study groups for first- and second-year female students, but this set will surely expand.

3. Step up efforts to promote the CS graduate program at Waterloo, and to ensure timely and smooth communication with prospective and accepted graduate students. Consider introducing an alternative pathway for excellent students from other disciplines to transition into the graduate program.
Response: (Re promotion) We have an active ‘Graduate Recruiting Committee’ that has been constituted just for this purpose. This committee coordinates a grad visit day, runs the graduate ambassador program, and maintains a comprehensive website for prospective graduate students. We believe that the committee is doing an excellent job already and do not anticipate the need for additional actions with regard to this suggestion.

(Re communication) We are keenly aware of this need. Faculty supervisors invariably maintain frequent contact with admitted students. We do not believe additional actions are required at this point.

(Re alternative pathway) The graduate program already includes a provision to encourage applications from undergraduate students from other disciplines.... a transitional student is normally required to complete a program of at most 5 undergraduate or graduate one-term courses in addition to those required of regular students.... Nevertheless, we believe that we can do more to strengthen this program. Therefore, we propose the following two action items: To re-invigorate our transitional program for Master’s students, making it possible for them to spend their transitional time without a supervisor; and to evaluate applicant quality independently of their undergraduate degree, so that top applicants from other disciplines are evaluated on a level playing field.

4. Increase the number of lecturers, as a means of reducing the number of sessionals. Ensure that lecturers and faculty in the professorial ranks strengthen their partnership in advancing and delivering the curriculum, are supported in adopting and assessing new practices pertaining to curriculum or pedagogy and extracurricular enrichment, and avail of professional development opportunities, e.g. through participation in SIGCSE.

Response: (Re lecturers): see (3) above.
(Re new practices in pedagogy): Some resources at Waterloo exist to support this process, such as the Centre for Teaching Excellence, but the Reviewers are right that the School hasn’t done much in this area. An exception was the School’s 2012 retreat, which focused on exactly this topic and stimulated some faculty members’ interest in online discussion systems or video lectures. Proposed action: Create regular events where faculty at all ranks can discuss innovative teaching practices and share their experiences.

5. Review the non-majors undergraduate program in CS in light of increasing enrollments in the School and changes in the CS curriculum at peer institutions.

Response: A subcommittee of our curriculum committee is currently exploring changes to our non-major courses, and will report later this term.

<table>
<thead>
<tr>
<th>Two-Year Plan: Action steps</th>
<th>Who is responsible?</th>
<th>Who will provide resources?</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Require all applicants to CS undergraduate programs to complete the “Additional</td>
<td>Director, Undergraduate Studies</td>
<td>n/a</td>
<td>2014</td>
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</tbody>
</table>


Information Form” as part of their application and focus our admissions process more closely on both what is in these forms and on increasing the gender diversity of our classes.

<table>
<thead>
<tr>
<th>Task</th>
<th>Responsible</th>
<th>Year</th>
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<tr>
<td>2. Create regular events where faculty at all ranks can discuss innovative teaching practices and share their experiences.</td>
<td>Teaching fellow? Other?</td>
<td>n/a</td>
</tr>
<tr>
<td>3. Re-invigorate our transitional program for Master’s students, making it possible for them to spend their transitional time without a supervisor.</td>
<td>Director, Graduate Studies</td>
<td>n/a</td>
</tr>
<tr>
<td>4. To evaluate applicant quality independently of their undergraduate degree, so that top applicants from other disciplines are evaluated on a level playing field.</td>
<td>Director, Graduate Studies</td>
<td>n/a</td>
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<tr>
<td>5. To work with the Graduate Studies Office to improve the clarity of the admission offer letter.</td>
<td>Director, Graduate Studies</td>
<td>n/a</td>
</tr>
<tr>
<td>6. To work with the Graduate Studies Office to inform a supervisor when an offer has gone out to an applicant.</td>
<td>Director, Graduate Studies</td>
<td>n/a</td>
</tr>
<tr>
<td>7. To create USRA opportunities at UW and to advertise these at other Canadian universities.</td>
<td>Director, Graduate Studies/ Director Undergraduate Studies</td>
<td>n/a</td>
</tr>
<tr>
<td>8. To create a slide deck for use by faculty to advertise the graduate program during visits.</td>
<td>Director Graduate Studies and School Recruitment Coordinator</td>
<td>n/a</td>
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<tr>
<td>9. To transition printing support to UW IST.</td>
<td>Director, Infrastructure</td>
<td>n/a</td>
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<tr>
<td>10. To investigate the use of non-CS TAs in introductory CS UG courses to allow TA support for CS graduate courses, as necessary.</td>
<td>Director, Undergraduate Studies</td>
<td>n/a</td>
</tr>
<tr>
<td>11. To set up a focus group to get feedback from graduate students in the program.</td>
<td>Director, Graduate Studies</td>
<td>n/a</td>
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</tbody>
</table>

This report will go to Waterloo Senate Graduate and Research Council on April 14 2014, to Senate Undergraduate Council on May 13, and to Senate on June 16 2014.
Final Assessment Report of the
Review of the Music, Music (Arts and Business and Church Music and Worship Programs (BA)

Review process
The self study for the program review was submitted on July 2, 2013. Prof. Laura Gray, Chair of the
Music Department, assumed primary responsibility for guiding the self-study process, with assistance of
others in the department. Faculty and staff were consulted. Student input was obtained via focus groups
and surveys. Alumni were surveyed.

The site visit by two external reviewers (Prof. Jennifer Bain, Dalhousie University; Prof. Patricia Debly,
Brock University) with a University of Waterloo team member (Prof. Dan Brown, Cheriton School of
Computer Science) occurred on November 18-19, 2013. The report of the external reviewers was
received on January 13, 2014. The program response and implementation plan, endorsed by the Dean
of Conrad Grebel University College (CGUC), were received on April 7, 2014.

Changes since the last review
The Music Department and CGUC have worked conscientiously since the last formal review in 2006,
making progress on 13 out of 17 recommendations made at the time. Recommendations that were not
yet implemented have all been discussed and, in most cases, substantial efforts have been made to
implement them. Follow-through on some recommendations depended on considerable donations (e.g.,
the building of a dedicated performance space), increased personnel resources, or the involvement of
other university administrators.

Staffing and faculty workload issues have been ameliorated somewhat by creating a new staff position
(administrative assistant), maintaining a maximum five course teaching load (with appropriate
reductions for faculty with administrative responsibilities), hiring a full-time faculty member with a
background in ethnomusicology, and planning concerning replacement of faculty set to retire in 2013
and 2014. With the arrival of new full-time faculty for 2013-2014, some of the students’ suggestions for
a wider, more varied curriculum will be met.

Classroom and performance facilities were improved by a substantial capital project that addressed
concerns raised in the 2006 review, including additional practice rooms and studios, centralizing Music
faculty offices for full-time and part-time faculty, an expanded departmental office, dedicated ensemble
rehearsal space, additional storage for the choral music library, instruments and electronic equipment,
and an updated digital music studio. Additional dedicated performance space awaits funding.

Program and curricular improvements resulting from the recommendation to strengthen the global and
cross-cultural character and components of the program included the hiring of an ethnomusicologist,
introduction of travel and special topics courses, and organization of conferences focusing on various
aspects of musical diversity. The Music Department has also created third and fourth year seminar
courses for senior students. The performance proficiency requirement now occurs well in advance of
graduation, in the fourth studio course - MUSIC 327 - thus giving students ample time to complete the
requirement in later studio terms should they not be successful earlier on. Issues surrounding the popular MUSIC 100 course and the program’s prerequisite structure were also examined. Engaging Co-operative Education and Career Action (CECA) to explore the possibilities for local co-op placements has not yet been undertaken, however.

Recommendations related to resources and funding resulted in an increase in the Music library acquisitions budget and investment in many online reference materials and services. Discussions among the Music Department, CGUC and UW regarding adjustments in the funding model for the program have occurred and once a significantly higher number of majors has been attained and become relatively stable for a few years, discussions will revisit the funding situation for Music.

Recommendations for enhancement of recruitment success and program file have resulted in new initiatives for engagement of high school students, the annual Spring Open House Audition Days for aspiring music majors, the UW residence-based Music Living-Learning program, and increasing exposure of program faculty, students and alumni accomplishments in various media.

Faculty

Faculty members in the Music Department have received numerous research and travel grants, as well as grants to assist with their creative work. Funding comes from a variety of sources, including CGUC, UW, as well as regional, provincial and national granting bodies. Music faculty regularly publish scholarly and other works, present at academic conferences, and present as invited speakers at a variety of events. Due to the nature of their profession as academics and musicians/composers, faculty are also involved in creative activities that go beyond the more conventional research output of academics in other disciplines. Music faculty have been the recipients of a variety of awards, honours and recognitions over the past seven years, both for their research and creative contributions to the university and broader community. Music faculty are involved in a wide range of professional associations and three are editors or sit on editorial boards for music-related publications.

A normal full-time teaching load in the Music Department is five courses per academic year, with course releases for the Chair and Undergraduate Officer. Course releases can also be negotiated in lieu of extra duties. Course evaluations in Music demonstrate that the overall quality of Music instruction and courses, regardless of class size, consistently exceeds the Faculty of Arts results. For all Music courses the average score over the last three years was 4.4 whereas it was 4.2 for the Faculty of Arts.

Characteristics of the program

Program objectives and distinctiveness

The Music Department is administered by Conrad Grebel University College (CGUC). The Department’s values are well aligned with the identity and mission of CGUC, the Faculty of Arts and UW. The Music Department is a full member of the Canadian University Music Society Standing Committee of Institutional Members, which sets out guidelines for university degrees in music. The Music Department adheres to the Standing Committee’s guidelines on faculty, physical resources, and music libraries, as well as the degree requirements for degrees that are not the traditional BMus.

The character of the Music program has been shaped to a significant degree by two factors: (1) a commitment to a liberal-arts and interdisciplinary approach to the experience and study of music that is distinctive among music programs in the Ontario university system, and (2) a conviction that most
university music programs serve a smaller pool of students than is potentially interested in the study of music because these focus more narrowly on professional training and skills acquisition.

The programs offered by the Music Department stand apart from those offered at other Canadian universities, resulting from its stature as an “intimately-sized” program and its intentional focus on a more rounded liberal-arts. The biggest difference is the offering of a Bachelor of Arts (BA) in Music, as opposed to a Bachelor of Music (BMus). Another distinguishing feature is the option to pursue a Minor or Specialization in Church Music and Worship, the option to pursue a Joint Honours degree, and to combine a Music degree with Business, as well as with a co-operative education stream option. The University of Waterloo’s program includes significant studio instruction and requires a high degree of performance skills that are closer to the requirements of BMus programs than typical BA music programs. This sets the University of Waterloo’s program apart as unique in its focus on developing skilled musicians as well as students with a broad, liberal-arts education who are able to think critically about the role of music in culture and society. The Music program at Waterloo has been providing an excellent educational experience for innumerable students with rather limited human resources for close to two decades, making their achievements all the more remarkable.

**Academic programs offered**
The Music Department offers a number of degree programs, as well as one diploma program. Church Music and Worship (CMW) is an interdisciplinary plan of study which may be taken in conjunction with many existing plans in Arts and other faculties. It is available as a specialization (only to Music majors), a minor and a diploma.

Music programs include:

- **Three-Year General Music**
- **Four-Year General Music**
- **Honours Music**
  - **Honours Music (Arts and Business Co-op and Regular)** - students wishing to pursue Music as a co-op option must enroll in the Arts and Business Program.
  - **A Joint Honours academic plan with Music** may be taken in combination with most Arts disciplines in which an Honours academic plan is offered and with many Honours majors in other Faculties.
  - **Honours Music – Church Music and Worship Specialization**. The Church Music and Worship (CMW) Specialization is open to students who are enrolled in the Honours Music academic plan.
  - **A Music Minor** is open to students enrolled in any degree program
  - **A Church Music and Worship Minor** is open to students enrolled in any degree program
  - Students enrolled in any non- or post-degree academic plan may pursue a Diploma in Church Music and Worship.

The Music program learning objectives are organized according to the following five broad categories: (1) music history and literature, (2) music theory, (3) music performance, (4) cross-disciplinary and non-traditional areas of music, (5) professional skills and musical citizenship. The program objectives are consistent with UW’s Undergraduate Degree Level Expectations (UDLEs). Consistent with the learning objectives of the Music major programs, students completing the minor in Music will demonstrate a basic knowledge and understanding of music history, literature, theory, and cross-disciplinary and non-traditional areas of music, and will have experience performing in ensembles. Students completing the Church Music and Worship Specialization, minor or diploma will demonstrate: an understanding of the history, structure and function of traditional and emerging forms of contemporary Christian worship; a
working knowledge of the principal genres of congregational song; mastery of the basic skills of choral conducting and congregational song-leading; and will have experience in developing and applying various skills of worship planning and leading in a congregational context.

The Department has an up-to-date curriculum map showing how its courses in the above categories introduce, reinforce and demonstrate mastery of the program learning objectives. Assessment varies according to the course, from conventional quiz, written assignments, exams, but also includes review of live performance, student presentations, journaling, in-class participation, dictation, sight-singing, keyboard skills test, performance, completion of a major research paper or musical composition.

The Music program’s learning objectives are also outcomes-based. Students are required to reach a level of mastery in each of the core areas of the program; for example, students of any Music BA program must achieve a Royal Conservatory of Music grade 10 performance level before graduating.

The Department encourages students with two strong areas of interest to combine their study of music with other disciplines.

**Courses and enrollment in the Music Program**

Since 2006, the total number of courses offered annually increased from 27 in 2006/2007 to a high of 33 in 2011/2012, while the number of ensembles (counted by terms in which they are offered) has increased from 12 to 13. There is no formal cooperation with other programs, other than cross-listed courses taught by Music.

The total number of enrolments in music courses has increased from 1707 in 2006/2007 to 2024 in 2012/2013. Studio enrollment has likewise grown from 86 in 2006-2007 to 106 in 2012-2013. Enrollment in 100-level Music courses from 2006/07 to 2012/13 has been steady, averaging 921 students, ranging from a low of 841 in 2006/07 to a high of 952 in 2012/13. Enrollment in 200-level courses ranged from 410 in 2006/07 to a high of 637 in 2011/12, averaging 535 students. Enrollment in 300-level courses ranged from 88 (2008/09) to 122 (2012/13), averaging 108 students. 400-level offerings are studio/seminar/thesis courses, so enrollments were much smaller, ranging between 12 and 21, averaging 15 students. In addition to offering regular courses, the Music Department organizes a number of music ensembles that are open to all students, as well as Faculty and Staff of the university.

The amount of service teaching done by the Music Department is most clearly evidenced by comparing annual course enrollment numbers to the number of actual Music students in any given year. While enrollment numbers have exceeded 2000 in the past few years, the number of Music students (including General, Minor and Honours programs) has not exceeded 92 in any given year since 2006.

**Students**

**Enrollment and student quality**

Because the Music program is not a direct entry program, students do not officially register as Music students until their 2A term. Full-time and part-time registrations for both Music Majors and Minors have remained fairly consistent, typically 65-68 students per year, although 2009/10 and 2011/12 saw an upward spike to 75 and 73 students respectively. Four Honours Music students are currently enrolled in the CMW Specialization. The number of students enrolled in the CMW Minor has ranged between 1 and 9 since 2006, with an average annual enrollment between 5 and 6. Students wishing to pursue Music as a co-op option enroll in the Arts and Business Program (co-op). The ratio of female to male
students entering Music programs has remained fairly high, with women typically outnumbering men 3 to 1.

Since 2009 to 2013 (the earliest year for which this data is available), the number of students at the time of application who indicated an interest in music has been between 33 and 55 students. Audition statistics also track interest – since 2008, 14-21 students per year have had auditions prior to their matriculation.

The large majority of Music students (General, Co-op, Minor) had high school averages between 80% and 89% with a notable number entering UW with averages over 90%. In the last 7 years, 7 students who have entered Music programs have received entrance scholarships as first year students. Fifteen renewable departmental awards have also been given in the last seven years. Most students in the program are Canadian. Music students appear to stay in their program - with minor exception, retention between 2nd and 3rd year is 100%.

Since 2006, the number of degrees granted annually to Music Majors has remained fairly consistent, with a high of 15 degrees granted in 2007, and a low of 7 in 2009 and 2010. The large majority of degrees granted are regular Honours degrees. The higher number of graduates in 2007/2008 was likely due to the graduation of the so-called “double cohort”, many of whom would have entered university programs in 2003. Since the CMW Specialization began, two students have graduated.

Since 2007, the % of Graduates (Music Majors and Minors) on the Dean’s Honours List has ranged from a low of 4% to a high of 33%.

Co-op and post-graduation employment
The total number of Music co-op students remains relatively small – 1-4 students per term, depending on the term. With the exception of the fall 2011 term, the employment rate for Music students has been 100%, slightly above both the Faculty and university average. The top three sectors in which Music co-op students were employed are: education services, public administration and professional, and scientific and technical services. Music co-op students are consistently highly ranked by their employers. Music co-op students have generally had favourable co-op experiences, evidenced in the high rankings of their employers.

The above areas of co-op employment mirror trends in the type of employment graduates have found, with a notable number entering education services, as well as in public administration. Although Music students secured a variety of employment, most did not relate directly to their major. Students benefit from the employment opportunities developed within the Arts and Business framework or from opportunities students in those programs have arranged on their own.

What Music students think about their program
Students are generally quite positive about their Music program. Students contribute to the social life of the Music program through the Music Society and through peer leadership in the Music Live-Learn program with first-year Music students who live in the CGUC residence. Student representatives are also directly involved in recruitment of potential Music students at our Annual Music Department Open House audition days in March and April each year.

From the student survey and two focus groups, students consider the program strengths (in order of highest to lowest) to be (1) teaching staff (accessible, enthusiastic, supportive), (2) variety of courses, (3) positive supportive environment, tight knit-community and small classes, (4) interesting content, (5)
openness to all students and (6) flexibility in program options. Students also commented favourably on the facilities, performances, different types of learning assignments and ensembles.

Students also identified program weaknesses and areas for improvement. There was a desire for increased availability and variety of courses, and more flexible scheduling particularly with respect to studio classes and night classes. There were a variety of issues pertaining to course content and teaching methods that concerned students (more “hands-on” courses, assessment methods, memorizing dates in some history classes, too many participation marks, lack of availability of lecture materials, too many quizzes in music theory courses, and a desire for more class outings to musical events). Students suggesting curriculum changes were mostly enrolled in 300-level courses, and more likely Music Majors/Minors. Other issues were requisites (e.g., making Music 100 a prerequisite for other music courses), courses with overlapping content and the need for equal time in students’ graduation recitals. Additional suggestions for improvement included introducing a Music Therapy program, a Master’s program, more opportunities for music-making/performances/ensembles, and increased access to courses by students with no music background. Regarding facilities, students suggested improvements such as better practice rooms with extended hours (late night), better classrooms, better seating and sound system in the Great Hall, better Wi-Fi access, a percussion room, and a better music technology studio. Students also felt that promotion and visibility of the Music program to the campus community was insufficient – this is at least partly the result of location of the program and the lack of a designated performance facility.

**What Music alumni think about their program**

A survey was completed by 27 alumni. Since graduation, 11 respondents went on to complete further studies, while 3 are currently completing degrees. Many of these respondents continued their education in music, while others pursued other fields of study, most notably the education sector. Approximately half of the respondents are employed in music-related jobs, while others are employed in a wide range of fields, ranging from other arts and culture related jobs to public service.

When asked “What impact do you think studying music at Conrad Grebel/the University of Waterloo has had on your employability?” of the 25 respondents answering this question, 6 indicated that studying Music had relatively little impact on their employability, or was not relevant to their field, while 1 was “on the fence” about the impact of their degree on their employability. The remainder of the respondents described a range of ways in which studying music had increased their employability, and made them more well-rounded individuals.

**Program concerns identified in self study**

**Personnel**

The Music Department depends substantially on sessional instructors, whose teaching accounts for over half of Music courses and about 80% of enrolments in Music. This number seems high even knowing, as the external reviewers commented, that “Most music departments rely heavily on sessional instructors, because of the needs of studio instruction.” In the mid-1990s, when there were five fulltime faculty, the annual enrolment was approximately 1300 per year; today, the Department has annual enrolments over 2000 – an increase of over 50%.

The Department also relies on a large number of studio instructors to offer studio courses in voice and in a variety of instruments, as well as to lead ensembles. Twenty-nine instructors have taught Studio courses and/or led ensembles over the past 7 years. In 2012/13, the studio program rose to 106
enrolments, the highest number in the history of the program. Much of the logistical work is handled by the full-time Administrative Assistant, who coordinates the work of the part-time Music Assistant. The Department recommends that the current contract Music Assistant position be made permanent, to compensate for the increasing enrolment in ensembles, studio and music courses.”

Recruitment
Recruitment remains a challenge. Although annual course enrolment has grown steadily and Music classes, ensembles and studio courses are becoming increasingly popular among students across campus, the number of Music majors remains relatively low. Reaching and maintaining a critical mass of Music majors of about 60 (from the current level between about 40 and 50) is crucial for a healthy sense of program identity among the Music majors. As the reviewers noted, the UW Music program is a second-year entry program and is therefore not as visible to potential majors as first-year entry Music programs at other schools. Like other Fine and Performing Arts, Music has distinctive needs in the admission process (such as auditions) that are difficult to integrate into the centralized UW Arts recruitment process. The Arts recruitment practice prior to 2013, which encouraged departments to make direct contact with prospective majors, was effective in recruiting more majors into the Music program, as the self-study report demonstrates. The new practice, however, has dramatically curtailed Music faculty involvement in communicating with potential majors.

Space and resources
Although the recent capital building expansion has provided much more space for Music, it did not include a designated recital performance hall, a critical requirement for a well-developed Music program. A feasibility study conducted since the last review indicated that the project was beyond the current financial capacity of the College and not a priority project of the University. The Department continues to use multi-use performance spaces on campus and in the community. The Department and College will continue conversations about how an additional performance space could meet the needs of the program and community and garner the financial support required for such a project.

Library resources (print, electronic, special collections, etc.) and library support to service the program are excellent. Equipment inventory (electronic, musical instruments) appears adequate to properly service the program.

Summary of program strengths and challenges

Strengths
• In addition to a BA in Music, the program presents the opportunity to pursue a Minor or Specialization in Church Music and Worship, the option to pursue a Joint Honours degree, and to combine a Music degree with Business, as well as with a co-operative education stream option.
• The Music program has the expected benefits of being “intimately-sized” and has an intentional focus on a more rounded liberal-arts education.
• There is a large variety of courses available.
• High quality of faculty benefit the program from both research and instruction perspectives, and sessional instructors are also of high quality
• Student retention is strong
Challenges

- The Music Department seeks to increase the number of majors from between 40-50 annually to about 60.
- The Music Department depends substantially on sessional instructors, whose teaching accounts for over half of Music courses and about 80% of enrollments in Music.
- The Music Department and CGUC will monitor and ensure that programmatic space needs are met within the current facilities. While continuing conversations about how a dedicated performance space could meet the needs of the program and community and garner the financial support required for such a project. It is unlikely, however, that there will be a firm plan for a dedicated performance space within the 2-year implementation schedule.

External reviewer report, program response and implementation plan

The assessment of the external reviewers recognized the overall high quality of the Music program and they reported favourably on the various criteria outlined in our Institutional Quality Assurance Framework. They recognized the diversity of offerings that set it apart from other programs in Canada, including the much larger program at Wilfrid Laurier University, prompting their comment “this Music Department has positioned itself well to respond to the Ontario government’s directive concerning differentiation.” They noted the challenges posed by limited resources, commenting that the “Department punches significantly above its weight and is prized by students, faculty and Conrad Grebel College. It provides a wonderful atmosphere for students to develop intellectually and emotionally...”

The Music program is in a time of transition, renewal and expansion. Two senior faculty retired and have been replaced by junior faculty in the past two years. A new position in Global Music was added this year and filled by a junior faculty member. The two remaining long term faculty serve as Chair and Undergraduate Officer. One of the priorities in the next years is to mentor the talented new faculty as teachers and scholars, and also as colleagues who share administrative tasks and departmental leadership. In the next few years the Department will focus on the challenges and opportunities identified in the self-study and the external reviewers’ report. The priorities will be recruiting Music majors, promotion of the program, community engagement, and curriculum review.

The reviewers made 15 recommendations for the program, re-organized in this report (but with their original numbers) according to topic. The program response and implementation plan follow each recommendation. Unless indicated otherwise, the responsibility for following through on the various initiatives lies with the Chair of the Music Department.

A) Program Issues & Curriculum Recommendations:

Recommendation 2. If the Faculty of Arts reduces the number of required major courses from 20 to 16, that the Department of Music be exempt from this change.

The Department will participate in UGAG discussions about such program changes. If the proposed reduction is proposed for all Arts programs, we will discuss with the CGUC Dean and the Faculty of Arts the importance of an exemption for the Music program. The exemption is well warranted – the program must meet the requirements for the minimum number of Music courses as determined by the Canadian University Music Society for the Honours BA degree in Music, while meeting the liberal-arts mandate of the Faculty of Arts. Furthermore, retention is not an issue as it is in some other Arts programs.
**Recommendation 15.** As the Department members fully intend to do, revisit the mission and vision for the Department and ensure that the curriculum reflects both.

Once the new Music Theory faculty member has begun in 2014, the Music Department will conduct a comprehensive review of the Music curriculum in the 2014-15 academic year, in light of Music’s program objectives and mission.

**Recommendation 3.** Change the name of “stage band” to “jazz band” and consider the possibility of creating another large ensemble for woodwind and brass players, i.e., a Wind Ensemble, if the number of performers warrants it.

The name of the ensemble has already been changed to “Jazz Ensemble”.

The Department will discuss options for accommodating wind and brass ensembles with the Director of the Instrumental Chamber Ensembles for fall term 2014.

**Recommendation 5.** The Review Committee encourages the Department to continue its expansion of global/world music courses – in both the academic and performance streams.

In 2014-15, the Music Department will add two seminars in Global Music: Music and Ritual, taught by Professor Sum, and Music and Peace, co-taught by Dr. Sum and PACS faculty member, Dr. Reina Neufeldt.

The Department will explore opportunities for further travel courses, including the possibility of a student trip to Indonesia, Morocco or another location in 2015-16.

**Recommendation 6.** Explore the area of music technology, in consultation with interested Computer Sciences faculty members at UW to create an interdisciplinary program with the Music Department.

The Department will continue to discuss music and technology offerings in a comprehensive curriculum review in 2014-15.

**Recommendation 7.** After the appointment of a tenure-track theorist in July 2014, the content of the four Music Theory courses needs to be examined. Concerns over whether all the various skills required in these courses (ear-training, sight-singing, and keyboard harmony) are receiving adequate instruction needs to be addressed, in light of the fact that all the written and analytical elements have to be incorporated as well.
The Music Department will schedule an additional class hour for skills (to an overall total of 4 hours/week) in each of the theory classes in the 2014-15 academic year to determine if more class time will address the issues. Further options for 2015-16 will be discussed with the new Music Theory faculty member who begins July, 2014.

**B) Publicity and Recruitment:**

**Recommendation 1.** Create a joint strategy with the Faculty of Arts for the recruitment of students straight from high school into Music programs.

Before the next recruitment cycle, it is imperative for the CGUC Dean, the Department and CGUC’s Recruitment Officer to discuss recruitment concerns with the Arts Recruitment Office to determine collaboratively an effective recruitment strategy for the program. We look forward to working with Arts to increase significantly the number and quality of Music majors.

In October, 2014 the Department will host the University of Waterloo Choral Day.

**Recommendation 4.** Based on the very positive outcomes listed for the program in Section 6 and Appendix D of the self-study, UW should consider promoting the Honours Music (Arts and Business) more in its recruitment strategies.

In the 2014-15 academic year, the Department will work with CGUC to secure a co-op placement for a Music Arts and Business student in the Music Department, working on promotion of the Music and Arts and Business programs and recruitment.

In Spring 2014, the Department will include information on its website about Music Arts and Business graduates who are currently employed in the arts.

**Recommendation 14.** Create a public event that highlights the liberal-arts framework at the core of the Department’s mission.

The Department has secured funding from CGUC and will organize a public event that highlights the liberal-arts nature of the program to take place in the 2014-15 academic year. This could be in the form of a guest lecture or lecture-recital or other event. We anticipate that this will grow into an annual or biennial event.

The Music Department will also pursue the idea of an annual public forum or event for senior students to present their theses or term projects, somewhat akin to a graduation recital, to feature the academic achievements of students and the liberal-arts character of the program. We anticipate that this would become an annual event.
C) Faculty and Staff Resources:

Recommendation 8. Maintain faculty complement of 5 and consider increasing to 6.

CGUC and Music Department are currently committed to five full-time faculty positions. As the new faculty fill their roles and as future program distinctions and scope are clarified, the Department and CGUC will discuss the faculty complement needed as part of long term strategic academic planning.

Recommendation 9. Make the half-time staff position, Music Assistant, permanent.

A job description is currently being drafted and will be presented to the Administrative Executive at CGUC for review in the context of 2014-15 budget decisions.

Recommendation 10. Create a new staff position dedicated to communications and marketing.

CGUC has such a position that serves all of its programs. By fall 2014, the Department will work with CGUC’s Communications Officer to update the design of promotional materials (concert programs, posters, and brochures).

In 2014-15, the Department will work with CGUC to secure a co-op placement for a Music Arts and Business student in the Music Department, working on promotion and recruitment. (See Recommendation 4 above)

D) Space and Other Resources:

Recommendation 11. Make sure the Department of Music retains all of the spaces they have been using even as they acquire new space through the current construction project.

The Music Department and CGUC will monitor and ensure that programmatic space needs are met within the current facilities.

Recommendation 12. Develop a firm plan with Conrad Grebel and the University of Waterloo to provide a dedicated performance space for the Department of Music.

The Department and CGUC will continue conversations about how a dedicated performance space could meet the needs of the program and community and garner the financial support required for such a project. It is unlikely, however, that there will be a firm plan for a dedicated performance space within the 2-year implementation schedule.

Recommendation 13. Have the library purchase a subscription to RILM (Répertoire Internationale de Littérature de Musique).

A decision will be made in the next two months whether a subscription to RILM is a prudent use of limited library resources. Because of the cost (annual subscription is $5820 USD), however, it is unlikely that the Department will order this resource.
Final Assessment Report
Sociology (BA, MA, PhD)
April 2014

Review Process

The review covers four undergraduate programs: the Bachelor of Arts (Honours, and Honours Co-op), and the three and four year general Bachelor’s programs in Sociology, and two graduate programs: the Master’s and the PhD in Sociology. The Department also took over the administration of the undergraduate programs in Legal Studies in 2009, and changed its name to the Department of Sociology and Legal Studies. Legal Studies will be reviewed separately in the near future, but in view of the close connections between the programs will be reviewed along with Sociology in future review cycles.

The self study was prepared by the Chair of the Department, with assistance from the Associate Chair for Undergraduate Studies in Sociology and the Associate Chair for Graduate Studies. The draft was discussed by the Undergraduate Committee, and circulated for review to the 19 faculty members (at the time) with primary teaching responsibility in Sociology (and to four retired faculty). The couple of faculty members in Legal Studies were not involved.

The external review was undertaken by Dr. Kelly Hannah-Moffatt, Professor, Vice-Dean Undergraduate at the University of Toronto at Mississauga, and Director of the Centre of Criminology and Sociolegal Studies and Dr. Rick Linden, Professor and Associate Dean, Research in the Faculty of Arts, University of Manitoba as well as Director of the Criminology Research Centre. The site visited occurred on October 7 and 8 2013. The internal reviewer was Dr. Monica Barra from the Department of Chemistry.

The previous undergraduate review of the undergraduate program (2006/7) resulted in four major recommendations. Two of these (regarding allowing non-Honours students to participate in co-op and to obtain specializations) are not within the Department’s jurisdiction and could not be implemented. One (regarding the online program) was implemented, and one (the provision of research funding for Honour’s essays) was already in place. Other recommendations (for curricular reform) were overtaken by events, namely the move of the Legal Studies program into the Department, which requires a more major curriculum review.

The previous graduate review (2007) made five recommendations:

• augment the core faculty (which at the time numbered only 13) (which has happened), and succession planning (still to be done);
• establish a fast track from the Master’s to the PhD (done);
• review the program fields (still to be done);
• improve the socialization of students to the program (done: students now are assigned interim advisors on entry into the program, and regular student progress reports were instituted); and
• make the intermediate statistics course a requirement for Master’s students (done).
The remaining two actions (succession planning and review of the fields) have not yet been undertaken, in view of the substantial and unexpected changes which occurred (two retirements, four new faculty from opportunity appointments, staff turnover, and the integration of Legal Studies into the Department). However, following the external review, the Department brought forward changes to the undergraduate curriculum, and further work is ongoing.

Characteristics of the Programs

Academic Programs Offered

The undergraduate BA in Sociology is offered in four formats (described above). There are also two specializations available:

- Crime and Deviance
- Business and Technology

The Master’s program is offered in three formats:

- Course Work MA (8 courses)
- Research Report MA (6 courses and a major research paper)
- Thesis MA (4 courses and a thesis)

The sub-specialization in Community Research Methodology is in the process of being cancelled.

The PhD program currently offers four fields:

- Social Inequality
- Crime and Deviance
- Interpretive Sociology
- Work and Technology

The Department plans to update the fields, with the retirement of key faculty previously teaching in the Work and Technology field, and given a desire to redefine the Interpretive Sociology field. Five courses are required in the PhD program, beyond the Master’s level, as well as a professional development seminar. On average about two students per year graduate with the PhD.

Program Objectives

The department has four objectives cutting across all levels of study, as follows:

- To offer a comprehensive and high quality education in the full discipline of Sociology;
- To offer undergraduate courses which are as current, topical and engaging as possible;
- To maintain a departmental culture of high expectations and rewards for productivity (measured in terms of publications and research grants); and
- To provide graduate students with the mentorship and encouragement needed to succeed professionally, in particular so they acquire the writing, presentational, and practical knowledge required to be competitive.

The objective of the Master's program is to elevate the critical analysis skills of the students and their basic background knowledge of the discipline, particularly with regard to theory and methods. Students are expected to acquire the knowledge needed to undertake research on specialized topics at a superior level, which entails being able to grasp the often formidable complexity of social processes, problems, and institutions. Depending on the program chosen, students are being prepared for work in the public
or private sector, or for entry into a doctoral program. The objective of the PhD program is similar, but with higher expectations. The aim is for students to develop expertise and the professional skills and acumen to secure an academic position or other higher level position in the public or private sector.

**Specific Learning Outcomes**

The self study provides a summary of the undergraduate learning objectives, and maps them to the curriculum and the UDLEs; similarly the graduate learning objectives are mapped to the GDLEs.

**Significant strengths of program**

The program ranked seventh in Canada according the 2012 and 2013 QS rankings, even though faculty complement is modest relative to the higher-ranked departments.

**Faculty**

At the time of writing the self study, the Department had 15 tenure stream faculty members (with a sixteenth scheduled to start in July 2013). In addition there are two faculty members in the AFIW, and two long-term adjunct/sessional faculty who play a major role in teaching, administration and supervision in the programs. This does not include the faculty members in Legal Studies who may (as the program evolves) also play a role in graduate teaching and supervision particularly in the Crime/Deviance field.

Faculty members have won various awards since 2006 (the Harrison-White book award from the Mathematical Sociology section of the ASA; John Porter Tradition of Excellence Book Award - two; Outstanding Service Award of the CSA; one former Canada Research Chair). Four faculty serve as Editors/Associate Editors of journals, and others serve on numerous editorial boards, and are section editors for journals or series editors for book/publication series. Faculty members received about $450,000 a year in research grants since the last review, two-thirds of this from the Tri-Agency.

On average, faculty members publish about 1.3 articles per person per year, 0.6 book chapters, and make about 2 conference presentations/keynotes. They have collectively published 20 books over the 7 year period. The average supervisory load is 2 graduate students per faculty member, although there is considerable variance. Given the number of Honours students, the average number of Honours thesis supervisions is also 2 per faculty member per year on average.

**Staff/Administration**

There are three staff who serve as the Administrative Assistants for the graduate program, the undergraduate program in Sociology, and the undergraduate program in Legal Studies, respectively.

**Students**

**Undergraduate**

At the undergraduate level, there are approximately 200 majors in any given year (and given that majors are not declared until second year, this implies about 70 majors graduating per year). About half of these are in Honours. Nationally the number of Sociology majors has been declining, as new but related
disciplines have developed. There is a co-op version of the Honours program, which is modest in size. Sociology does an enormous amount of service teaching, with 5000 students enrolled in its courses per year, such that three quarters of the students in courses are not majors. Some of the service teaching is for Legal Studies, which has been growing, some is for cognate programs (e.g. in Applied Health Sciences, where there are some requirements for Sociology courses as well as a cross-appointed faculty member) and some is service more generally to the university.

For students in the General program, the entering averages are predominantly between 75% and 84%. For students in Honours, the median entering average is between 80% and 84%. Only 7% of the students are visa students, and 27% are male. Attrition and retention data were hard to read, since students can switch readily between closely related programs (Honours/Honours Co-op/General/Legal Studies).

The Co-op program is not large, but 95% of Sociology co-op students were evaluated as Good, Excellent or Outstanding by their employers. The top sectors for co-op employment over the period since the last review were public administration (29%), education services (25%), professional and technical services (13%) and amusement and recreational services (13%).

Graduate
The Master’s program graduates on average 6 students per year, with a median time to completion of two years. About 15% of Master’s students publish an article based on their research.

The Doctoral program has small numbers and hence the data on completion times are based on small samples. For those who graduated during the period, the completion times were around 6 years (cohort data) and even longer (flow-through data, recognizing the graduation of some students who had entered the program before the previous review). Of the seven who graduated since the last review, five published two or more articles or book chapters, and one co-authored an article and a book. Of these six, at the time of writing, two held faculty positions at universities, one was teaching on contract, and three held positions at research institutions. Since the self study was written, another four students graduated in 2013.

The self study did not include the usual data on student support. The Faculty of Arts provides guaranteed minimum funding for doctoral students for four years, usually a little above the university minimum requirement (currently just over $21,000/year). No information was provided about Master’s funding.

Summary of programs’ strengths and challenges

Strengths
• The reviewers commented that this is a strong program in transition, operating strong and academically sound programs
• The reviewers commented that student and faculty culture is collegial, and new faculty are playing an active role in revitalizing the program
• There are opportunities for synergy as the Legal Studies program is integrated into the Department’s strategic plan

Challenges
• There are additional likely retirements upcoming (although this also represents an opportunity)
• Gender balance – female-dominated discipline at the student level
• Large amounts of service teaching, and a declining trend for majors at the undergraduate level (although total majors are increasing in the Department, with the integration of Legal Studies)

**Reviewers’ Recommendations/Departmental response regarding program enhancements**
(paraphrased and abridged from both reports)

1. We recommend that the department conduct an off-site strategic planning exercise to clarify their plans for the future.
   *Response*: the Department agreed to start planning for such an event for fall 2014, using an outside location and a trained facilitator.

2. The department should conduct a thorough review of its undergraduate and graduate curricula.
   This review should entail:
   a. Identification of core streams/clusters;
   b. Rationalizing course offerings based on the core streams/clusters;
   c. Focusing graduate programs on the core areas in which the department has the greatest strengths (consider possible differentiation);
   d. Cancel the sub-specialization in Community Research Methodology (this supports the Department’s intention); and
   e. At both the undergraduate and graduate levels, the curriculum rationalization should clearly specify and articulate learning outcomes and degree level expectations.
   *Response*: work has begun on curriculum rationalization and will continue at the retreat. The Department agrees with (d) and will simply move ahead to implementation.

3. The undergraduate specializations should be reviewed (as above), and then more broadly publicized to encourage undergraduates to enroll.
   *Response*: The Department is indeed reviewing the specializations, however the need for additional publicity was based on the reviewers’ misunderstanding of the process and is not thought to be necessary.

4. We recommend that the department’s graduate fields be reviewed during the curriculum review, to ensure they reflect the department’s current priorities and interests.
   *Response*: agreed.

5. We recommend that part of the curriculum rationalization process include the development of a logical progression of undergraduate courses with 3rd and 4th year courses having prerequisites, to ensure that students have sufficient preparation for their upper-level courses.
   *Response*: some changes have been made prior to the retreat, and more will be made following the retreat.

6. To address the issues arising from the heavy service teaching commitment, the department might consider offering sections of the first year course that are directed to students interested in social sciences and likely to major in sociology. This course could be taught and resourced differently (i.e., tutorials) and provide students with more substantive depth and writing. This would facilitate the early attraction of students into the Sociology major programs. A second strategy to increase the number of majors would be to increase the number of joint majors. In particular a joint major program with Legal Studies would build synergies within the department.
   *Response*: the Department agrees with both suggestions, and is working to implement them.

7. While recognizing the difficulties in obtaining placements, we encourage the department to keep working on the co-op program and to also consider other options such as unpaid placements or experiential learning courses in order to provide students with experience in the world of work.
Response: the Department will follow up on this later (note however that these are options primarily for the non-co-op students).

8. While recognizing budgetary restraints, we recommend that Sociology continue to be given new faculty positions to replace retiring faculty and that these hires be consistent with the department’s strategic plan.
   Response: the Department agrees, but notes with concern that lack of suitable office space is a problem.

The Dean of Arts endorsed the Departmental response, and noted that future complement positions would be considered as part of the Department’s strategic plan.

<table>
<thead>
<tr>
<th>Two-Year Plan: Action steps</th>
<th>Who is responsible?</th>
<th>Who will provide resources?</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Hold a retreat in fall 2014</td>
<td>Chair</td>
<td>Department</td>
<td>2014</td>
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<tr>
<td>2. Review undergraduate program, identify core streams/clusters, rationalize the course offerings, and articulate learning outcomes</td>
<td>Associate Chair Undergraduate, Sociology</td>
<td>n/a</td>
<td>2014-15</td>
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<tr>
<td>3. Review graduate program, review fields, and articulate learning outcomes</td>
<td>Associate Chair Graduate</td>
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<td>2014-15</td>
</tr>
<tr>
<td>4. Review undergraduate specializations (currently 3)</td>
<td>Associate Chair Undergraduate, Sociology</td>
<td>n/a</td>
<td>2014-15</td>
</tr>
<tr>
<td>5. Review graduate fields (currently 4)</td>
<td>Associate Chair Graduate</td>
<td>n/a</td>
<td>2014-15</td>
</tr>
<tr>
<td>6. As part of undergraduate curriculum review, develop appropriate prerequisites for 3rd and 4th year courses</td>
<td>Associate Chair Undergraduate, Sociology</td>
<td>n/a</td>
<td>2014-15</td>
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<td>7. Consider offering an enhanced first year course for potential majors</td>
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<td>Chair</td>
<td>2014</td>
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<tr>
<td>8. Continue supporting co-op program and also consider experiential learning opportunities and unpaid placements</td>
<td>Associate Chair Undergraduate, Sociology</td>
<td>n/a</td>
<td>2014-16</td>
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<tr>
<td>9. Replace retirements in ways consistent with the Department’s strategic plan</td>
<td>Dean</td>
<td>Dean? Depends on plan</td>
<td>ongoing</td>
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n/a means not applicable

This report will go to Waterloo Senate Graduate and Research Council on May 12 2014, to Senate Undergraduate Council on May 13, and to Senate on June 16 2014.
FOR INFORMATION

Recognition and Commendation
Department of Electrical & Computer Engineering Professor Mohamed Kamel and Perimeter Institute for Theoretical Physics Director Neil Turok (physics & astronomy professor) have been named fellows of the prestigious Royal Society of Canada (RSC). Fellows of the Royal Society are “peer-selected as the best in their field,” in areas spanning science, the arts, and Canadian public life.

“Mohamed Kamel has made distinguished and outstanding contributions to the fields of pattern recognition and machine intelligence. He introduced novel approaches in clustering and classification and developed valuable solution methods,” his citation reads. “He pioneered the application of these approaches in character recognition, biometrics, visual inspection, solving differential equations and data mining. His work has significantly impacted industry as demonstrated through his patents, research contracts with industry and his involvement in spin-off companies.”

“Neil Turok is an internationally renowned physicist who has made major contributions to cosmology, the study of the origins and evolution of the universe,” reads the RSC’s citation. “He is a world leader in developing and testing fundamental theories and is the co-inventor of the cyclic model for cosmology. His visionary leadership has advanced science in Canada and worldwide, in directing the Perimeter Institute for Theoretical Physics and by founding the African Institute for Mathematical Sciences.”

Kamel and Turok are invited to join the other new fellows to be inducted to the academies of the RSC during a ceremony on Saturday 22 November at Fairmont Le Château Frontenac in Quebec City.

Founded in 1882, the RSC comprises the Academies of Arts, Humanities and Sciences of Canada. Its mission is to recognize scholarly, research and artistic excellence, to advise governments and organizations, and to promote a culture of knowledge and innovation in Canada and with other national academies around the world. [10 and 11 September 2014 Daily Bulletin]

Professor Susan Tighe of the Department of Civil & Environmental Engineering and Professor Chris Eliasmith of the Departments of Philosophy and Systems Design Engineering are among the inaugural 91 members of the College of New Scholars, Artist and Scientist recently named by the RSC. Those named to the college have been nominated by 51 Canadian universities and the National Research Council, and they represent the emerging generation of scholarly, scientific and artistic leadership in Canada.

Tighe was cited for her “pioneering work in pavement engineering resulting in major changes to road and highway technology, specifications and standards worldwide. Work through novel integration of field and laboratory performance has resulted in improved safety, unique material usage and structural designs which are cost-effective and resilient to climate and loading impacts. She has an extensive record of scientific achievement and is at the forefront of research in this field.”

“Chris Eliasmith is a pioneering figure in the rapidly developing field of theoretical neuroscience,” reads his citation. “His most visible contribution has been in the development of Spaun, the world’s largest functional model of the brain. Spaun has garnered wide acclaim, both in the academy and in the popular press. Behind Spaun’s success is a deeply influential body of work implementing an innovative approach to the problem of how brains encode meaning.”

The presentation ceremony for this first cohort will take place on Friday 21 November at Fairmont Le Château Frontenac in Quebec City. [18 September 2014 Daily Bulletin]
University of Waterloo historian Ken McLaughlin was recently presented with the Waterloo Award, the City of Waterloo’s highest civic honour, recognizing individuals whose outstanding contributions have enhanced the local quality of life. McLaughlin was cited for his long academic career and the role he played in significantly shaping local history. He is a retired St. Jerome’s University professor of history, a distinguished professor emeritus, and has authored a number of works about communities in Waterloo Region, including two books about the history of the University of Waterloo. [24 September 2014 Daily Bulletin]
MEMORANDUM

To: Members of Senate
   Chairs of Departments and Directors of Schools

Copy: Daily Bulletin

From: Ian Orchard, Vice-President, Academic & Provost

Re: Call for “University Professor” Nominations

To date, Waterloo has awarded this distinction to twenty individuals: Garry Rempel (chemical engineering), Mary Thompson (statistics & actuarial science) and Mark Zanna (psychology) in 2004; Terry McMahon (chemistry), Cam Stewart (pure mathematics) and Robert Jan van Pelt (architecture) in 2005; Phelim Boyle (accountancy) and Ian Munro (computer science) in 2006; Ken Davidson (pure mathematics), Keith Hipel (systems design engineering) and Jake Sivak (optometry) in 2007; Roy Cameron (health studies & gerontology) and Flora Ng (chemical engineering) in 2008; Ellsworth LeDrew (geography & environmental management) and Ming Li (computer science) in 2009; Stuart McGill (kinesiology) and Janusz Pawliszyn (chemistry) in 2010; Robert Le Roy (chemistry) in 2011; François Paré (French studies) in 2012; Doug Stinson (computer science) in 2013.

The selection process is reproduced below for your information. Please ensure that nomination material is submitted to my office before the December break.

UNIVERSITY PROFESSOR

The University of Waterloo owes much of its international reputation and stature to the quality of its eminent professors. University of Waterloo recognizes exceptional scholarly achievement and international pre-eminence through the designation “University Professor.” Once appointed, a faculty member retains the designation until retirement.

Not counting retirees, it is anticipated there will be one University Professor for approximately every 60 full-time regular faculty members, with at most two appointments each year. Such appointments are reported to Senate and the Board of Governors in March and April respectively, and are recognized at convocation.

Selection Process

1. Annually, nominations will be sought from Faculty deans, directors of schools and department chairs, as well as from the university community generally. A nominee shall have demonstrated exceptional scholarly achievement and international pre-eminence in a particular field or fields of knowledge. The individual who nominates a colleague is responsible for gathering the documentation and submitting it to the vice-president academic & provost before the December break. The University Tenure & Promotion Committee will act as the selection committee; its decisions are final.

2. A nomination must be supported by at least six signatures from at least two UW departments/schools and must be accompanied by a curriculum vitae and a short, non-technical description of the nominee’s contributions.

3. A nomination must also be accompanied by letters from the nominee’s dean, and from at least two and no more than five scholars of international standing in the nominee’s field from outside the university. The scholars are to be chosen by the nominee’s chair/director in consultation with the dean and the nominator. The letter of nomination should explain why these particular scholars were chosen.

4. Letters soliciting comments from scholars shall be sent by the chair/director. Scholars shall be asked to comment on the impact and specific nature of the nominee’s most influential contributions, addressing their responses directly to the vice-president, academic & provost.

5. The dossiers of unsuccessful nominees remain in the pool for two additional years. The appropriate dean should provide updated information each year.
University of Waterloo
REPORT OF THE DEAN OF APPLIED HEALTH SCIENCES TO SENATE
October 20, 2014

FOR INFORMATION

A. APPOINTMENTS/REAPPOINTMENTS

Definite-Term Appointment

KNUTSON, Shannon, Lecturer, Department of Recreation and Leisure Studies, July 21, 2014 – August 30, 2015. MA (Recreation and Leisure Studies), University of Waterloo, 2012; Honours BA (Minor in Gerontology), University of Waterloo, 2009. Ms Knutson will be teaching undergraduate courses and contributing to honours thesis supervision, and serving on graduate committees.

Adjunct Reappointments

Graduate Supervision

GRIFFIN, Tom, Lecturer, Department of Recreation and Leisure Studies, September 1, 2014 – December 31, 2014.

JUTAN, Norma, Assistant Professor, School of Public Health and Health Systems, February 1, 2015 – December 31, 2015.

MITCHELL, Gail, Professor, Department of Recreation and Leisure Studies, July 1, 2014 – June 30, 2015.

Special Appointments

Undergraduate Instruction

BRAYHAM, Angela, Lecturer, Department of Recreation and Leisure Studies, September 1, 2014 – December 31, 2014.

BURNS, Robert, Lecturer, Department of Kinesiology, September 1, 2014 – December 31, 2014.

SILVA, Veronica, Lecturer, Department of Kinesiology, September 1, 2014 – December 31, 2014.

VAN OOTEGHEM, Karen, Lecturer, Department of Kinesiology, September 1, 2014 – December 31, 2014.

Cross Appointment

HOULE, Sherilyn, Assistant Professor, School of Pharmacy to School of Public Health and Health Systems, August 1, 2014 – July 31, 2019.

Postdoctoral Fellow to Research Appointment

PLANTE, Courtney, Department of Recreation and Leisure Studies, September 1, 2014 – August 31, 2015.

B. SABBATICAL LEAVES

For Approval by the Board of Governors

DUPUIS, Sherry, Professor, Department of Recreation and Leisure Studies, January 1, 2015 – June 30, 2015, 85% salary.
WELLS, Richard, Professor, Department of Kinesiology, January 1, 2015 – June 30, 2015, full salary.

James W.E. Rush
Dean, Faculty of Applied Health Sciences
A. APPOINTMENTS/REAPPOINTMENTS

Probationary-Term Appointment

GARCIA, Joanna (BA 1997 Ohio Wesleyan University, MA 2005 North Carolina State University. PhD 2014 Virginia Tech University), Assistant Professor, School of Accounting and Finance, July 1, 2014 to June 30, 2017. Dr. Garcia joins the tax area of the school. Her research interests include archival research in taxation, especially related to corporate social responsibility, corporate lobbying, tax policy and the political process. She received the KPMG Foundation Minority Accounting Doctoral Scholarship. Dr. Garcia is a certified Public Accountant and worked as a Senior Tax Consultant for Deloitte Tax, LLP from 2005 to 2010. She has taught courses in taxation and she will contribute to the School of Accounting and Finance by strengthening research and teaching in the tax area.

Probationary-Term Appointment Date Change

FORAND, Jean Guillaume, Assistant Professor, Department of Economics, change from July 1, 2014 to June 30, 2017 to July 1, 2014 to June 30, 2018.

Definite-Term Appointment

PENATE, Rocky (BA 2002 University of Western Ontario, PhD 2011 University of Toronto, BEd 2014 Brock University), Lecturer, Department of French Studies, September 1, 2014 to August 31, 2015. Dr. Penate’s PhD research focused on late 19th- and early 20th-century French literature and combined philosophic and thematic approaches to the works of Flaubert Proust and Ponge. His current research project examines different representations of animals and animality across a variety of literary forms. He brings to the department an interdisciplinary approach that incorporates literary analysis, eco-criticism, and a reflection on the relationship between humans and animals.

Adjunct Appointments

Instruction

BULLOCH, Dean, Lecturer, Department of Psychology, September 1, 2014 to December 31, 2014.

FILICE, Michelle, Lecturer, Women’s Studies, September 1, 2014 to December 31, 2014.

LUCAS, Jonathon, Lecturer, Department of Drama and Speech Communication, September 1, 2014 to December 31, 2014.

MUNAWAR, Sherry, Lecturer, School of Accounting and Finance, September 1, 2014 to December 31, 2014.

ZAIDI, Ashna, Lecturer, Department of English Language and Literature, September 1, 2014 to December 31, 2014.

ZIMMERMANN, Alexandra, Lecturer, Department of Germanic and Slavic Studies, September 1, 2014 to December 31, 2014.

Graduate Supervision

DEL ROSARIO, Kerris, Assistant Professor, Department of Psychology, September 1, 2014 to August 31, 2015.
FETSCHER, Justus, Professor, Department of Germanic and Slavic Studies, September 1, 2014 to August 31, 2019.

MCBRIDE, Carolina, Assistant Professor, Department of Psychology, September 1, 2014 to August 31, 2015.

Miscellaneous (research, consultations, etc.)
FONDACARO, Rocco, Associate Professor, Department of Psychology, September 1, 2014 to August 31, 2019.

Adjunct Reappointments
Instruction
AL ETHARI, Lamees, Lecturer, Department of English Language and Literature, September 1, 2014 to December 31, 2014.

ARNASON, Mark, Lecturer, School of Accounting and Finance, September 1, 2014 to December 31, 2014.

BORONKA, Irina, Lecturer, Department of Germanic and Slavic Studies, September 1, 2014 to December 31, 2014.

CHASMAR, Hugh, Lecturer, School of Accounting and Finance, September 1, 2014 to December 31, 2014.

DE ROOIJ-MOHLE, Margreet, Department of Germanic and Slavic Studies, September 1, 2014 to December 31, 2014.

DIGNAN, Paul, Lecturer, Department of Fine Arts, September 1, 2014 to December 31, 2014.

GARWOOD, Kim, Lecturer, Department of English Language and Literature, September 1, 2014 to December 31, 2014.

HARVIE, Jo, Lecturer, Department of Drama and Speech Communication, September 1, 2014 to December 31, 2014.

HAYDON, Nathan, Lecturer, Department of Philosophy, September 1, 2014 to December 31, 2014.

KHOOLDI, Amir-Shahram, Lecturer, Department of History, September 1, 2014 to December 31, 2014.

LAZAR, Karen, Lecturer, Department of Drama and Speech Communication, September 1, 2014 to December 31, 2014.

MANDEL, Jordan, Lecturer, Faculty of Arts, Stratford Programmes, September 1, 2014 to December 31, 2014.

MCCAULEY, Eva, Lecturer, Department of Fine Arts, September 1, 2014 to December 31, 2014.

MCGOWAN, Rosemary, Lecturer, Department of Political Science, September 1, 2014 to December 31, 2014.

MEINYKEVYCH, Viktoriya, Lecturer, Department of Germanic and Slavic Studies, September 1, 2014 to December 31, 2014.
NUNEZ, Camelia, Lecturer, Department of Spanish and Latin American Studies, September 1, 2014 to December 31, 2014.

OLDHAM, Andrew, Lecturer, School of Accounting and Finance, September 1, 2014 to December 31, 2014.

RAY, Nicholas, Lecturer, Department of Philosophy, September 1, 2014 to December 31, 2014.

REICHERT, Tetyana, Lecturer, Department of Germanic and Slavic Studies, September 1, 2014 to December 31, 2014.

ROBERTS, Steve, Lecturer, School of Accounting and Finance, September 1, 2014 to December 31, 2014.

STACEY, Jeffrey, Lecturer, Department of Drama and Speech Communication, September 1, 2014 to December 31, 2014.

VAN BRUWAENE, David, Lecturer, Department of Philosophy, September 1, 2014 to December 31, 2014.

ZIMMERMAN, Amber, Lecturer, Department of Drama and Speech Communication, September 1, 2014 to December 31, 2014.

Miscellaneous (research, consultations, etc.)

BEHARRY, Edward, Assistant Professor, Department of Psychology, September 1, 2014 to August 31, 2015.

BEHARRY, Pamela, Assistant Professor, Department of Psychology, September 1, 2014 to August 31, 2015.

DODGSON, Philip, Assistant Professor, Department of Psychology, September 1, 2014 to August 31, 2015.

ETHIER, Nicole, Assistant Professor, Department of Psychology, September 1, 2014 to December 31, 2014.

FARVOLDEN, Peter, Assistant Professor, Department of Psychology, September 1, 2014 to August 31, 2015.

GIFFORD, Shannon, Assistant Professor, Department of Psychology, September 1, 2014 to August 31, 2015.

LANE, Christopher, Assistant Professor, Department of Psychology, September 1, 2014 to August 31, 2015.

MCINTYRE-SMITH, Alexandra, Assistant Professor, Department of Psychology, September 1, 2014 to August 31, 2015.

MIKAIL, Samuel, Assistant Professor, Department of Psychology, September 1, 2014 to August 31, 2015.

ORR, Elizabeth, Clinician, Department of Psychology, September 1, 2014 to August 31, 2015.
PAULITZKI, Jeffrey, Assistant Professor, Department of Psychology, September 1, 2014 to August 31, 2015.

SADLER, Pamela, Associate Professor, Department of Psychology, September 1, 2014 to August 31, 2015.

WHEELER, Heather, Assistant Professor, Department of Psychology, September 1, 2014 to August 31, 2015.

Graduate Student to Part-Time Lecturer Appointments
ABDULLA, Rosanne, Department of French Studies, September 1, 2014 to December 31, 2014.

BOURGET-FOGARTY, Galen, Department of English Language and Literature, September 1, 2014 to December 31, 2014.

BROUSSEAU, Anna, Department of French Studies, September 1, 2014 to December 31, 2014.

CAMPBELL-SEYLER, Caroline, Department of French Studies, September 1, 2014 to December 31, 2014.

DEFRAEYE, Julien, Department of French Studies, September 1, 2014 to December 31, 2014.

EVEN, Coleen, Department of French Studies, September 1, 2014 to December 31, 2014.

HIRSTEIN, Mario, Department of Germanic and Slavic Studies, September 1, 2014 to December 31, 2014.

JAGIELSKA, Agata, Department of French Studies, September 1, 2014 to December 31, 2014.

JORDAN, William, Department of Philosophy, September 1, 2014 to December 31, 2014.

KARPIAK, Katherine, Department of French Studies, September 1, 2014 to December 31, 2014.

LEROUX, Carlie, Department of Sociology and Legal Studies, September 1, 2014 to December 31, 2014.

MACDONALD, Ian, Department of Philosophy, September 1, 2014 to December 31, 2014.

MAZOYER, Alexandre, Department of French Studies, September 1, 2014 to December 31, 2014.

MCCARTHY, Megan, Department of Psychology, September 1, 2014 to December 31, 2014.

MCEWAN, Micheal, Department of Philosophy, September 1, 2014 to December 31, 2014.

ROSS, George, Department of Drama and Speech Communication, September 1, 2014 to December 31, 2014.

ROTH, Daniela, Department of Germanic and Slavic Studies, September 1, 2014 to December 31, 2014.

SCHLEIN, Friederike, Department of Germanic and Slavic Studies, September 1, 2014 to December 31, 2014.
SCHOLZ, Kyle, Department of Germanic and Slavic Studies, September 1, 2014 to December 31, 2014.

SHAKESPEARE, David, Department of Drama and Speech Communication, September 1, 2014 to December 31, 2014.

SMEATON, Joan, Department of French Studies, September 1, 2014 to December 31, 2014.

SMITHWICK, Neil, Department of Sociology and Legal Studies, September 1, 2014 to December 31, 2014.

WAMMES, Jeffrey, Department of Psychology, September 1, 2014 to December 31, 2014.

Staff to Faculty Appointments
BREUGST, Eric, Lecturer, Faculty of Arts, September 1, 2014 to December 31, 2014.

DI GRAVIO, Katrina, Lecturer, Department of Psychology, September 1, 2014 to December 31, 2014.

HAYDEN, Jayne, Lecturer, Faculty of Arts, September 1, 2014 to April 30, 2015.

B. ADMINISTRATIVE APPOINTMENTS
DIAMOND, James, Associate Chair, Undergraduate Studies, Department of Religious Studies, September 1, 2014 to August 31, 2016.

O’CONNOR, Daniel, Interim Chair, Department of Sociology & Legal Studies, October 1, 2014 to June 30, 2015.

C. ADMINISTRATIVE APPOINTMENT DATE CHANGE
DAWSON, Lorne, Chair, Department of Sociology & Legal Studies, change from July 1, 2011 to June 30, 2015 to July 1, 2011 to September 30, 2014.

D. SABBATICAL LEAVES
For Approval by the Board of Governors
MACDONALD, Michael, Associate Professor, Department of English Language & Literature, January 1, 2015 to June 30, 2015, 85% salary.

SCHULZE, Mathias, Associate Professor, Department of Germanic & Slavic Studies, January 1, 2015 to June 30, 2015, 85% salary.

Douglas M. Peers
Dean, Faculty of Arts
A. APPOINTMENTS/REAPPOINTMENTS

Probationary-Term Appointment Date Change

Definite-Term Appointment
LEE, Czang-Ho, Research Assistant Professor, Department of Electrical & Computer Engineering, December 1, 2014 – November 30, 2016. PhD University of Waterloo 2006; MSc Kangwon National University, South Korea 1998; BSc Kangwon National University 1996. Dr. Lee is an expert in electronic materials and devices with a focus on semiconductor growth and processing. He has extensive experience with thin-film transistor fabrication and characterization. Dr. Lee’s expertise and experience is an important resource that will be required for helping to train and mentor new users as well as assisting in the on-going research in the G2N lab in the ECE department.

Definite-Term Reappointment

Visiting Appointments
BARAJAS, John Raymond, Scholar, Department of Civil & Environmental Engineering, September 15, 2014 – February 14, 2015.

MAROUFMASHAT, Azadeh, Scholar, Department of Chemical Engineering, October 1, 2014 – March 31, 2015.

MENG, Qingxing, Scholar, Department of Civil & Environmental Engineering, September 1, 2014 – August 31, 2016.

PIRES DE OLIVEIRA, Rafael, Scholar, Department of Chemical Engineering, October 1, 2014 – September 30, 2015.


Visiting Reappointments
CHIU, Gordon, Scholar, Department of Chemical Engineering, July 1, 2014 – January 31, 2015.

ISMAILOV, Vugar, Scholar, Department of Chemical Engineering, August 1, 2014 – August 31, 2014.

LI, Qiuyang, Scholar, Department of Systems Design Engineering, September 1, 2014 – October 31, 2014.

LIU, Zhe-Fu, Scholar, Department of Chemical Engineering, October 1, 2014 – June 30, 2015.
MOKHTARI, Fatemeh, Scholar, Department of Electrical & Computer Engineering, September 1, 2014 – November 30, 2014.

Special Appointments

Undergraduate Instruction

AMINI, Ghobad, Lecturer, Department of Mechanical & Mechatronics Engineering, September 1, 2014 – December 31, 2014.

BARDELCIK, Alexander, Lecturer, Department of Mechanical & Mechatronics Engineering, September 1, 2014 – December 31, 2014.

BATAY-CSORBA, Andrew, Lecturer, School of Architecture, September 1, 2014 – December 31, 2014.

BORLAND, Matt, Lecturer, Department of Systems Design Engineering, September 1, 2014 – December 31, 2014.

KOHAR, Christopher, Course Developer, Department of Mechanical & Mechatronics Engineering, September 1, 2014 – December 31, 2014.

KOLLER, Heinrich, Lecturer, School of Architecture, September 1, 2014 – December 31, 2014.

MOHAMED, Samar, Lecturer, Department of Electrical & Computer Engineering, September 1, 2014 – December 31, 2014.

MURPHY, Andrea, Lecturer, School of Architecture, September 1, 2014 – December 31, 2014.

NAKAMURA, Hajime, Lecturer, School of Architecture, September 1, 2014 – December 31, 2014.


POROVIC, Jelena, Lecturer, School of Architecture, September 1, 2014 – December 31, 2014.

QAZI ZADE, Azad, Lecturer, Department of Mechanical & Mechatronics Engineering, September 1, 2014 – December 31, 2014.

SAAD, Dina, Lecturer, Department of Civil & Environmental Engineering, September 1, 2014 – December 31, 2014.

SOLEIMANI, Arash, Lecturer, Department of Civil & Environmental Engineering, September 1, 2014 – December 31, 2014.

SORLI, Scott, Lecturer, School of Architecture, September 1, 2014 – December 31, 2014.

WICKENS, Timothy, Lecturer, School of Architecture, September 1, 2014 – December 31, 2014.

Graduate Instruction

IRANNEJAD, Mehrdad, Lecturer, Department of Mechanical & Mechatronics Engineering, September 1, 2014 – December 31, 2014.
JYRKAMA, Mikko, Lecturer, Department of Civil & Environmental Engineering, September 1, 2014 – December 31, 2014.

SPREMULLI, Matthew, Lecturer, School of Architecture, September 1, 2014 – December 31, 2014.


Other


Special Reappointments

Undergraduate Instruction

LIM TUNG, Fiona, Lecturer, School of Architecture, September 1, 2014 – December 31, 2014.

MARCOPOULOS, Christos, Lecturer, School of Architecture, September 1, 2014 – December 31, 2014.

MORENO, Carlos, Lecturer, Department of Electrical & Computer Engineering, September 1, 2014 – December 31, 2014.

YEKRANGIAN, Delnaz, Lecturer, School of Architecture, September 1, 2014 – December 31, 2014.

Adjunct Appointments

Graduate Supervision

BRZEZINSKI, Andrew, Assistant Professor, Department of Mechanical & Mechatronics Engineering, July 25, 2014 – July 24, 2017.

CORBIN, Stephen, Professor, Department of Mechanical & Mechatronics Engineering, July 1, 2014 – June 30, 2017.

YANG, Victor, Associate Professor, Department of Mechanical & Mechatronics Engineering, July 24, 2014 – July 23, 2017.

Graduate Supervision and Research

CHATZIS, Ioannis, Professor, Department of Chemical Engineering, September 1, 2014 – August 31, 2017.

GARG, Siddharth, Assistant Professor, Department of Electrical & Computer Engineering, September 1, 2014 – August 31, 2017.

SYKES, Jonathan, Professor, Department of Civil & Environmental Engineering, September 1, 2014 – August 31, 2017.
Adjunct Reappointments

Instruction

VANDEN BOSCH, Nancy, Lecturer, Conrad Business, Entrepreneurship and Technology Centre, Dean of Engineering Office, September 1, 2014 – August 31, 2015.

Graduate Supervision

APLEVICH, Dwight, Professor, Department of Electrical & Computer Engineering, August 1, 2014 – July 31, 2017.

Graduate Supervision and Research

CUMMING, Douglas, Professor, Department of Management Sciences, September 1, 2014 – August 31, 2017.

FANG, Liping, Professor, Department of Systems Design Engineering, September 1, 2014 – August 31, 2017.

HAAS, Ralph, Professor, Department of Civil & Environmental Engineering, September 1, 2014 – August 31, 2017.

MARK Jon, Professor, Department of Electrical & Computer Engineering, September 1, 2014 – August 31, 2017.

SEGLENIEKS, Frank, Assistant Professor, Department of Civil & Environmental Engineering, July 1, 2014 – June 30, 2017.

SURAL, Haldun, Professor, Department of Management Sciences, September 1, 2014 – August 31, 2017.

Research

MACPHIE, Robert, Professor, Department of Electrical & Computer Engineering, October 1, 2014 – September 30, 2017.

B. ADMINISTRATIVE REAPPOINTMENTS


WELLS, Mary, Associate Dean, Outreach, Department of Mechanical & Mechatronics Engineering, September 1, 2014 – August 31, 2017.

C. RESIGNATION

BRZEZINSKI, Andrew, Assistant Professor, Department of Mechanical & Mechatronics Engineering, July 24, 2014.

D. RETIREMENT

SYKES, Jonathan, Professor, Department of Civil & Environmental Engineering, August 31, 2014.

E. SABBATICAL LEAVES

For Approval by the Board of Governors

AAGAARD, Mark, Associate Professor, Department of Electrical & Computer Engineering, January 1, 2015 – December 31, 2015, 85% salary.
CLAUSI, David, Professor, Department of Systems Design Engineering, January 1, 2015 – June 30, 2015, 85% salary.

COZZAIRN, Brian, Associate Professor, Department of Management Sciences, July 1, 2015 – June 30, 2016, 94% salary.

HEPPLER, Glen, Professor, Department of Systems Design Engineering, January 1, 2015 – December 31, 2015, 100% salary.

SCOTT, Stacey, Assistant Professor, Department of Systems Design Engineering, January 1, 2015 – June 30, 2015, 100% salary.

TIZHOOSH, Hamid, Professor, Department of Systems Design Engineering, January 1, 2015 – June 30, 2015, 100% salary.

Pearl Sullivan
Dean, Faculty of Engineering
A. APPOINTMENTS/REAPPOINTMENTS

Definite-Term Reappointment

FELTMATE, Blair, Associate Professor, School of Environment, Enterprise and Development, October 1, 2014 to June 30, 2017.

Adjunct Appointment

Graduate Supervision and Research

EDGE, Sara, Assistant Professor, Faculty of Environment, August 1, 2014 to July 31, 2017

Special Appointments

Instruction

BRAUNSTEIN, Martina, Studio Facilitator/Professional Support, School of Planning, September 1, 2014 to December 31, 2014.

CARDWELL, Francesca, Lecturer, Department of Geography and Environmental Management, September 1, 2014 to December 31, 2014.

ESOPENKO, Megan, Studio Facilitator/Professional Support, School of Planning, September 1, 2014 to December 31, 2014.

FERGUSON, Philip, Lecturer, School of Planning, September 1, 2014 to December 31, 2014.

JOAKIM, Erin, Lecturer, Faculty of Environment, September 1, 2014 to April 30, 2015.

MURRAY, Daniel, Lecturer, School of Environment, Enterprise and Development, September 1, 2014 to December 31, 2014.

RATCLIFFE, William, Lecturer, School of Environment, Enterprise and Development, September 1, 2014 to December 31, 2014.

STEWART, Douglas, Lecturer, Department of Environment and Resource Studies, September 1, 2014 to December 31, 2014.

Graduate Student to Part-Time Lecturer Appointments

MARKVART, Tanya, Department of Environment and Resource Studies, January 1, 2015 to April 30, 2015.


MAY, Bradley, Department of Geography and Environmental Management, September 1, 2014 to December 31, 2014.
PIZARRO PINOCHET, Jose, Department of Environment and Resource Studies, September 1, 2014 to December 31, 2014.

SHANNON, Meghan, Department of Geography and Environmental Management, September 1, 2014 to December 31, 2014.

TOURANGEAU, Wesley, Department of Environment and Resource Studies, September 1 2014 to December 31, 2014.

Postdoctoral Fellow to Part-Time Lecturer Appointment
KIRCHHOFF, Denis, Department of Environment and Resource Studies, September 1 2014 to December 31, 2014.

B. ADMINISTRATIVE APPOINTMENT
WEBER, Olaf, Acting Director, School of Environment, Enterprise and Development, January 1, 2015 to June 30, 2015.

C. SABBATICAL LEAVES
For Approval by the Board of Governors
CRAIK, Neil, Associate Professor, School of Environment, Enterprise and Development, January 1, 2015 to June 30, 2015, 100% salary.

LYNES MURRAY, Jennifer, Associate Professor, School of Environment, Enterprise and Development, January 1, 2015 to June 30, 2015, 100% salary.

WOLFE, Sarah, Assistant Professor, Department of Environment and Resource Studies, January 1, 2015 to June 30, 2015, 100% salary.

Jean Andrey
Dean, Faculty of Environment
FOR INFORMATION

A. APPOINTMENTS/REAPPOINTMENTS

Visiting Appointments


Adjunct Reappointments

Instruction


BARSALOU, Edward, Lecturer, David R. Cheriton School of Computer Science, September 1, 2014 – December 31, 2014.


MILLER, Killian, Lecturer, Dept. of Applied Mathematics, September 1, 2014 – December 31, 2014.


Research

LUCENA, Carlos, Professor, David R. Cheriton School of Computer Science, May 1, 2014 – June 30, 2017.

PALDUS, Josef, Professor, Dept. of Applied Mathematics, September 1, 2014 – August 31, 2017.

Cross Appointment

TAN, Lin, Assistant Professor, Electrical and Computer Engineering to David R. Cheriton School of Computer Science, July 1, 2014 – June 30, 2016.
Cross Reappointment
LEUNG, Debbie, Associate Professor, Dept. of Combinatorics and Optimization to David R. Cheriton School of Computer Science, August 1, 2014 – June 30, 2016.

Graduate Student to Part-time Lecturer Appointments


Postdoctoral Fellow to Part-time Lecturer Appointment
COUTINHO, Gabriel, Dept. of Combinatorics & Optimization, September 1, 2014 – August 31, 2015.

B. SABBATICAL LEAVES
For Approval by the Board of Governors

FORREST, Brian, Professor, Dept. of Pure Mathematics, January 1, 2015 – December 31, 2015, 100% salary.

MANN, Richard, Associate Professor, David R. Cheriton School of Computer Science, January 1, 2015 – December 31, 2015, 85% salary.

WILLARD, Ross, Professor, Dept. of Pure Mathematics, January 1, 2015 – December 31, 2015, 85% salary.

C. SPECIAL LEAVE
CHILDS, Andrew, Associate Professor, Dept. of Combinatorics and Optimization, November 1, 2014 – October 31, 2015. This is an unpaid leave.

Ian P. Goulden
Dean, Faculty of Mathematics
A. APPOINTMENTS/REAPPOINTMENTS

Probationary-Term Appointment

KATZENBACK, Barbara, Assistant Professor, Department of Biology, September 1, 2016 to June 30, 2019. [BSc, University of Alberta (2006); PhD, University of Alberta (2012).]

Dr. Katzenback completed her PhD under the supervision of Dr. M. Belosevic (Honorary Degree from Waterloo in 2013). In August 2012, she moved to Carleton as a postdoctoral fellow with Dr. Ken Storey. She received a number of awards during her training, notably NSERC Alexander Graham Bell CGS-M and CGS-D Scholarships and the President’s Doctoral Dissertation Prize at Alberta. Dr. Katzenback also received a Graduate Teaching Award and Commendation at Alberta. She is an immunologist, who uses mostly frogs, but also fish as model systems to study the effects of environmental and physical stressors on the immune system. She will be a valuable addition to the teaching complement in physiology and immunology. Presently, Dr. Katzenback has begun a Banting Postdoctoral Fellowship working at Waterloo with Dr. Brian Dixon, subsequently transitioning to an independent faculty position in two years. Her area of research builds on the department’s strategic strength in aquatic biology.

Probationary-Term Reappointment

MARIANTONI, Matteo, Assistant Professor, Department of Physics and Astronomy, July 1, 2016 to June 30, 2019. [BSc, Politechnico di Milano (2001); MSc, Chalmers University of Technology (2003); PhD, Walther-Meissner-Institut and Technical University Munich (2009).]

Adjunct Appointments

Undergraduate Instruction

COULSTON, Barbara, Assistant Professor, School of Pharmacy, September 1, 2014 to December 31, 2015.

Graduate Supervision

VENKITESWARAN, Jason, Assistant Professor, Department of Earth and Environmental Sciences, September 1, 2014 to August 31, 2017.

Graduate Supervision and Research

CHARLAND, Paule, Assistant Professor, Department of Physics and Astronomy, September 1, 2014 to August 31, 2017.

DARKO, Johnson B., Assistant Professor, Department of Physics and Astronomy, September 1, 2014 to August 31, 2017.

SIEMANN, Stefan, Associate Professor, Department of Chemistry, September 1, 2014 to August 31, 2017.

ZHAN, Lixin, Assistant Professor, Department of Physics and Astronomy, September 1, 2014 to August 31, 2017.
Adjunct Reappointments
Graduate Supervision
PELTIER, Wm. Richard, Professor, Department of Earth and Environmental Sciences, May 1, 2014 to April 30, 2017.

Graduate Supervision and Research
BOYLE, Latham A., Assistant Professor, Department of Physics and Astronomy, September 1, 2014 to August 31, 2019.

Undergraduate Instruction, Graduate Supervision and Research
OSEI, Ernest, Professor, Department of Physics and Astronomy, October 1, 2013 to September 30, 2016.

Special Appointments
Undergraduate Instruction
DiGIOVANNI, Sheri, Lecturer, School of Pharmacy, September 1, 2014 to December 31, 2014.

DOLMAN, Howard, Lecturer, School of Optometry and Vision Science, January 1, 2015 to April 30, 2015.

HANNA, Brad, Lecturer, School of Optometry and Vision Science, September 1, 2014 to December 31, 2014.

KIRBY, Gordon M., Lecturer, School of Optometry and Vision Science, September 1, 2014 to December 31, 2014.

ROBERTS, Ken, Lecturer, School of Pharmacy, September 1, 2014 to December 31, 2014.

Special Reappointments
Undergraduate Instruction
BARNES, Derek J., Lecturer, School of Optometry and Vision Science, September 1, 2014 to December 31, 2014.

CONANT Jr., Brewster, Lecturer, Department of Earth and Environmental Sciences, September 1, 2014 to December 31, 2014.

GILBERT, Dara E., Lecturer, Department of Chemistry, September 1, 2014 to December 31, 2014.

VARIKOOTY, Jalaiah, Lecturer, School of Optometry and Vision Science, September 1, 2014 to December 31, 2014 and January 1, 2015 to April 30, 2015.

Graduate Student to Part-time Lecturer Reappointments
HOSSEINZADEH KHALIGH, Hadi, Lecturer, Department of Physics and Astronomy, September 1, 2014 to December 31, 2014.

NESAN, Dinushan, Lecturer, Department of Biology, September 1, 2014 to December 31, 2014.
Postdoctoral Fellow to Part-time Lecturer Reappointments

BENNETT, Drew, Lecturer, Department of Chemistry, September 1, 2014 to December 31, 2014.

DELANEY, Keith, Lecturer, Department of Earth and Environmental Sciences, September 1, 2014 to December 31, 2014.

Staff to Part-time Lecturer Reappointments

ASSOUD, Abdejalil, Lecturer, Department of Chemistry, September 1, 2014 to December 31, 2014.

MARTA, Richard, Lecturer, Department of Chemistry, July 1, 2014 to August 31, 2014 and September 1, 2014 to December 31, 2014.

B. ADMINISTRATIVE APPOINTMENTS

BALOGH, Michael, Associate Chair, Department of Physics and Astronomy, September 1, 2014 to August 31, 2017.

HILL, Robert, Associate Dean, Graduate Studies, Faculty of Science, September 1, 2014 to August 31, 2017.

HUDSON, Christopher, Associate Director, Research, School of Optometry and Vision Science, September 1, 2014 to August 31, 2017.

C. ADMINISTRATIVE REAPPOINTMENTS

GORECKI, Tadeusz, Associate Dean, Co-op, Faculty of Science, September 1, 2014 to August 31, 2015.

IRVING, Elizabeth, Clinic Director, School of Optometry and Vision Science, August 1, 2014 to July 31, 2015.

JONES, Deborah, Interim Associate Director, Academics and Research, School of Optometry and Vision Science, July 1, 2014 to June 30, 2015.

LIN, Shoufa, Associate Dean, International Programs, Faculty of Science, September 1, 2014 to August 31, 2015.

D. SABBATICAL LEAVES

For Approval by the Board of Governors

BLOWES, David, Professor, Department of Earth and Environmental Sciences, January 1, 2015 to December 31, 2015, 100% salary.

CAMPBELL, Melanie, Professor, Department of Physics and Astronomy, January 1, 2015 to December 31, 2015, 100% salary.

DMITRIENKO, Gary, Associate Professor, Department of Chemistry, January 1, 2015 to December 31, 2015, 100% salary.

EVANS, Stephen G., Professor, Department of Earth and Environmental Sciences, May 1, 2015 to April 30, 2016, 100% salary.
GINGRAS, Michel. Professor, Department of Physics and Astronomy, January 1, 2015 to December 31, 2015, 100% salary.

HEIKKILA, John J. Professor, Department of Biology, January 1, 2016 to December 31, 2016, 100% salary.

NEUFELD, Josh. Associate Professor, Department of Biology, January 1, 2015 to December 31, 2015, 97.5% salary.

PTACEK, Carol. Professor, Department of Earth and Environmental Sciences, January 1, 2015 to December 31, 2015, 100% salary.

TAYLOR, James. Associate Professor, Department of Physics and Astronomy, January 1, 2015 to June 30, 2015, 85% salary.

T.B. McMahon
Dean, Faculty of Science
FOR APPROVAL

Committee Appointments

Motion: To approve the following appointments:

- **Executive Committee**: Mark Seasons (planning) as environment faculty senator representative (replacing Bruce Frayne), term to 30 April 2015.
- **Finance Committee**: Craig Janes (public health & health systems) as AHS faculty senator representative (replacing Jim Rush), term to 30 April 2015.
- **Long Range Planning Committee**: Michael Drescher (planning) as environment faculty senator representative (replacing Alexander Brenning), term to 30 April 2015.
To: Members of Senate  
From: Logan Atkinson, University Secretary & General Counsel  
Date: 23 September 2014  
Subject: Revision and consolidation of Senate bylaws

Following the first reading of the draft revised and consolidated Senate bylaws at the meeting of 15 September 2014, this memorandum aims to address the points raised at and following that meeting and to provide a detailed response where applicable. The listed amendments have been incorporated into the attached draft Senate bylaws.

As well, contingent upon second reading and passage of the consolidated bylaws, a draft motion to establish publication outlets for notice of meetings and for notices related to elections is provided for the consideration of Senate.

Amendments Incorporated into Draft Bylaws

1. Amendment of section 1.02(j) of draft Senate Bylaw 1, to reflect that under Policy 45 an acting dean or dean pro tem is named to serve by the vice-president, academic & provost.

2. Amendment to section 8.03 of draft Senate Bylaw 1 to clarify that a member who declares a conflict of interest and who will not be permitted to enter into debate on the matter, further shall not be eligible to vote on the same item.

3. Amendment of section 2.01(b) of draft Senate Bylaw 3, as follows:

   b. The nomination period for faculty constituencies and graduate students is providing at least twenty-one (21) days, for faculty constituencies and graduate students and seven (7) days for undergraduate students. Constituencies the nomination period is determined in consultation with the Federation of Students, to respond. The chief returning officer shall call for nominations from those faculty and student constituencies that have members whose terms are expiring by placing a suitable notice in such places and ways as may be designated from time to time by Senate, with copies to the appropriate faculties and constituency presidents. Nomination forms shall be made available by the Secretariat & Office of General Counsel and, in the case of undergraduate student elections, by the Federation of Students. Nominations shall be submitted in writing to the chief returning officer. Each nomination shall be signed by the required number of members of the constituency from which the member is to be elected and shall include a signed statement from the nominee agreeing to serve if elected. For faculty and graduate students, the required number of members is five; for undergraduate students elected from a single faculty, the required number is twenty-five; for undergraduate students elected at large, the required number is one hundred.

Rationale: This amendment will align the bylaw with current practice of the Federation of Students with regard to establishing a nomination period.
Motion: Whereas section 22(o) of the *University of Waterloo Act* provides that the Senate of the University of Waterloo is empowered to enact bylaws and regulations for the conduct of its affairs; now therefore the Senate hereby repeals Bylaws 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 and 11, as amended, and gives second reading and approval to bylaws 1, 2, 3 and 4.

Resolution to establish publication outlets

BE IT RESOLVED THAT for the purposes of providing public notice to the university community as provided in sections 3.01 and 3.04(d) of Bylaw 1, Senate designates that notice of general and special meetings of Senate shall be provided electronically through the Secretariat & Office of General Counsel and may further be provided in other places and ways as may be determined by the Secretariat & Office of General Counsel;

AND FURTHER THAT for the purposes of providing public notice to the university community as provided in sections 2.01(b), 2.01(d) and 2.03(c) of Bylaw 3, Senate designates that notice calling for nominations, for the publication of candidates’ statements, and for by-elections shall be placed in the Daily Bulletin and may further be provided in other places and ways as may be determined by the Secretariat & Office of General Counsel.

Items for further consideration

Regarding the observations pertaining to the specific ex-officio membership on Senate’s committees and councils, as well as the appropriateness of a one-year appointment where such appointments are made under these bylaws, the Secretariat & Office of General Counsel believes these observations merit additional review which can feasibly be carried out on a separate track from the consolidation of the Senate bylaws.
Senate Bylaw 1
A bylaw relating generally to the business and affairs of Senate of the University of Waterloo, and its Committees and Councils

BE IT ENACTED as a bylaw of Senate of the University of Waterloo, as follows:

1. INTERPRETATION

1.01 In all the bylaws of Senate,
   a. "academic year" means the twelve-month period dating from 1 May of one year to 30 April of the succeeding year.
   b. "Senate" means Senate of the University of Waterloo.
   c. “Executive Committee” means the Executive Committee of Senate as established in the Senate bylaws

1.02 Throughout all the bylaws of Senate of the University of Waterloo:
   a. Where the title "president" appears, an acting president or president pro tem, so designated by the Board of Governors, shall serve in the place of the president, with the latter's full rights and responsibilities.
   b. Where the title "vice-president, academic & provost" appears, an acting vice-president, academic & provost or vice-president, academic & provost pro tem, so designated by the president and/or the Board of Governors, shall serve in the place of the vice-president, academic & provost, with the latter's full rights and responsibilities.
   c. Where the title "vice-president, administration & finance" appears, an acting vice-president, administration & finance or vice-president, administration & finance pro tem, so designated by the president, shall serve in the place of the vice-president, administration & finance, with the latter's full rights and responsibilities.
   d. Where the title "vice-president, advancement" appears, an acting vice-president, advancement or vice-president, advancement pro tem, so designated by the president, shall serve in the place of the vice-president, advancement, with the latter's full rights and responsibilities.
   e. Where the title "vice-president, university relations" appears, an acting vice-president, university relations or vice-president, university relations pro tem, so designated by the president, shall serve in the place of the vice-president, university relations, with the latter's full rights and responsibilities.
   f. Where the title "vice-president, university research" appears, an acting vice-president, university research or vice-president, university research pro tem, so designated by the president and/or the Board of Governors, shall serve in the place of the vice-president, university research, with the latter's full rights and responsibilities.
   g. Where the title "associate vice-president, academic" appears, an acting associate vice-president, academic or associate vice-president, academic pro tem, so named to serve by the president, shall serve in the place of the associate vice-president, academic, with the latter's full rights and responsibilities.
   h. Where the title "associate provost, graduate studies" appears, an acting associate provost, graduate studies or associate provost, graduate studies pro tem, so named to serve by the president, shall serve in the place of the associate provost, graduate studies, with the latter's full rights and responsibilities.
i. Where the title "associate provost, resources" appears, an acting associate provost, resources or associate provost, resources pro tem, so designated by the president, shall serve in the place of the associate provost, resources, with the latter's full rights and responsibilities.

j. Where the titles "dean of each faculty" appear, an acting dean, or dean pro tem, so named to serve by the vice-president, academic & provost, shall serve in the place of the dean, with the latter's full rights and responsibilities.

2. SCHEDULE OF MEETINGS

2.01 The schedule of meetings for Senate and its committees and councils shall be approved by the chair of Senate and published by the Secretariat and Office of General Counsel prior to the new academic year.

3. MEETINGS OF SENATE

3.01 General Meetings

Senate shall normally hold ten (10) general meetings during each academic year. Notice of each meeting shall be communicated to the university community in such places and ways as may be designated from time to time by Senate.

3.02 Place of Meetings

Meetings of Senate shall be held upon the campus of the university.

3.03 Notice of an Agenda and Background Material for General Meetings

Notice in writing of each general meeting and the agenda and available background material for any such meeting, shall be available to all members of Senate at least seven (7) days prior to the date of each such meeting.

3.04 Special Meetings

a. Special meetings of Senate shall be called by one of the following:

   i. The chair of Senate, upon the receipt of a request of the Executive Committee for such meeting; or
   ii. The secretary of Senate, upon receipt by the secretary of a written request for such meeting signed by at least twenty members of Senate, with such request to state the reason for calling the special meeting.

b. Special meetings shall be called promptly.

c. Notice in writing of each special meeting, together with the agenda and available background material shall be available to each member of Senate at least seven (7) days prior to the date of the meeting, provided that the chair of Senate shall have the power and authority to abridge such seven-day period when, in the chair's absolute discretion, the urgency of any item of business to be dealt with at such meeting so requires.

d. Notice in writing of each special meeting shall be communicated to the university community in such places and ways as may be designated from time to time by Senate.

4. COMMITTEES AND COUNCILS - AGENDA AND BACKGROUND MATERIAL TO BE AVAILABLE

4.01 Notice in writing of each general meeting of any committee or council shall be available at least seven (7) days prior to the date of each such meeting.
4.02 The agenda and available background material for any general meeting of any committee or council shall be available at least seven (7) days prior to the date of each such meeting.

5. QUORUM

5.01 At all meetings of Senate and of its committees and councils, a majority of the members shall constitute a quorum for the transaction of the business and affairs of the body.

6. MEETINGS IN OPEN SESSION

6.01 Subject to section 7 of this bylaw, all general and special meetings of Senate and its committees and councils shall be open to members of the university community, the public-at-large, and representatives of the news media. Senate will make every effort to hold its meetings in a room sufficiently large to accommodate those who indicate to the secretary of Senate, two full working days in advance of the meeting, their desire to attend.

6.02 Non-members in attendance at meetings shall not disrupt the proceedings of the meeting nor cause any disturbance by unreasonable noise or vocal expression. The chair may remove any such person when, in the chair’s sole judgment, such person is engaging in improper or disruptive conduct that is detrimental to Senate carrying out its business.

7. MEETINGS IN CLOSED SESSION

7.01 Notwithstanding the provisions of section 6 of this bylaw, and provided that all meetings shall begin in open session, Senate and its committees and councils shall have the right to hold any meeting or part thereof in closed session. This provision may exclude therefrom all persons, save for members and such resource persons as may be agreed should be in attendance, for the purpose of considering confidential financial matters of the university or where intimate financial or personal matters of any person may be disclosed, unless such person requests that such part of the meeting be open to the public.

a. The Executive Committee shall determine for purposes of the Senate agenda whether any matter is of a confidential nature and such matter shall be so designated on the agenda for such Senate meeting and shall be designated and described in a manner consistent with maintaining the confidentiality of such matter.

b. The chair or chair(s) of any committee or council of Senate will determine whether any matter is of a confidential nature and such matter shall be so designated on the agenda for such meeting and shall be designated and described in a manner consistent with maintaining the confidentiality of such matter.

c. Senate or its committees or councils shall initially deal with any such confidential matter in closed session, but, after receiving the pertinent information relative to the confidential matter, may direct that the matter be thereupon considered in open session.

8. DECLARATIONS OF CONFLICT OF INTEREST

8.01 At the beginning of each meeting of Senate or any of Senate’s committees or councils, the chair will call for members to declare any conflicts of interest with regard to any agenda item. For agenda items to be discussed in closed session, the chair will call for declarations of conflict of interest at the beginning of the closed portion of the meeting. Members may nonetheless declare conflicts at any time during a meeting.

8.02 A member shall be considered to have an actual, perceived or potential conflict of interest, when the opportunity exists for the member to use confidential information gained as a member of Senate, or any of Senate’s committees or councils, for the personal profit or advantage of any person, or use the authority, knowledge or influence of the Senate, or a committee or council thereof, to further her/his
personal, familial or corporate interests or the interests of an employee of the University with whom the member has a marital, familial or sexual relationship.

8.03 Members who declare conflicts of interest shall not enter into debate nor vote upon the specified item upon which they have declared a conflict of interest. The chair will determine whether it is appropriate for said member to remove themselves from the meeting for the duration of debate on the specified item(s).

8.04 Where the Senate or a committee or council of Senate is of the opinion that a conflict of interest exists that has not been declared, the body may declare by a resolution carried by two-thirds of its members present at the meeting that a conflict of interest exists and a member thus found to be in conflict shall not enter into debate on the specified item upon which they have declared a conflict of interest. The chair will determine whether it is appropriate for said member to remove themselves from the meeting for the duration of debate on the specified item(s).

9. REPRESENTATIONS TO MEETINGS

9.01 Any members of the university community, or of the public-at-large, wishing to make representations to any meeting of a committee or council shall file with the secretary of the relevant committee or council, at least two full working days prior to the date of such proposed meeting, written notice to that effect with such notice to designate the nature of the proposed representations.

10. TIME LIMIT ON REPRESENTATIONS

10.01 The chair of any committee or council may limit the time to be allotted to members of the university community and the public-at-large for committee or council representations.

11. SECRETARY

11.01 The university secretary and general counsel (USGC) of the university shall be the non-voting secretary of Senate.

11.02 The USGC shall appoint one or more associate secretaries of Senate to act as secretary of Senate in the absence of the USGC.

11.03 The USGC, or designate, shall be the non-voting secretary of each committee or council of Senate.

12. LIMIT ON SERVICE ON COMMITTEES

12.01 An elected member of Senate shall not serve on more than one of the Executive, Finance or Long Range Planning Committees.

13. TERM OF OFFICE

13.01 Except where specified by Senate bylaws, the term of office on committees or councils shall be one year, with members eligible for re-election.

14. BYLAWS - GENERAL

14.01 The passage of a new bylaw or amendment(s) to an existing bylaw is accomplished in two readings by Senate. At the first reading, such discussion as is deemed appropriate by Senate shall take place. At the second reading, further discussion may take place and the vote on the document shall be taken. The two readings shall take place at different, but not necessarily consecutive, meetings of Senate.

14.02 No proposed bylaw or amendment(s) will be given reading unless it has been bound into or accompanies the agenda portfolio distributed in advance of the meeting.
14.03  Any proposed bylaw or amendment(s) shall include the proposed wording of the bylaw or amendment(s), and where appropriate, a summary of the reasons for such bylaw or amendment(s).

14.04  In order to be approved by Senate, any new bylaw or amendment(s) to bylaws must receive the affirmative vote of at least two-thirds of the members of Senate present and voting at the meeting.

15. FACULTY CONSTITUTIONS

15.01  Each faculty and each academic department and school of the university may adopt a formal constitution governing its operations, provided that each such constitution and any amendments thereto shall be inoperative and ineffective until approved by Senate. No provision of the constitutions shall be inconsistent with any provisions of The University of Waterloo Act, 1972, as amended, and no provision of any constitution shall be exempt from the provisions of any of the bylaws or established policies of the university, except as expressly approved by Senate.

*Amended/consolidated from bylaws 1, 6, 7, and 10 in two readings in September and October 2014.*
Senate Bylaw 2

A bylaw to establish Committees and Councils of Senate of the University of Waterloo.

BE IT ENACTED as a bylaw of Senate of the University of Waterloo, as follows:

1. EXECUTIVE COMMITTEE

1.01 There shall be a standing committee of Senate called the Executive Committee.

1.02 Executive Committee Membership

The membership of this committee shall consist of the following:

   a. Ex Officio

      i. The president of the university who shall chair this committee.
      ii. The vice-president, academic & provost.
      iii. The associate provost, graduate studies.
      iv. The president of the Faculty Association of the University of Waterloo.

   b. Elected

      i. One faculty member of Senate from each faculty of the university.
      ii. Three members from the student members of Senate, at least one of whom shall be an undergraduate student and at least one of whom shall be a graduate student.
      iii. One member of Senate from among the community-at-large members of the Board of Governors.
      iv. One faculty member of Senate from the affiliated and federated institutions of Waterloo.
      v. One member from among the alumni members of Senate.

1.03 The term of office of members elected pursuant to paragraph 1.02.b shall be one year. Each member is eligible for re-election.

1.04 Powers and Duties of Executive Committee

The Executive Committee shall have the following powers and duties:

   a. To request special meetings of Senate, in accordance with Senate Bylaw 1.4.

   b. To exercise the powers held by Senate, within the limits of The University of Waterloo Act, 1972, for what are normally considered routine matters, on those occasions when the agenda does not, in the estimation of the Executive Committee, warrant a meeting of Senate. All such actions are to be reported to Senate.

   c. To prepare the agenda for all regular and special meetings of Senate.

   d. To receive and review reports from the deans of the university prior to their submission to Senate at each regular meeting.

   e. To present to Senate, normally at the last regular meeting in the academic year in April, a list of nominations for the committees and councils of Senate.

   f. To make recommendations to Senate as may be necessary from time to time regarding the establishment of ad hoc committees of Senate, such recommendations to include the terms of reference of any such committee and a list of nominations for the membership thereof.
g. To receive and review the reports and recommendations of all committees and councils, prior to their presentation to Senate and to make at its discretion recommendations to Senate thereon.

h. To act on behalf of Senate on such matters as Senate may from time to time designate.

i. To report to Senate, as expeditiously as possible, with respect to the conduct of such matters as shall be delegated by Senate to the committee from time to time.

1.05 Meetings of the Executive Committee

The committee shall normally hold ten (10) regular meetings during each academic year, each such meeting to be held approximately two weeks prior to the date of each general meeting of Senate. Special meetings of the committee shall be called by the chair of the committee.

2. FINANCE COMMITTEE

2.01 There shall be a standing committee of Senate called the Finance Committee.

2.02 Finance Committee Membership

The membership of this committee shall consist of the following:

a. Ex Officio

i. The president of the university who shall chair this committee.
ii. The vice-president, academic & provost.
iii. The vice-president, administration & finance.
iv. The vice-president, university research.
v. The associate provost, graduate studies.
vi. The associate provost, resources.
vii. The dean of each faculty.

b. Elected

i. One member from the community-at-large members of the Board of Governors.
ii. One elected faculty member of Senate from each faculty and one faculty member of Senate from the affiliated and federated institutions of Waterloo.
iii. Three members from the elected student members of Senate, at least one of whom shall be an undergraduate student and at least one of whom shall be a graduate student.
iv. One member from among the alumni members of Senate.

2.03 The term of office of members elected pursuant to paragraph 2.02.b shall be one year. Each member is eligible for re-election

2.04 Powers and Duties of Finance Committee

The Finance Committee shall have the following powers and duties:

a. To consider, study, and review all matters pertaining to the financial operations of the university and to make recommendations to Senate thereon.

b. To consider, study, and review the general policies governing the internal allocation of the university's financial resources and to make recommendations to Senate thereon.

c. To receive each year from the vice-president, academic & provost, for consideration, study, and review, on behalf of Senate, a detailed operating budget for the university and to make recommendations to Senate thereon.
3. LONG RANGE PLANNING COMMITTEE

3.01 There shall be a standing committee of Senate called the Long Range Planning Committee.

3.02 Long Range Planning Committee Membership

The membership of this committee shall consist of the following:

a. Ex Officio

   i. The president of the university.
   ii. The vice-president, academic & provost, who shall chair this committee.
   iii. The vice-president, administration & finance.
   iv. The vice-president, university research.
   v. The associate provost, graduate studies
   vi. The associate provost, resources.
   vii. The dean of each faculty.

b. Elected

   i. One elected faculty member of Senate from each faculty and one faculty member of Senate from the affiliated and federated institutions of Waterloo.
   ii. One member from the Board of Directors of the Faculty Association of the University of Waterloo.
   iii. Three members of Senate from the elected student members, at least one of whom shall be an undergraduate student and at least one of whom shall be a graduate student.
   iv. One member of Senate from the community-at-large members of the Board of Governors.
   v. One member from among the alumni members of Senate.

3.03 The term of office of members elected pursuant to paragraph 3.02.b shall be one year. Each member is eligible for re-election.

3.04 Powers and Duties of Long Range Planning Committee

The Long Range Planning Committee shall have the following powers and duties:

a. To make recommendations to Senate in all matters pertaining to the co-ordination of the planning of the academic, physical, and operational development of the university and the achievement of a planned rate and scope of such development.

b. To receive from the president, for consideration, study and review, on behalf of Senate, plans for the development of the university and to make recommendations to Senate thereon.

c. To undertake such studies as Senate may designate from time to time.

d. To report to Senate, as expeditiously as possible, with respect to the conduct of such matters as shall be delegated by Senate to the committee from time to time.

4. GRADUATE & RESEARCH COUNCIL

4.01 There shall be a council of the university, appointed by and responsible to Senate, called the Graduate & Research Council.

4.02 Graduate & Research Council Membership

The membership of this council shall consist of the following:
a. **Ex Officio**

i. The president of the university.
ii. The vice-president, academic & provost.
iii. The vice-president, university research, who shall co-chair this council.
iv. The associate provost, graduate studies, who shall co-chair this council.
v. The associate dean of graduate studies in the graduate studies office.
vi. The associate vice-president, university research.
vii. The associate vice-president, external research.
viii. The chief ethics officer.
ix. The director, research partnerships.
x. The director, graduate academic services.
xi. The university librarian, or designate.
xii. The president of the Graduate Student Association.

b. **Elected / Appointed**

i. Two faculty members with Approved Doctoral Dissertation Supervisor status from each faculty, one of whom must be an associate dean with a research and/or graduate studies portfolio. Associate deans serve without term limits; others serve for a two year term
ii. One faculty member from the affiliated and federated institutions of Waterloo, who shall serve for a term of two years.
iii. One graduate student from each faculty, each of whom shall serve for a term of two years.

4.03 **Powers and Duties of the Graduate & Research Council**

The Graduate & Research Council shall consider all questions relating to the academic quality of graduate studies and research activity within the university and, without intending to restrict the generality of the foregoing, the Graduate & Research Council shall,

a. Make recommendations to Senate with respect to the government, direction and management of, or any changes in rules, regulations or policies for graduate studies and research in the university.

b. Advise the vice-president, academic & provost on all matters relating to graduate studies and research.

c. Receive, consider, study and review briefs on any aspect of graduate studies and research from members of the university.

d. Make recommendations to Senate with respect to any financial matter pertaining to graduate studies and research.

e. Consider, study and review all proposals for new graduate programs, the deletion of graduate programs, major changes to existing graduate programs, arrange for internal appraisals as the council shall see fit, and make recommendations to Senate thereon.

f. On behalf of Senate, consider and approve all new graduate courses, the deletion of graduate courses, and proposed minor changes to existing graduate courses and programs, and provide Senate with a brief summary of council's deliberations in this regard. Any matter of controversy that might arise may be referred to Senate.

g. Consider, study and review all proposals for new centres and institutes, and the closure of centres and institutes, and make recommendations to Senate thereon.

h. On behalf of Senate, consider and approve renewals for centres and institutes, and report such renewals to Senate for information. Any matter of controversy that might arise may be referred to Senate.
5. UNDERGRADUATE COUNCIL

5.01 There shall be a council of the university, appointed by and responsible to Senate, called the Undergraduate Council.

5.02 Undergraduate Council Membership

The membership of this council shall consist of the following:

a. Ex Officio
   i. The president of the university.
   ii. The vice-president, academic & provost.
   iii. The associate vice-president, academic, who shall chair this council.
   iv. The dean of the federated university.
   v. The associate dean for undergraduate studies for each faculty.
   vi. The registrar of the university.
   vii. The university librarian or delegate.
   viii. The vice-president (education) or equivalent from the Undergraduate Student Association of each faculty of the university.

b. Elected / Appointed
   i. One member of the faculty from each faculty of the university which offers undergraduate programs, each of whom shall serve for a term of two years.
   ii. One member of faculty from the federated university, who shall serve for a term of two years.
   iii. One member of faculty from the affiliated university colleges, who shall serve for a term of two years.
   iv. A director appointed from Co-operative Education & Career Action.
   v. An executive member appointed from the Federation of Students.

5.03 Powers and Duties of the Undergraduate Council

The Undergraduate Council shall consider all questions relating to the academic quality of undergraduate studies within the university and, without intending to restrict the generality of the foregoing, the Undergraduate Council shall,

a. Make recommendations to Senate with respect to rules and regulations for the government, direction and management of undergraduate studies in the university.

b. Make recommendations to Senate with respect to new undergraduate programs/plans, the deletion of undergraduate programs/plans, and major changes to undergraduate programs/plans.

c. On behalf of Senate, consider and approve all new undergraduate courses, the deletion of undergraduate courses, and proposed changes to existing undergraduate courses and minor changes to programs and/or plans, and provide Senate with a summary of council's deliberations in this regard. Any matter of controversy that might arise may be referred to Senate.

d. Advise the vice-president, academic & provost on all matters relating to undergraduate studies.

e. Consider, study and review briefs on any aspect of undergraduate studies from members of the university.

Amended/consolidated from bylaws 2, 3, 4, 8 and 9 in two readings in September and October 2014.
Senate Bylaw 3

A bylaw relating to the selection of members of Senate of the University of Waterloo.

BE IT ENACTED as a bylaw of Senate of the University of Waterloo as follows:

1. CHIEF RETURNING OFFICER

1.01 The university secretary & general counsel (USGC) or designate shall act as chief returning officer for the purpose of conducting the election of members of Senate. As chief returning officer, the USGC or designate has overall responsibility for the general conduct of such elections and by-elections, which shall be by secret ballot. Without restricting the generality of the foregoing, the chief returning officer shall:

a. Establish the timing of Senate elections and by-elections, subject to the provisions described in sections 2 and 4 below.

b. Call for nominations and when doing so inform the university community of the names of those members of Senate whose terms of office expire on 30 April of that year and whether such members are eligible for a further term of service.

c. Verify the eligibility of nominees and nominators.

d. For undergraduate student elections, provide nomination information to the Federation of Students Election Committee.

e. Distribute ballots and balloting information to eligible voters, allowing at least one week for the polling period.

f. Announce the results to the university community, and resolve ties, as necessary.

2. ELECTIONS

2.01 Elections

a. The election of faculty and student members to Senate shall be completed by the regular March meeting of Senate each year. Undergraduate student elections shall be held in conjunction with the annual elections conducted by the Federation of Students in February. Faculty and graduate student elections are conducted by the Secretariat & Office of General Counsel.

b. The nomination period for faculty constituencies and graduate students is at least twenty-one (21) days. For undergraduate student constituencies the nomination period is determined in consultation with the Federation of Students. The chief returning officer shall call for nominations from those faculty and student constituencies that have members whose terms are expiring by placing a suitable notice in such places and ways as may be designated from time to time by Senate, with copies to the appropriate faculties and constituency presidents. Nomination forms shall be made available by the Secretariat & Office of General Counsel. Nominations shall be submitted in writing to the chief returning officer. Each nomination shall be signed by the required number of members of the constituency from which the member is to be elected and shall include a signed statement from the nominee agreeing to serve if elected. For faculty and graduate students, the required number of members is five; for undergraduate students elected from a single faculty, the required number is twenty-five; for undergraduate students elected at large, the required number is one hundred.
c. Undergraduate student nominees, or their representatives, shall attend an all candidates’ mandatory meeting held by the Federation of Students. The chief returning officer, or designate, shall also be present.

d. For faculty and graduate student elections, the chief returning officer shall publish the candidates’ statements in such places and ways as may be designated from time to time by Senate.

2.02 Campaigning/Voter Eligibility

a. Public campaigning shall not take place before the close of nominations. For faculty and graduate student elections, nominees are to provide a brief statement (100 words maximum) to appear with the ballot.

b. The Federation of Students election rules regulating campaigning for undergraduate student elections, except for spending limits, shall be followed. The Federation of Students Election Committee decisions may be appealed to the USGC, who shall act as chief returning officer, and whose decision is final.

c. The campaign spending limit for undergraduate students shall be: up to $100 for constituency seats and $200 for at-large seats, with all campaign costs to be borne by the candidate.

d. In a faculty constituency, all faculty members who hold a regular faculty appointment in that constituency are eligible to vote. In a graduate student constituency, all full-time and part-time graduate students registered in a degree program in that constituency are eligible to vote. In an undergraduate student constituency, all full-time students registered in a degree program in that constituency are eligible to vote; this includes students whose academic programs require a prolonged absence from campus such as a co-op work term or an approved study term abroad.

2.03 By-Elections

a. The USGC shall declare a Senate seat vacant:

   i. upon receipt of a written resignation from a member of Senate.
   ii. when a member of Senate ceases to be eligible to represent the constituency that elected the member, for example when a faculty member ceases to hold a regular faculty appointment, or when a student graduates or otherwise ceases to be registered in the constituency that elected the student.¹

b. If, within any year, a member of the Senate or any of its committees or councils, not having been granted permission to be absent by such body, attends less than 50 per cent of the regular meetings of such body, the member’s office shall be by that very fact considered to be vacated and a confirmatory resolution shall be passed by Senate declaring the membership vacant. The Senate or its committee or council may grant such permission to members who are going on an approved sabbatical, on a co-op term, or any similar such absence related to the members’ employment and/or educational program.

c. Subject to the provisions noted below, the chief returning officer shall call by-elections to fill vacancies as soon as feasible and shall place a suitable notice in such places and ways as may be designated from time to time by Senate, with copies to the appropriate faculties and constituency presidents. Nominations shall remain open for at least one week and shall be submitted in writing to the chief returning officer. Each nomination shall be signed by the required number of members of the constituency from which the member is to be elected; and shall include a signed statement from the nominee agreeing to serve if elected. For faculty and graduate students, the required number of members is five; for undergraduate students elected from a single faculty, the required number is twenty-five; for undergraduate students elected at large, the required number is one hundred.
d. When a seat is vacant because of the failure of a constituency to nominate any candidate to contest an election or by-election, that seat shall remain vacant until the next annual election, unless a petition [available from the Secretariat & Office of General Counsel] requesting a by-election signed by the required number of members of the constituency concerned is received by the chief returning officer.

e. When a seat becomes vacant within three months of the end of the term for that seat, no by-election shall be called to fill the vacancy for the balance of the term.

f. No by-election shall be called or held in any constituency between 1 July and 15 September. In addition, no by-election shall be held in any undergraduate constituency between 1 April and 1 July.

3. ALUMNI REPRESENTATION

3.01 Each year the Alumni Council shall recommend the names of individual(s) for appointment to Senate. The USGC shall be informed of such recommendations as they are made and shall so inform Senate.

Approved by Senate 15 June 1972.
Amended by Senate April 1973.
Amended by Senate June 1975.
Amended by Senate in two readings, September and October 1975.
Amended by Senate in two readings, November and December 1982.
Amended by Senate in two readings, January and February 1983.
Amended by Senate in two readings, December 1984 and January 1985.
Amended by Senate in two readings, December 1989 and January 1990.
Amended by Senate in two readings, October and November 1990.
Amended by Senate in two readings, November and December 1991.
Amended by Senate September 1995.
Amended by Senate September 1999.
Amended by Senate in two readings, October and November 2013.
Amended from Bylaw 5 by Senate in two readings, September and October 2014.

1See The University of Waterloo Act, section 25, for instances when graduating students may be exempt.
Senate Bylaw 4

A bylaw relating to the naming of additional *ex officio* members of Senate of the University of Waterloo.

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BE IT ENACTED as a bylaw of Senate of the University of Waterloo, as follows:

### 1. EX OFFICIO MEMBERS

WHEREAS *The University of Waterloo Act, 1972* provides in Section 18.a.9. that Senate of the university may add to its membership such other *ex officio* members as Senate by bylaw may, from time to time, designate; and

WHEREAS *The University of Waterloo Act, 1972* provides in Section 18.b.2. that elected members of the faculty shall equal in number one more than the total number of all other members of Senate; and

WHEREAS *The University of Waterloo Act, 1972* provides in Section 18.c. that upon the designation of and addition, from time to time, by Senate of any additional *ex officio* members, the number of elected members from the Board of Governors, the undergraduate students, the graduate students and the alumni shall be increased by whatever numbers are necessary to retain the ratios, in each case, of the number of such elected persons to the number of elected faculty.

BE IT THEREFORE enacted as a Bylaw of Senate of the University of Waterloo as follows:

1.01 That the following be named as *ex officio* members of Senate:

   a. The vice-president, administration & finance
   b. The vice-president, advancement
   c. The vice-president, university relations
   d. The vice-president, university research
   e. The associate provost, resources
   f. The president of the Faculty Association of the University of Waterloo
   g. The president of the Federation of Students, University of Waterloo
   h. The president of the Graduate Student Association - University of Waterloo

1.02 That the chief returning officer be empowered upon passage of this Bylaw to take whatever steps are necessary to carry out such elections or by-elections as may be necessary to comply with the provisions of *The University of Waterloo Act, 1972*, cited above and arising from the designation of *ex officio* members of Senate by the passage or amendment of this Bylaw.

*Approved by Senate May 20, 1975.*
*Amended by Senate at two meetings, December 1980 and January 1981.*
*Amended by Senate at two meetings, December 1983 and January 1984.*
*Amended by Senate at two meetings, May 1987 and June 1987.*
*Amended by Senate at two meetings, May 1990 and June 1990.*
*Amended by Senate at two meetings, October 2012 and November 2012.*
*Amended by Senate in two readings, November 2013 and January 2014.*
*Amended from bylaw 11 by Senate in two readings, September and October 2014.*
Senate Graduate & Research Council met on 9 June 2014, and agreed to forward the following items to Senate for approval. These items are recommended for inclusion in the regular agenda.

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

FOR APPROVAL

NEW POLICY – RESEARCH CENTRES AND INSTITUTES

1. **Motion:** To endorse and recommend that the President approve the draft policy on research centres and institutes, as described in Attachment 1.

   **Rationale:** With increasing numbers of research centres and institutes emerging in recent years, some quite large and complex, the need for a review and updating of policy and practice had been expressed for some time at Senate, at Senate Graduate & Research Council, and by the research units themselves. The strategic plan transformational research theme affirms the university’s commitment to collaboration across disciplines and continuing to support and nurture interdisciplinary research institutes.

   The 19 July 2011 report from the Committee on Senate-approved Centres and Institutes (C&Is) included a number of recommendations including a recommendation to develop a policy for the governance of C&Is formed for the advancement of research. Additionally, some guidance was given within the recommendation to respect a number of basic principles for C&Is including involvement of members in C&I governance, governance models, authority over C&Is and processes related to properly establishing C&I membership and leadership.

   Following publication of that report, a taskforce advised the vice-president, university research on how to implement the recommendations, and a group led by the Office of Research was formed to draft the policy which included representatives from all six Faculties, the Affiliated and Federated Institutions of Waterloo and the Faculty Association of the University of Waterloo. Consultation on various drafts of the C&I policy has been carried out via Faculty Relations Committee (24 April 2014 and 25 September 2014), Deans’ Council (7 May 2014), and Senate Graduate & Research Council (9 June 2014). The attached policy incorporates the valuable input received from these stakeholders and constituencies.

George Dixon
Vice-President, University Research

Jim Frank
Associate Provost, Graduate Studies
The true copy of this policy is held by the Secretariat and bears the seal of the University of Waterloo. The online version is accessible for information purposes solely. In case of discrepancy between the online version and the true copy held by the Secretariat, only the latter has official value.

Policy ##: Research Centres and Institutes

Established: [Insert date of final approval in accordance with Policy 1.]
Revised: N/A
Mandatory Review Date: [If a new policy, insert the second anniversary of the establishment date. If revised, insert the fifth anniversary after the date last revised.]
Supersedes: N/A
Class: G
Responsible/Originating Department: Office of Research
Executive Contact: Vice-President, University Research

Related Policies, Guidelines & Procedures:
Guidelines for the Establishment of Centres and Institutes
Guidelines for the Review of Centres and Institutes
Template for the Organization and Management of Centres and Institutes
Senate Bylaw 8
Policy 7 – Gift Acceptance
Policy 14 – Pregnancy and Parental Leaves (including Adoption)
Policy 18 – Staff Employment
Policy 40 – The Chair
Policy 76 – Faculty Appointments
Policy 77 – Tenure and Promotion of Faculty Members
Procedures Re: University Contracts
Procedure 1, Contracts and Agreements – Excluding Research
Procedure 1A, Contracts and Agreements – Research
Procedure 25, Contracts and Agreements – Zero or Unspecified Dollar Amount

1. Introduction

The university is committed to fostering high quality Research Centres and Institutes that enhance the research and scholarship of the institution.

2. Scope

This policy applies to all Research Centres and Institutes at the University of Waterloo. It does not apply to centres and institutes whose function is primarily administrative (even though some collateral research activities may be pursued from time to time).

3. Legal Framework

In addition to the abovementioned “Related Policies, Guidelines & Procedures”, the Policy must be construed in accordance with the following legal provisions:
4. Purpose

The purpose of this Policy is to define Research Centres and Institutes at the university, the scope of their activities, and their required governance and reporting structures in order to support and facilitate the attainment of excellence and realization of their missions.

5. Definitions

Research Centres/Institutes are units that facilitate collaborative research across departments, schools, and/or Faculties, as well as engage in appropriate international research collaborations. The terms “centre” and “institute” are interchangeable; however, some centres and institutes are supported and governed at the university level while others are housed within individual Faculties. A centre or institute is entitled to identify itself as a part of the University of Waterloo and to use the university’s name and address in the conduct of its activities. These rights are granted at the discretion of Senate for fixed, renewable terms.

Responsible Officers are individuals with designated responsibility for overseeing a Research Centre or Institute’s financial viability and compliance with university policies, procedures and guidelines.

University Research Centres/Institutes are cross-Faculty, university-supported Research Centres/Institutes that facilitate collaborative research across departments, schools, and/or Faculties, as well as engage in appropriate international research collaborations.

6. General

6.1. Research Centres and Institutes are normally formed to promote and encourage collaborative and multi-disciplinary research and related activities in academic areas that are not accommodated conveniently within single academic departments or schools.

6.2. The function of a Research Centre or Institute is to facilitate the development and promotion of its particular academic area. In pursuit of this objective, Research Centres and Institutes may: establish links inside and outside the university, organize seminars and symposia, solicit funds in the university’s name, and maintain an appropriate administrative infrastructure.

6.3. Research Centres and Institutes are expected to operate with transparency and accountability, and are subject to all applicable university policies, procedures and guidelines.

7. Establishing Research Centres and Institutes

7.1. All Research Centres and Institutes at the university must be approved by Senate on the recommendation of Senate Graduate & Research Council. They are normally established for a five-year renewable term.

7.2. Proposals for new Research Centres and Institutes are submitted to the vice-president, university research and must include the information set out in the Guidelines for the Establishment of Centres and Institutes.

7.3. When considering establishing a new Research Centre or Institute, Senate will take into account: the potential academic importance of the work, the proposed governance structure, the degree of financial support and/or financial risk involved in start-up, and projected ongoing costs.
7.4. Prior to Senate approval, individuals and groups may not refer to themselves as a Research Centre or Institute unless they clearly identify the entity as “proposed” or “subject to Senate approval.”

7.5. Research groups do not require Senate approval. Formal research groups that have the characteristics of Research Centres or Institutes and would benefit from that designation are encouraged to pursue formal approval from Senate as Research Centres or Institutes.

7.6. Research groups that represent themselves as “centres” or “institutes”, but are not Senate-approved, are required to seek that approval or to apply to Senate through the vice-president, university research for a special dispensation.

8. Funding

8.1. The university allocates central funds to support the operation of University Research Centres/Institutes on a competitive basis. The University Research Centre/Institute is approved for a period of five years, but it is subject to an annual budgetary process. Operating support for the subsequent fiscal year is determined annually by the vice-president, academic & provost in consultation with the vice-president, university research, based on review of a detailed budget and annual report submitted and approved by the University Research Centre/Institute’s Governing Body. Operating support for the following fiscal year may be withdrawn at the discretion of the vice-president, academic & provost, subject to an appropriate review, upon provision of written notice.

8.2. Research Centres and Institutes are entitled to solicit funds from internal and external sources, and to generate income through activities such as seminars, symposia, membership dues and affiliates programs.

8.3. Any advancement or philanthropic activity involving Research Centres and Institutes must follow university policies, procedures and guidelines, including prospect management and signing authority procedures. Questions should be addressed to the Office of Advancement.

9. Oversight

9.1. The university maintains appropriate and sufficient authority over the governance and operation of Research Centres and Institutes.

9.2. All Research Centres and Institutes report to one or more Responsible Officers who are responsible for overseeing financial viability and compliance with university policies, procedures and guidelines.

9.3. The Responsible Officer(s) are the participating Faculty dean(s) or, in the case of University Research Centres/Institutes, the vice-president, university research.

9.4. All Research Centres and Institutes are reviewed at least once every five years by Senate Graduate & Research Council, which recommends to Senate that the Research Centre or Institute: continue with review in another five years; continue with review in one, two or three years; or be wound up. Review criteria established by Senate Graduate & Research Council are available in the Guidelines for the Review of Centres and Institutes.

10. Governance

10.1. Research Centres and Institutes have governance structures that safeguard the independence of scholarship associated with the Research Centre or Institute and the academic freedom of its members.
10.2. The governance structure of each Research Centre or Institute is set out in a constitution or charter approved by Senate that includes:
- objectives
- organizational and reporting structure
- composition of its Governing Body
- criteria for and categories of membership
- privileges and responsibilities of membership
- terms and conditions of affiliates program, if any

Any changes to a Research Centre or Institute’s constitution must be approved by Senate on the advice of Senate Graduate & Research Council.

10.3. Governing Body
Each Research Centre or Institute has a central Governing Body, such as a board of directors or a steering committee that serves as its primary executive authority and oversees its activities.

Composition
10.3.1. The Governing Body is chaired by the Responsible Officer or his/her delegate who, in the case of University Research Centres/Institutes is the vice-president, university research or delegate and in the case of other Research Centres and Institutes is the appropriate Faculty dean(s). Where there are multiple Responsible Officers, they may elect to serve as co-chairs or to alternate.

10.3.2. In the case of a University Research Centre/Institute, the participating Faculty deans are <em>ex officio</em> voting members of the Governing Body.

10.3.3. A majority of voting members of the Governing Body shall be Regular Faculty at the University of Waterloo as defined in Policy 76 – Faculty Appointments, unless special dispensation is obtained from Senate.

10.3.4. The Regular Members of a Research Centre or Institute shall be represented sufficiently on the Governing Body.

Meetings
10.3.5. The Governing Body is required to meet at least once per year and additionally as appropriate. For Research Centres and Institutes with complex budgetary and/or reporting requirements, meeting at least quarterly is preferable.

10.3.6. Research Centres and Institutes may establish their own rules regarding quorum for meetings of the Governing Body, provided that quorum shall consist of a majority of Regular Faculty at the University of Waterloo as defined in Policy 76 – Faculty Appointments.

10.3.7. The Governing Body will conduct its business transparently. Meetings of the Governing Body will be open to Members of the Research Centre or Institute. Minutes will be taken at all meetings of the Governing Body and will be available to the Members of the Research Centre or Institute.

Powers
10.3.8. The Governing Body has the authority to execute and monitor the affairs of the Research Centre or Institute, subject to all applicable university policies, procedures and guidelines. This includes the ability to:
- Enact rules and regulations for membership of the Governing Body and the conduct of its affairs;
- Recommend appointment of the Director and other leaders to the Responsible Officer;
- Recommend appointment and removal of staff to the Responsible Officer;
- Appoint and remove Members, and establish categories of Membership and associated fees;
- Plan and implement the Research Centre or Institute’s development;
- Establish processes to manage and monitor the Research Centre or Institute’s financial affairs;
- Establish and enforce rules and regulations governing the Research Centre or Institute’s activities, provided such rules and regulations are consistent with university policies, procedures and guidelines; and
- Establish such committees as it deems necessary to discharge its responsibilities; this may include establishing advisory bodies comprised primarily of external Members for the purpose of providing strategic or scientific advice to the Governing Body or the Director.

10.4. Director

10.4.1. Research Centres and Institutes must have adequate research/scientific/academic leadership and administrative leadership.

10.4.2. Each Research Centre or Institute has a Director who is appointed by the Responsible Officer on the recommendation of the Governing Body. In making its recommendation, the Governing Body will seek the views of the Research Centre or Institute’s Members.

10.4.3. The Director shall hold a University of Waterloo faculty appointment and is seconded to the role on a part-time basis.

10.4.4. The Director’s term is determined by the Responsible Officer, and is normally for a five-year period. A Director’s term may be extended or renewed by the Responsible Officer with the support of the Governing Body.

10.4.5. If permitted by the Governing Body, the Director may delegate some of his/her responsibilities to one or more Associate Directors and/or in the case of University Research Centres/Institutes and other Research Centres or Institutes with sufficient resources, to one or more staff members.

10.4.6. The Director is responsible for:
- overseeing the Research Centre or Institute’s operations and managing its budget;
- supervising staff members;
- establishing working groups or committees to provide appropriate guidance and advice in support of his/her responsibilities;
- preparing an Annual Report to the Governing Body; and
- discharging all responsibilities set out in the constitution or charter, and as directed by the Governing Body.

10.4.7. The procedures followed by the Director in all matters shall be governed by prevailing departmental and/or Faculty practices, as applicable, and by university policies, procedures and guidelines.

10.4.8. The Director’s performance is reviewed annually by the Responsible Officer. With prior knowledge of the Director, the Responsible Office will seek confidential input from the Governing Body, Members of the Research Centre or Institute, and its staff by any means s/he deems appropriate.
10.4.9. In the event of the Director’s absence for any prolonged period, arrangements should be made for the Responsible Officer to appoint an Acting Director for a period of no more than one year.

10.4.10. If the office of Director becomes unexpectedly vacant, the Responsible Officer will appoint, after appropriate consultation, an interim Director and initiate the process of filling the vacancy.

10.4.11. A Director may only be removed from office for cause, which is to be understood in relation to the duties of the Director as described herein. Causes for removal include negligence, incompetence, unprofessional conduct, and inability to maintain the confidence of the Members. The procedures governing removal for cause shall be those set out in section 4 of Policy 40 – The Chair, except that all references to the “Chair” shall mean the Director and references to the “Dean” shall mean the Responsible Officer.

11. Membership and Appointments

11.1. Research Centres and Institutes may define categories of membership and establish associated rights and obligations, including membership fees (if any), qualifications for membership, and length of term.

11.2. Each Research Centre or Institute shall have a defined category of Regular Members who are university faculty conducting research or scholarship in the area of Research Centre or Institute. The Regular Members are entitled to participate in the Research Centre or Institute’s governance.

11.3. The following categories of individuals may be appointed directly to a Research Centre or Institute on a definite-term or contingent-upon-funding basis as appropriate, provided that the Research Centre or Institute possesses sufficient governance processes and resources to cover associated financial, space and other commitments. All such appointments must follow university policies and procedures including, but not limited to policies 14, 18 and 77; involve academic units appropriately; and be approved by the Research Centre or Institute’s Governing Body and the participating Faculty dean(s):
- research professors
- technicians and administrative staff
- research assistants

11.4. Regardless of their affiliation with a Research Centre or Institute, the following categories of individuals must be appointed to or registered in a department, school and/or Faculty:
- tenured or tenure track faculty members
- graduate students
- postdoctoral fellows

12. Participation in Academic Programs

12.1. Research Centres and Institutes do not have autonomy to administer for-credit academic courses or programs leading to University of Waterloo degrees or diplomas. All such academic courses and programs must be formally housed in one or more department(s), school(s), and/or Faculty(ies) and governed in accordance with their policies, procedures and regulations, subject to Senate oversight.

12.2. Research Centres and Institutes serve as catalysts for collaborations that may develop into academic programs based in departments, schools and/or Faculties.
12.3. Research Centres and Institutes may be used to enhance, facilitate and/or deliver academic programming offered by departments, schools and/or Faculties, including assisting with course or program implementation, attracting students and funding, and providing expertise to program advisory committees.

12.4. Faculty Members of Research Centres and Institutes may represent their academic disciplines, areas, and/or problem foci on program advisory committees established by academic unit(s) in order to help shape and define the nature of interdisciplinary academic programs and facilitate engagement with Research Centres and Institutes.

12.5. Research Centres and Institutes may develop and deliver continuing education programs, subject to the approval of and managed in conjunction with the Centre for Extended Learning. However, as outlined in 12.1, they do not have autonomy to administer for-credit academic courses or programs leading to University of Waterloo degrees or diplomas.
Senate Undergraduate Council met on 9 September 2014, and agreed to forward the following items to Senate for approval. Council recommends that these items be included in the regular agenda. Items recommended for inclusion in the consent agenda are contained within a separate report.

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

FOR APPROVAL [effective 1 September 2015]

NEW ACADEMIC PLANS

► Faculty of Arts
  Digital Arts Communication

1. **Motion:** To approve the new minor plan in digital arts communication as presented.
   
   Students enrolled in any degree program in the Faculty of Arts may pursue a minor designation in Digital Arts Communication. This minor is available to students who wish to study the design of digital communication using hypertext, image, sound, and video. The minor emphasizes the design of digital communication, and especially its role in meeting the needs of different audiences, rather than computer programming or the use of particular software applications.

   The Digital Arts Communication Minor requires successful completion of a minimum of four academic units (eight courses) with a minimum cumulative average of 65%, including:
   
   - At least four of DAC 201, DAC 202, DAC 203, DAC 300, DAC 302, DAC 305, DAC 307, DAC 308, DAC 309, DAC 329, DAC 400, DAC 403
   - Up to four of:
     - DRAMA 379, DRAMA 405
     - ENGL 294, ENGL 320, ENGL 392A, ENGL 392B, ENGL 408A
     - FINE 130, FINE 228, FINE 229, FINE 232
     - MUSIC 275
     - SPCOM 220, SPCOM 440

   **Rationale:** This plan is transitioning from a specialization to a minor (see related motion #17) in order to make the program available to more students in the faculty.

► Faculty of Arts
  English Language and Literature

2. **Motion:** To approve the new minor plan in technical writing as presented.
   
   Students enrolled in any degree program may pursue a minor designation in Technical Writing.

   The Technical Writing Minor requires successful completion of a minimum of four academic units (eight courses) with a minimum cumulative average of 65%, including:
   
   - ENGL 210E, ENGL 210J, ENGL 292, ENGL 392A
   - Two of ENGL 210F, ENGL 210G, ENGL 210H, ENGL 210I
   - Two of ENGL 335, ENGL 376R, ENGL 392B, ENGL 408B, ENGL 408C, ENGL 472

   **Note:** The Technical Writing Minor is not available to students in any English Language and Literature plan.
**Rationale:** This minor supports the Faculty’s strategic plan initiative to create pragmatic career-based minors. It builds on teaching and research expertise in professional writing and information design in the department. The minor is open to all students (except English majors) and may be useful to students in both arts and in other Faculties who can combine the technical writing designation with their own subject area specialization.

3. **Motion:** To approve the new specialization in technical writing as presented.

The Technical Writing Specialization is open to students who are enrolled in any English Language and Literature major plan. Admission to the Technical Writing Specialization is by consent of the Department of English Language and Literature upon completion of the first year of studies.

Requirements
The Technical Writing Specialization requires the completion of four courses:
- ENGL 210E, ENGL 392A
- One of ENGL 210G, ENGL 210I, ENGL 210J
- One of ENGL 408B, ENGL 408C, ENGL 472

**Rationale:** This specialization consists of a smaller concentration of courses that complements the new minor (see motion #2), and is created for the benefit of English majors.

4. **Motion:** To approve the new specialization in global literatures as presented.

The Global Literatures Specialization is open to students who are enrolled in an Honours English academic plan. Admission to the Global Literatures Specialization is by consent of the Department of English Language and Literature upon completion of the first year of studies.

Requirements
The Global Literatures Specialization requires successful completion of four courses:
- ENGL 291
- two of ENGL 208L, ENGL 208M, ENGL 290, ENGL 322, ENGL 345, ENGL 463
- one of ENGL 280, ENGL 260, ENGL 313, ENGL 318, ENGL 342, ENGL 410C, ENGL 460A, ENGL 460B, ENGL 460C, ENGL 460D

**Rationale:** This specialization is being created to replace the Honours English – English Literature in a Global Literatures Context Specialization (see related motion #18). Due to the desired plan title change, a new plan must be created and the old plan inactivated in order to ensure students who are currently enrolled will graduate with the old designation, whereas new students will declare the new plan.

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**Faculty of Arts**

**History**

5. **Motion:** To approve the new specialization in applied history as presented.

The Applied History Specialization explores practical, real world uses of the past in society and the marketplace. The Applied History Specialization is open to all Four-Year General or Honours History students.

Eligibility for graduation with the Applied History Specialization requires successful completion of two academic course units (four courses) from the following:
- HIST 202, HIST 203, HIST 302, HIST 303, HIST 305
Rationale: The three specializations presented in motions 5-7 encompass key areas of focus in the Department of History. These specializations will raise the department’s profile by highlighting concentrations of scholarly and teaching strength. The courses selected for each specialization are offered either annually or biennially which allows students to pursue the specialization without undue delay.

6. Motion: To approve the new specialization in global interactions as presented.

The Global Interactions Specialization moves beyond borders to explore human interactions on a global scale. The Global Interactions Specialization is open to all Four-Year General or Honours History students.

Eligibility for graduation with the Global Interactions Specialization requires successful completion of two academic course units (four courses) from the following:
- HIST 201, HIST 268, HIST 271, HIST 275, HIST 389

Rationale: See rationale for motion #5.

7. Motion: To approve the new specialization in revolution, war and upheaval as presented.

The Revolution, War, and Upheaval Specialization examines the impact of conflict on the course of history. The Revolution, War, and Upheaval Specialization is open to all Four-Year General or Honours History students.

Eligibility for graduation with the Revolution, War, and Upheaval Specialization requires successful completion of two academic course units (four courses) from the following:
- HIST 220, HIST 226, HIST 227, HIST 314, HIST 316

Rationale: See rationale for motion #5.

CHANGES TO ACADEMIC PLANS

Faculty of Arts
Drama and Speech Communication

8. Motion: To approve changes to the three-year general drama plan as presented.

(strikethrough = deleted text, underline = new text)

...  

2. Drama Plan-level requirements:
   o at least six academic course units (12 courses) in Drama with a minimum cumulative average of 65%, including:
     • DRAMA 101A, 101B, 102
     • DRAMA 243, 244, 409
     • DRAMA 100, DRAMA 102, DRAMA 200, DRAMA 243, DRAMA 244
     • one of DRAMA 300, 371 or 301, 372
     • Dramatic Literatures: three of DRAMA 301, 311, 314, 315, 318, 319B, 380, 381, 382, 386, 387, ENGL 190

Note: A student who has taken ENGL 362/363 or DRAMA 386/387 may not also take ENGL 190.

Rationale: Motions 8-13 arise as part of a program-wide curriculum revision, with appropriate changes made to each plan to ensure balance and integration of theory and practice at all levels of the curriculum. These changes will: increase students’ range of choices in elective courses while
preserving their ability to specialize in a particular area if they so choose; adopt the Faculty’s strategies for plan standardization; and integrate students’ critical and practical training in a capstone project suitable for portfolio presentation to employers or graduate schools, where applicable.

9. **Motion:** To approve changes to the four-year general drama plan as presented.  
   *(strikeout = deleted text, underline = new text)*

   ...

2. Drama Plan-level requirements:
   - at least **seven** academic course units (15 courses) in Drama with a minimum cumulative average of 70%, including:
     - **DRAMA 101A, 101B, 102**
     - **DRAMA 243, 244, 301, 371, 372, 409**
     - **DRAMA 100, DRAMA 102, DRAMA 200, DRAMA 243, DRAMA 244, DRAMA 300, DRAMA 301**
     - one of **DRAMA 400 or 410**
     - Dramatic Literatures: three of **DRAMA 311, 314, 315, 318, 319B, 380, 381, 382, 386, 387**

   **Notes:**
   1. A fourth dramatic literature may be used to replace one of **DRAMA 371 or 372**.
   2. A student who has taken ENGL 362/363 or DRAMA 386/387 may not also take ENGL 190.

   **Rationale:** See rationale for motion #8.

10. **Motion:** To approve changes to the honours drama plan as presented.  
    *(strikeout = deleted text, underline = new text)*

    The Honours academic plan is designed so that a student can work through a particular sequence of courses in one field (acting, academic, directing, technical). The optional **DRAMA 499A/B project** in the fourth year may be centred on this specialization.

    Continuation in this academic plan requires a cumulative overall average of 60% and a cumulative Drama average of 75%.

    Eligibility for graduation in the Honours Drama academic plan includes successful fulfillment of the following requirements:
    1. Appropriate Program-level requirements. See Bachelor of Arts Degree Requirements.
    2. Drama Plan-level requirements:
       - at least **eight** academic course units (16 courses) in Drama with a minimum cumulative average of 75%, including:
         - **DRAMA 101A, 101B, 102**
         - **DRAMA 243, 244, 301, 371, 372, 409**
         - **DRAMA 100, DRAMA 102, DRAMA 200, DRAMA 243, DRAMA 244, DRAMA 300, DRAMA 301**
         - one of **DRAMA 400 or 410**
         - Dramatic Literatures: four of **DRAMA 311, 314, 315, 318, 319B, 380, 381, 382, 386, 387**

    **Note:** A student who has taken ENGL 362/363 or DRAMA 386/387 may not also take ENGL 190.

    **Rationale:** See rationale for motion #8.
11. **Motion**: To approve changes to the honours drama (arts and business co-op and regular) plan as presented.

(strikeout = deleted text, underline = new text)

... 

2. Drama Plan-level requirements:
   o at least 7.5 eight academic course units (15 16 courses) in Drama with a minimum cumulative average of 75%, including:
     • DRAMA 101A, 101B, 102
     • DRAMA 243, 244, 301, 371, 372, 409
     • DRAMA 100, DRAMA 102, DRAMA 200, DRAMA 243, DRAMA 244, DRAMA 300, DRAMA 301
     • one of DRAMA 400 or DRAMA 410
     • Dramatic Literatures: three of DRAMA 311, 314, 315, 318, 319B, 380, 381, 382, 386, 387

3. Arts and Business requirements.

Notes:
1. A fourth dramatic literature may be used to replace one of DRAMA 371 or 372.
2. A student who has taken ENGL 362/363 or DRAMA 386/387 may not also take ENGL 190.

**Rationale**: See rationale for motion #8.

12. **Motion**: To approve changes to the joint honours drama plan as presented.

(strikeout = deleted text, underline = new text)

2. Drama Plan-level requirements:
   o at least 7.5 eight academic course units (15 16 courses) in Drama with a minimum cumulative average of 75%, including:
     • DRAMA 101A, 101B, 102
     • DRAMA 243, 244, 301, 371, 372, 409
     • DRAMA 100, DRAMA 102, DRAMA 200, DRAMA 243, DRAMA 244, DRAMA 300, DRAMA 301
     • one of DRAMA 400 or DRAMA 410
     • Dramatic Literatures: three of DRAMA 311, 314, 315, 318, 319B, 380, 381, 382, 386, 387

3. Plan-level requirements for the second major.

Notes:
1. A fourth dramatic literature may be used to replace one of DRAMA 371 or 372.
2. A student who has taken ENGL 362/363 or DRAMA 386/387 may not also take ENGL 190.

**Rationale**: See rationale for motion #8.

13. **Motion**: To approve changes to the minor plan in drama as presented.

(strikeout = deleted text, underline = new text)

Students enrolled in any degree program may pursue a minor designation in Drama.

The Drama Minor requires successful completion of a minimum of four academic course units (eight courses) in Drama with a minimum cumulative average of 65%, including:

• DRAMA 101A, 101B, 102
• DRAMA 100, DRAMA 102, DRAMA 200, DRAMA 243
• Dramatic Literatures: two of DRAMA 311, 314, 315, 318, 319B, 380, 381, 382, 386, 387
Note: A student who has taken ENGL 362/363 or DRAMA 386/387 may not also take ENGL 190.

Rationale: See rationale for motion #8.

Faculty of Arts
Political Science – Arts and Business

14. Motion: To approve changes to the honours political science (arts and business co-op) plan as presented.

Eligibility for graduation in the Honours Political Science (Arts and Business Co-op and Regular) academic plan includes successful fulfillment of the following requirements:

1. Appropriate Program-level requirements. See Bachelor of Arts Degree Requirements.
2. Political Science Plan-level requirements:
   o at least seven academic course units (14 courses) in Political Science with a minimum cumulative average of 75%, including:
     • 12 PSCI courses above the 100-level with two courses at the 400-level, excluding PSCI 497A & B, 498A, B, & C, and PSCI 499A & B. [Note: Students enrolled in co-op may, with appropriate consent, count the excluded courses towards their remaining Political Science courses, but they will not count towards the 400-level requirement].
3. Arts and Business requirements.

Rationale: Changes to this plan will help to distinguish the honours political science program from the general four-year plan, as well as offering students a co-op pathway for experiential education.

15. Motion: To approve changes to the honours political science (arts and business regular) plan as presented.

Eligibility for graduation in the Honours Political Science (Arts and Business Co-op and Regular) academic plan includes successful fulfillment of the following requirements:

1. Appropriate Program-level requirements. See Bachelor of Arts Degree Requirements.
2. Political Science Plan-level requirements:
   o at least seven academic course units (14 courses) in Political Science with a minimum cumulative average of 75%, including:
     • 12 PSCI courses above the 100-level with two courses at the 400-level
     • PSCI 299
     • One of
       o Research Pathway: PSCI 499A, PSCI 499B, and one additional course at the 400-level, excluding PSCI 497A and B and 498A, B and C. [Note: Students in the Research Pathway who take PSCI 498A, B, C, or D may count this course as one of the remaining Political Science courses in their plan, but it will not count towards the Research Pathway requirements].
       o Engagement Pathway: PSCI 497 A and B or one of PSCI 498 A, B or C; and two additional courses at the 400-level, excluding PSCI 499A or B. [Note: Students in the Engagement Pathway who write an Honours Essay in PSCI 499A/B may count these courses as one of the remaining Political Science courses in their plan, but they will not count towards the Engagement Pathway requirements].
3. Arts and Business requirements.
Rationale: Changes to this plan will help to distinguish the honours political science program from the general four-year plan, and will offer students a pathway for experiential education outside of co-op. The research pathway provides students with support for writing an honours thesis, while the experiential pathway provides opportunities for experiential learning in both the university and the wider community. The pathways are designed to provide the support and direction that honours students need to achieve their degree objectives without substantially decreasing the amount of choice students have in completing their degrees.

Faculty of Science
School of Optometry and Vision Science

16. Motion: To approve the changes to the requirements for admission to the doctor of optometry program as presented.

Application Procedures

Specific instructions, including deadlines, will be outlined in the application procedures accompanying the Application.

Criminal Record Checks - Vulnerable Sector (CRC) will be required for entering students. Continuation in the degree program will be conditional upon completion of an Annual Self-Declaration Form.

Applicants, who are invited to an admissions interview for the Doctor of Optometry program, will be required to provide a Criminal Record Check - Vulnerable Sector (CRC) by January 31 of the academic year of their application. If the CRC or self-declaration of any disciplinary proceedings on the application informs the Doctor of Optometry’s Admissions Officer of a criminal offence or disciplinary action, then the School of Optometry and Vision Science’s Criminal Record Check Consideration Committee will meet and take into account various factors related to the offence. Applicants who are unsure regarding disclosure are strongly advised to contact the Admissions Officer for advice before submitting their application.

More information about obtaining a CRC can be obtained from the local police agency. Applicants are responsible for paying any costs related to having the CRC sent to the School.

Self-Declaration

If accepted, students will be required to provide an annual written Self-Declaration regarding any criminal convictions, cautions or disciplinary proceedings by August 31 before entering years 2 and 3, and by April 1 before entering year 4. This includes minor misdemeanours but not road traffic offences dealt with by way of a fixed penalty notice. Other external clinics may require separate CRC reports. Failure to disclose any relevant information that is revealed subsequently may result in an investigation by the University's Secretariat, and the revocation of the student’s registration in the Doctor of Optometry program.

All information received by the University is treated confidentially, in accordance with applicable privacy legislation.

The deadline for receipt of final academic transcripts is May 31, 2015. Upon entrance into Optometry, students will be required to submit documentation of up-to-date immunization for measles, rubella, mumps, diphtheria, tetanus, a tuberculin skin test, and hepatitis B. Students are not allowed to participate in the optometry clinics without this documentation.
Students granted admission to the first professional year who have taken courses equivalent to those required in the professional program may apply for exemptions from these courses after acceptance into Optometry.

**Rationale:** During their training to become optometrists at the school, students will work with members of the public as patients in its clinics, including children and vulnerable adults. As such, it is prudent that one of the conditions of acceptance into the program be that students declare all criminal convictions, cautions and disciplinary proceedings before being admitted to the program and annually while enrolled in the program. The school has drafted a clear and detailed process for considering information provided by the CRC, including provision for the applicant to make a written submission for consideration along with the CRC.

**ACADEMIC PLAN INACTIVATIONS**

- **Faculty of Arts**
  - **Arts and Business**

  17. **Motion:** To inactivate the arts and business co-op digital arts communication specialization plan.

  **Rationale:** Due to low enrolment numbers in the current specialization in Digital Arts Communication within Arts and Business Co-op, it will be inactivated. Students in the specialization prior to the minor taking effect will be allowed to continue in the specialization until they graduate.

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

  18. **Motion:** To inactivate the honours English - English literatures in a global literatures context specialization plan.

  **Rationale:** This plan is being inactivated in order to create a new plan with a new name: Honours English – Global Literatures Specialization. Students currently enrolled in this plan will be allowed to complete the requirements under this plan, whereas new students will enroll in the new plan.

- **Faculty of Arts**
  - **Sociology and Legal Studies**

  19. **Motion:** To inactivate the honours sociology/legal studies, criminology specialization departmental co-op.

  **Rationale:** With the inactivation of the criminology specialization for the honours sociology/legal studies and the legal studies/sociology plans, this inactivation removes the availability of departmental co-op in line with the intent of those inactivations.

Mario Coniglio
Associate Vice-President, Academic
FOR INFORMATION

Report from the Fall Break Task Force
A report on the feasibility of a fall break for the University of Waterloo was requested by Geoff McBoyle, former vice-president, academic & provost. A task force was assembled and charged to outline possible scheduling options for a fall break with pros/cons for each option, including determining how various faculty, staff and student stakeholder groups could be impacted. The task force was asked not to take a position on whether or not a fall break should be adopted, but rather recommend a preferred option for a fall break scenario should one become obvious.

Given the growing attention to this matter in the media, the impending student referendum and the implementation of a fall break at Wilfrid Laurier University, the task force’s report is being distributed to Senate as part of the 20 October 2014 meeting agenda package.

The report notes that Waterloo is included in a minority of outliers of Ontario universities who do not currently have a fall break. Fourteen Ontario universities currently have a fall break, although durations are variable (2-5 days in length) as is the timing. Although mental health reasons are commonly cited as the reason to adopt a fall break, the report states that:

“hard data to support this assertion is generally lacking. Students, counselors, instructors and academic advisors will, however, readily attest that the Fall term is widely seen as a “pressure cooker”, especially in regards to transitioning issues and looming midterm exams for new incoming students. The University of Waterloo, among numerous other Ontario institutions, is keenly aware of the need to provide conditions that promote the physical and mental well-being of our students.”

The report makes six key recommendations [see Executive Summary]. Furthering discussion of a fall break should follow the November student referendum if it results in a “yes” vote. At this time, the task force will engage various stakeholder groups to more thoroughly explore the various trade-offs that could emerge as a result of fall break, and their implications.

The report concludes that if Waterloo were to adopt a fall break, it should be two days in length and that accommodating the break would be most readily done by an earlier start date to fall classes.

Regardless of whether or not we proceed to a fall break, the report also suggests that clear terms of reference are needed for mid-term breaks and should be applied to the existing February “Reading Week.”
Consideration of a Fall Break at the University of Waterloo

Executive Summary
The upcoming (Fall 2014) undergraduate student referendum on the desirability of a Fall Break and recent adoption of a Fall Break on a three-year trial period by Wilfrid Laurier University have independently re-ignited the discussion at the University of Waterloo. Fourteen Ontario universities currently have a Fall Break, varying from 2-5 days in length. UW is among a small number of institutions within Ontario who do not currently have one.

The primary challenge to arranging a Fall Break is finding sufficient space to schedule: 60 teaching days, a minimum of 2 pre-exam study days, and a minimum of 12 exam days while finishing by December 22. This challenge seems relatively easy to accomplish most years but is complicated by the occasional late Labour Day holiday.

The most promising way forward is to start classes earlier by abbreviating or changing Orientation activities, so that classes commence on the Thursday following Labour Day. The fact that the English Language Proficiency Exam (ELPE) is no longer written during Orientation Week, and in recent years, the institution has been engaging undergraduate students prior to their arrival on campus via an effective communication and transition strategy, suggest a shortened Orientation week is a reasonable approach to finding space in the term to accommodate a Fall Break.

There are other mechanisms that could be adopted in order to find additional space in the term. They include: allowing Sunday exams, or ending the exam period a day later (December 23, instead of December 22). It would likely be necessary to use either of these options on the rare occasion (every seventh year) when Labour Day is comparatively late in the term. It is important to note that the level of challenge for scheduling will vary from year to year, depending on when Labour Day occurs.

The 6 key recommendations of this report are the following:

1) Settle on a terms of reference for a term break. This should apply to the existing Winter “Reading Week” and to any Fall Break that may be adopted in the future. This would serve to clarify the expectations and responsibilities of students (including graduate students) and instructors related to any mid-term break. Even if a Fall Break is not approved, these terms of reference should be considered for the Winter Break.

2) Consult openly and thoroughly with all stakeholder groups. The adoption of a Fall Break would impact much of the university community and hence broad consultation is paramount to the decision as to whether or not to proceed. Groups to be engaged include students, faculty, staff, administration and student services.
If a Fall Break is adopted, the following are recommended:

3) **The break should be 2 days in length.** Making the break 2 days in length will be easier to facilitate and adding it to the existing Thanksgiving break ensures an adequate duration (5 days). There are significant issues concerning Co-operative Education regarding this timing, however, and these issues require thorough examination.

A possibility that should be considered is varying the length of the Fall Break depending on when Labour Day falls. Thus, depending on the year, the Fall Break could be lengthened to take advantage of years when there is an earlier scheduling of Labour Day.

4) **Consider changing the start date for classes.** Orientation week can be modified in order to facilitate a break later in the term. Changes may include new or different activities but also timing of existing activities. A few key changes here could facilitate a break that could aid all students later in the term. This may be a worthwhile tradeoff from which the whole university community might benefit. Starting Fall classes on the Thursday of Orientation week vastly simplifies the scheduling of final examinations and allows the maintenance of pre-examination study days, no scheduled Sunday examinations, examination period ending on December 22, and 60 teaching days in the term.

5) **Consider adopting a Fall Break on a trial basis for a period of 2 or 3 years.** This may help with establishing a better understanding of emergent issues and challenges. We should be prepared to monitor and alter the break or return to the status quo if the benefits do not significantly outweigh the challenges or inconveniences.

6) **Develop wellness education and awareness-building initiatives.** This is to be done in conjunction with other wellness efforts on campus that inform students on how to maintain wellness, and how best to capitalize on a Fall Break.
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Report to the Vice President and Provost - September 8, 2014

Introduction
This report was requested by the previous Vice-President, Academic and Provost, Geoff McBoyle, in response to the recently revitalized discussion of a Fall Break at the University of Waterloo in anticipation of a student referendum in the Fall 2014. Another important influence was Wilfrid Laurier University’s recent adoption of a Fall Break, for a 3-year trial period.

Discussion on Fall Breaks at UW has occurred in the recent past. In 2009, there were conversations with some key stakeholders and in 2011, 12 focus groups with over 100 first and upper year undergraduate students were organized – reactions at the time regarding a Fall Break were mixed and no planning to install a Fall Break emerged.

The implementation of a Fall Break, along with other institutional interventions, together can have an overall positive impact on the campus culture around promoting and supporting wellness. Thoughtful consideration of a Fall Break at UW must be informed, however, from several key perspectives – faculty, staff and student groups, as well as administration. Structural issues, such as duration of the break, when it occurs, and adjustments to the academic schedule (including final exam period) all need to be considered to establish feasibility. Scheduling of a Fall Break needs to be considered in the context of priorities at the University of Waterloo – importantly, it should occur at an optimal time in the term for a break for the majority of our students.

The 2014/2015 academic calendar is already set, so the earliest possible Fall term that could be considered is 2015. This would require that consultations occur and approvals be received in a timely fashion this Fall.

Rationale for considering a Fall Break
Fourteen Ontario universities currently have a Fall Break, varying from 2-5 days in length, evidently scheduled without jeopardy to their academic programming. In light of this, UW is an anomaly within the province.

Promotion of sound mental health is widely claimed as the rationale for installing a Fall Break, although hard data to support this assertion is lacking. Students, counselors, instructors and academic advisors will, however, readily attest that the Fall term is widely seen as a “pressure cooker”, especially in regards to transitioning issues and looming midterm exams for new incoming students. The University of Waterloo, among numerous other Ontario institutions, is keenly aware of the need to provide conditions that promote the physical and mental well-being of our students. An institution whose actions promote mental health well-being will be well regarded by undergraduate and graduate students, prospective students and their parents.
The Fall Break Task Force – composition and mandate

A Fall Break Task Force (hereinafter referred to as the Task Force) was constituted to include wide stakeholder representation and charged to provide to the university community:

- an outline of all scheduling options considered for a fall break, with pros/cons for each option. The various trade-offs are to be explored and implications they might present anticipated.
- a recommended option, should one become clear to the group. Note the task force was not asked to determine or take a position on whether the university should adopt a Fall Break.
- any resources relevant to informing future discussions regarding the merits of adopting a Fall Break.

The Task Force met 4 times between June and August, 2014. Membership on the Task Force was as follows:

- Mario Coniglio, Associate Vice-President, Academic (Chair)
- Ron McCarville, Associate Dean for Undergraduate Studies, Applied Health Sciences
- Stephane Hamade, Vice-President, Education, Federation of Students
- Rebecca Little, Academic Affairs Commissioner, Federation of Students (representing Stephane Hamade)
- Allyson Francis, Undergraduate-student-at-large, Faculty of Engineering
- Robbie Henderson, Vice-President, Student Affairs, Graduate Students Association
- Coleen Even, Vice-President Communications and Events, Graduate Students Association (representing Robbie Henderson)
- Maya D’Alessio, Board of Directors, Graduate Students Association (representing Robbie Henderson)
- David Porreca, FAUW president
- Jasmin Habib, FAUW representative
- Lynn Judge, Graduate Studies Office
- Ray Darling, Registrar
- Pam Charbonneau, Director, Student Success Office
- Victoria Lehmann, Administrative Support, Associate Provost Students Office

Establishing the terms of reference for a Term Break

Mid-term breaks, regardless of the term in which they occur, should have the same terms of reference. Currently, the nature of the Winter “Reading” Week at Waterloo is not defined, although it involves the cancellation of all academic meetings (classes, labs, tutorials, seminars, exams, etc.) during the mid-February week following the statutory Family Day holiday (Monday). There are no formal guidelines as to whether academic work can be made due during this week. However, administrators have favoured delaying deadlines until the resumption of classes. Furthermore, graduate classes have been affected by this break unevenly - some instructors have cancelled classes, while others have not. Co–op interviews continue during the week and this is the only formally articulated statement related to the Winter Reading Week. Special activities, such as Pharmacy’s clinical rotations, also continue during the Winter Reading Week.

We suggest that the terms of reference below be applied to any mid-term break (including the existing Winter Reading Week and the currently-being-discussed Fall Break):
A mid-term break (e.g., Winter Reading Week) is intended to act as a pause for on-campus students to reflect upon and catch up on their term’s work to date and, as necessary, prepare for any upcoming mid-term assignments and assessments.

During this pause, there are to be no scheduled meetings for students (e.g., classes, labs, tutorials, seminars, exams). While exceptions may exist (e.g., co-operative employment interviews, Pharmacy’s clinical rotations, PhD comprehensive exams, graduate thesis defenses), the pause applies to meetings involving both undergraduate and graduate students.

Deadlines for student submissions should not be scheduled during the break. Student services, such as Health Services, Counselling Services, the library, residences, etc. are expected to continue working at full capacity.

**Guiding principles, constraints and impacts**

The following section examines the key factors to consider in furthering the discussion of a Fall Break, including relevant guidelines, organizational and scheduling issues, and stakeholder interests. Factors related to scheduling are emphasized. Although the Task Force has identified numerous concerns from various stakeholder groups, there remains the need to consult formally with these groups to ensure the full spectrum of concerns is brought to the discussion table. Scheduling concerns relate to the need to preserve a number of necessary (e.g., number of teaching days and exam days) and desirable (e.g., number of pre-exam study days, no Sunday exams) attributes of the Fall term.

It was the Task Force’s collective sense that resistance to the Fall Break idea arises, not from the break itself, but rather concern over trade-offs made while arranging the break. In the following, we lay out various trade-offs and suggest the implications they might present.

**Start of Fall academic term**

Viewing orientation of new students as a process instead of a series of events during a particular time period is more reflective of current student development and transition philosophy and practice. Our current Fall undergraduate orientation program normally starts the Sunday evening before Labour Day and extends to the Saturday after Labour Day, with classes beginning the Monday of the following week.

Our existing institutional guidelines indicate that there are normally 60 teaching days each term. The current guidelines indicate that a clear rationale for having fewer than 60 days necessitates Senate approval. So while it is possible to have fewer than 60 teaching days, shortening the term does not appear to be in the best interests of our students nor our teaching mission.

As will become apparent in the following discussion, changes to the start of classes and to orientation are considered to be a feasible option to make space for a Fall Break.

**Starting classes two-days earlier**

A revamped Orientation Week could effectively include the start of classes on the Thursday and Friday of that first week. This early start would mitigate complications for the December exam schedule, particularly in years when Labour Day is late (e.g., September 5, 6 or 7).

However, some faculty members worry that upper year students might deliberately skip the scheduled Thursday and Friday classes in favour of starting to attend classes a few days later on the following
Monday. It is relevant to note that the majority of universities in Ontario start classes on Thursday or earlier in the week and they do not seem to have issues with students skipping classes. Perhaps more important is that an early start to classes would mean instructors and course-support staff would be required to begin their work earlier in the term.

**Duration of Orientation Week**
The duration of Orientation Week is potentially flexible, in part the result of developments concerning the English Language Proficiency Exam (ELPE) which, in past years, was written toward the end of Orientation Week. Furthermore, in recent years, the institution has been engaging undergraduate students prior to their arrival on campus via an effective communication and transition strategy, which could potentially also be utilized to further assist with Orientation. As well, there is value in considering extending Orientation-type activities judiciously into the first few weeks following the start of classes.

**Scheduling of move-in days**
The usual Orientation Week move-in days (Sunday and Labour Day Monday) could be scheduled earlier to be Saturday-Sunday move-in days, freeing up Monday (Labour Day) for Orientation activities. The possibility of scheduling some Orientation activities during evenings of Orientation Week, and perhaps even Sunday following Orientation Week could be considered as well.

Earlier move-in days are a feasible option. However, as with starting classes 2 days earlier, facilitating an earlier move-in period would require the availability of more paid staff and volunteers sooner into the Labour Day weekend, as well as residence staff prior to the weekend to prepare residences for the incoming class.

**Scheduling Orientation Week before Labour Day weekend**
Starting Orientation activities before Labour Day may be problematical on several fronts, the most important being the encroachment of limited holiday time availability for instructors, staff, grad students involved as TAs in courses during the Spring term; graduate student orientation, the early return to campus for Orientation leaders; and complications related to accommodation (leases for off campus accommodations typically start September 1). This option is not considered feasible.

**December exam period**
The Fall exam period should have no fewer than 12 days, a reflection of our current inventory of suitable exam venues. Due to the latest possible scheduling of Labour Day in the Fall 2015 term, an extra day will have to be found in the Fall term, even without adoption of a Fall Break. This could mean a Saturday teaching day perhaps in the last week of classes (as was previously done in 2009 when Labour Day was September 7), for example, or perhaps allowing exams to be scheduled on the first Sunday of the exam period. Either of these changes would allow for a 12-day exam period. Fall terms with earlier Labour Days will not have this problem. Issues concerning Sunday exams are elaborated further below.

**Pre-exam period study days**
Pre-exam study days ensure that students have the opportunity to prepare for their final assessment in all courses taken during the term. Our existing guidelines dictate that there be no fewer than 2 study days (excluding Saturday, Sunday and holidays) between the end of classes and the beginning of exams. A reduction in the number of study days would be seen to offset any benefit from a Fall Break, however, therefore reducing the number of pre-exam period study days should not be considered a feasible option.
**End of exam period**

The existing guidelines stipulate that no Fall term exams are to be scheduled later than December 22. Allowing scheduling of final exams to December 23 would allow one day to be gained, and appears to be feasible, although potential impacts to the university community relate to holiday travel plans; problematical exam scheduling for exams postponed due to emergency closure late in the exam schedule; less time for instructors and TAs to mark exams written late in the exam period; delaying the processing of Fall term grades in the new year; and significant impact on Waterloo and University College residences’ ability to turn rooms over in time for new students moving in for the Winter term. This option is not as intractable as those that involve inflexible constraints, such as number of teaching days and number of exam days but is not a favoured approach to ensuring the minimum number of exam days.

**Sunday exams**

Allowing Sunday exams to be included in the normal exam schedule (when required\(^1\)) will generate up to 2 additional days that are available for the writing of exams. It is only in those years when Labour Day is late (e.g., September 7) when Sunday exams might be considered to obtain additional exam days during the exam schedule.

There was concern expressed by faculty over Sunday exams on the basis of work-life balance. We note that additional work-life balance opportunities offered by a Fall Break may offset this concern but we also acknowledge that this is likely to be a sensitive issue. As well, concerns over religious observance may emerge. However, we note that Sunday exams (and therefore attending to them by faculty and graduate student proctors) are already permitted under exam regulations. Sunday exams are not addressed in the Faculty Memorandum of Agreement but they are permitted if an exam must be rescheduled, as articulated in the institutional exam regulations (https://uwaterloo.ca/registrar/final-examinations/examination-regulations-and-related-matters). When scheduled final exams cannot be written due to emergency closure, the date chosen for writing the postponed exam will be the next available day when exams have not been scheduled, which can include Sunday.

The Task Force did not learn of any strong opposition by undergraduate students to Sunday exams, although graduate students (through the Graduate Students Association Council) voiced their concern as they relate to their exam proctoring duties.

While we consider Sunday exams to be a feasible way forward to generate the required number of exam days during the exam period, it comes with significant risk, and therefore is not a preferred option. If Sunday examinations are allowed, scheduling of examinations due to emergency closure becomes problematical on several fronts. This could mean, for example, postponed exams are written early in the subsequent Winter term; delays in academic progression requirements; and TA responsibilities for graduate students are carried over to the new term and may conflict with their new responsibilities. However, having only one Sunday exam day, the first in the exam schedule, mitigates some of the risks associated with weather emergencies as the second Sunday is still available. A compressed exam schedule in which Sundays are used to schedule exams also is taxing on students writing the exams, as well as the faculty, staff and graduate student proctors who must then attend to them.

\(^1\)Including one Sunday exam day in the Fall 2015 exam period will allow the minimum 12 days for the exam period and the normal conclusion to the exam period (December 22). An alternative is using a Saturday later in the term as a teaching day.
Characteristics of a Fall Break

Length of a Fall Break
Fall Breaks at other institutions vary in duration, and also vary as to when they are scheduled. WLU scheduled their Fall Break to include the 4 days (Tuesday to Friday) immediately following the Thanksgiving Monday, effectively providing 9 sequential class-free days for most students. Their choice necessitated allowing Sunday exams during the Fall exam period, evidently eliminating the flexibility of using these days for postponed exams if a weather-related closure forced rescheduling.

The Task Force examined numerous scenarios for scheduling a Fall Break. Fixed references were a minimum of 12 exam days with exams ending on December 22. Variables included the number of days in the Fall Break (2 or 4), the number of study days between the end of classes and the beginning of exams (from none to 2), duration of Orientation Week (full vs. a 3-day Orientation week where classes commence on the Thursday of that week) and the possibility of Sunday exams. The task force did not consider a Fall Break of 3 or 5 days as it could readily delineate the key issues to be grappled with the 2 chosen scenarios.

For the 4-day scenarios considered for Fall 2015 (the most challenging year to schedule due to the latest possible Labour Day), there were no feasible solutions that balanced the need to have a minimum of 2 study days, no Sunday exams and ending the exam period on December 22. Even with scenarios having a shortened Orientation Week (i.e. classes start the Thursday of Orientation Week), ending the exam period on December 22 would require acquiring 2 final exam days from some combination of the 2 pre-exam study days or the 2 Sundays available in December during the exam period.

Feasible scenarios involving a 2-day Fall Break were comparatively easier to schedule. A 2-day Fall Break satisfies the need to “pause” in the term (especially if it is attached to the Thanksgiving weekend – discussed further below), while at the same time, allowing an acceptable exam period preceded by 2 study days. Moreover, an Orientation Week shortened by 2 days would mean the exam schedule would not need to be modified by having fewer pre-exam study days, Sunday exam writing, or extending the schedule to December 23. An exception is related to every seventh year when Labour Day is on September 7. As mentioned earlier, for Fall 2015 when Labour Day is September 7, it is likely that a Saturday teaching day in the last week of classes will be required to allow for 12-day exam period, or alternatively, the first Sunday in the exam schedule could be used. We reiterate - the Fall 2015 schedule is the most difficult to work with due to the late Labour Day. Subsequent years become progressively easier to schedule as Labour Day occurs earlier into September.

A possibility that should be considered is varying the length of the Fall Break depending on when Labour Day falls. Thus, depending on the year, the Fall Break could be lengthened to take advantage of years when there is an earlier scheduling of Labour Day.

Timing of a Fall Break
Extending forward from the 3 days of the Thanksgiving weekend provides the most advantage to students. If a 2-day break is adopted, that would provide 5 sequential days – a significant pause in the academic term that coincides with the timing of mid-term exams.

On the surface it seems convenient to schedule a Fall Break to coincide with WLU’s Fall Break, but the rationale for doing so weakens significantly if UW adopts a shorter break than the 4 days WLU decided upon or at another time in the term. Our understanding is that the scheduling of the Fall Break at WLU
was arrived at via compromise; the original preference of senior administration was a 2-day break later in the term.

It is important to note that Co-operative Education will be significantly impacted by a Fall Break, particularly if the break is scheduled to extend the Thanksgiving weekend. Their recruitment work during the Fall term is the most challenging of the year, because they are focused on securing co-op placements for the highest number of students scheduled out to work in the following term. An option that would have minimal impact for Co-operative Education would be to have the Fall Break occur in the last week of October, following the main round match. Clearly, Co-operative Education needs to be very much a consideration in the discussion of the timing of a Fall Break due to the impact on their schedule of activity.

Other impacts of a Fall Break

Graduate students
The potential impact of a Fall Break on UW graduate students is significant from several perspectives. As students taking courses, the rationale for a Fall Break should also apply to graduate students. In their role as TAs, their concerns would be aligned more closely to those of faculty and staff. Furthermore, a number of our graduate programs have collaborations with other institutions (e.g., history, geography, physics, chemistry), which may or may not have a Fall Break coincident with one adopted by UW.

Online courses
Discussion of the impact of a Fall Break on online courses requires consideration of how the offering of online courses should be changed (if at all) to realize the same benefits accrued to online students as for on-campus students during the Fall Break.

Course scheduling issues
The impact of a Fall Break needs to be considered in courses where there is special scheduling, for example, in Science laboratories that are scheduled in alternating weeks.

Recommendations
1) Settle on a terms of reference for a term break. This should apply to the existing Winter “Reading Week” and to any Fall Break that may be adopted in the future. This would serve to clarify the expectations and responsibilities of students (including graduate students) and instructors related to any mid-term break. Even if a Fall Break is not approved, these terms of reference should be considered for the Winter Break.

2) Consult openly and thoroughly with all stakeholder groups. The adoption of a Fall Break would impact much of the university community and hence broad consultation is paramount to the decision as to whether or not to proceed. Groups to be engaged include the following:

- Undergraduates Students – Orientation Steering Committee, Orientation leaders (FOC), Federation of Student Council, Undergraduate Student Relations Committee
• Graduate Students – Orientation Steering Committee, Graduate Orientation organizers (Student Success Office, Graduate Studies Office), Graduate Students Association Council, Graduate Student Relations Committee

• Faculty Association and Staff Association (to hear from professors and instructional staff such as lab instructors)

• Administrative Officers – undergraduate and graduate Associate Deans in Faculties, Associate Deans in AFIW, Department Chairs, School Directors

• Student support services – Registrar Office, GSO, Housing and Residences, CECA (Co-operative Education), Athletics, Food Services and others

• Other institutions with which we have partnerships

• Faculty Councils

If a Fall Break is adopted, the following are recommended:

3) The break should be 2 days in length. Making the break 2 days in length will be easier to facilitate and adding it to the existing Thanksgiving break ensures an adequate duration (5 days). There are significant issues concerning Co-operative Education regarding this timing, however, and these issues require thorough examination.

A possibility that should be considered, however, is varying the length of the Fall Break depending on when Labour Day falls. Thus, depending on the year, the Fall Break could be lengthened to take advantage of years when there is an earlier scheduling of Labour Day.

4) Consider changing the start date for classes. Orientation week can be modified in order to facilitate a break later in the term. Changes may include new or different activities but also timing of existing activities. A few key changes here could facilitate a break that could aid all students later in the term. This is a worthwhile tradeoff from which the whole university community might benefit. Starting Fall classes on the Thursday of Orientation week vastly simplifies the scheduling of final examinations and allows the maintenance of pre-examination study days, no scheduled Sunday examinations, examination period ending on December 22, and 60 teaching days in the term.

5) Consider adopting a Fall Break on a trial basis for a period of 2 or 3 years. This may help with establishing a better understanding of emergent issues and challenges. We should be prepared to monitor and alter the break or return to the status quo if the benefits do not significantly outweigh the challenges or inconveniences.

6) Develop wellness education and awareness-building initiatives. This is to be done in conjunction with other wellness efforts on campus that inform students on how to maintain wellness, and how best to capitalize on a Fall Break.
Amendments to Policy 68, Vice-President, University Research

Motion: To approve amendments to Policy 68, Vice-President, University Research, as set forth in Attachment 1.

Summary of Amendments:

- In the section re: Term of Office, the renewal term has been changed to five years (instead of three), to a maximum of ten years (instead of eight). The original renewal term and maximum term reflect the position’s origins as a decanal appointment. The proposed renewal term and maximum term are consistent with the appointment terms for other vice-presidents with definite-term appointments.
- The language in section 5.B has been changed to mirror the language in Policy 48 – The Vice-President, Academic & Provost regarding the approval process for reappointments and new appointments.
- The chair of the nominating committee has been changed from provost to president or delegate to reflect the current reporting structure.
- For purposes of alignment with the new policy template (as part of the Policy Project), a section titled “Legal Framework” has been added.
- The term “Federated and Affiliated Colleges” has been replaced with the term “Affiliated and Federated Institutions of Waterloo”.
- Capitalization has been updated to reflect the Waterloo Writing Style Guide published by Marketing and Strategic Communications.

Background: The proposed amendments were approved by the Faculty Relations Committee on 11 September 2014 and the president on 25 September 2014. If approved by Senate, the policy will be sent to the Board of Governors for approval as per Policy 1.
Policy 68 – Vice-President, University Research

The policies found on the website of the Secretariat & Office of General Counsel (SOGC) are compulsory rules for the university community. The authoritative copies of the policies are held by the SOGC and bear the seal of the university. The online version accessible through the website of the SOGC is available for information purposes only. In case of discrepancy between the online version and the authoritative copy held by the SOGC, the authoritative copy shall prevail. Please contact the SOGC for assistance if necessary.

Established: 21 November 1988
Revised: 27 October 1998
[2014]
Mandatory Review Date: [2019]
Supersedes: N/A
Class: A
Responsible/Originating Department: Office of the President Vice-President, Academic & Provost
Executive Contact: President Vice-President, Academic & Provost

Related Policies, Guidelines and Procedures:
N/A

1. General
The vice-president, university research provides leadership in research throughout the university and externally. He/she is appointed for a definite and known term after the appropriate selection procedure has been followed.

2. Qualifications, Duties and Responsibilities
The vice-president, university research is a senior faculty member of considerable scholarly stature. He/she is a university officer, serving in that capacity on the Senate, appropriate major committees, and on other such university bodies. As a university officer, the vice-president, university research has responsibility for making independent judgments on total university matters, representing the particular interests, policies and point of view of research as determined by the Senate Graduate & Research Council, and being the external representative for the university with regard to research and research-related issues. The vice-president, university research has particular responsibility for maintaining the autonomy and intellectual independence of the university in matters related to research, and for fostering an environment which promotes a high academic standard of scholarly activity.

The vice-president, university research is co-chair and academic mentor of the Senate Graduate & Research Council; together with the Faculty deans, he/she is responsible for setting and maintaining a high academic standard of scholarly activity with respect to research throughout the university.

3. Legal Framework
In addition to the abovementioned “Related Policies, Guidelines & Procedures”, the Policy must be construed in accordance with the following legal provisions:

- Employment Standards Act, 2000, S.O. 2000, c. 41;
- Pay Equity Act, R.S.O. 1990, c. P.7;
- Occupational Health and Safety Act, R.S.O. 1990, c. O1;
4. **Term of Office**
   A. The term of office for the vice-president, university research is normally five years, renewable for three five years, to a maximum of eight ten years.

   B. Reappointment beyond a second consecutive term should be considered unusual and will occur only if there are compelling reasons, as specified by the nominating committee, along with strong support throughout the university.

   C. In the event of the absence of the vice-president, university research for any prolonged period, arrangements should be made for the president to appoint an acting vice-president, university research for a period of no more than one year.

5. **Appointment and Reappointment Procedures**
   A. **Appointment of a Nominating Committee**

      When nominations for the vice-president, university research are required, as through notice of resignation, death, or the approaching end of a term, a nominating committee shall be formed by the president. The nominating committee shall normally be formed no earlier than 18 months and no later than one full calendar year prior to the end of the term of office of the incumbent.

      The nominating committee shall consist of:
      - The Vice President, Academic & Provost president or the president’s delegate, who shall chair the committee.
      - The associate provost, graduate studies.
      - One senator of professorial rank from each Faculty, elected by a vote within that Faculty.
      - Two graduate students, appointed by the Graduate Student Association.
      - One staff member appointed by the Staff Association, and one elected by and from the regular staff in the Office of Research.
      - One faculty member from and appointed by the affiliated and federated institutions of Waterloo Federated and Affiliated Colleges.

      A reasonable gender balance should be maintained on nominating committees, whenever feasible.

      Membership on nominating committees shall be conditional on each person agreeing to maintain in confidence the information discussed by the committee, except on points where the committee subsequently agrees otherwise, and to exercise authority and responsibility as an individual in order that decisions may be taken at the time and place of committee meetings.

      If any member of the nominating committee becomes, or seeks to become, a candidate for the office of vice-president, university research, the member shall resign from the committee.
In the event of a perceived conflict of interest that could compromise or be seen to compromise the member's judgment of the candidates, he/she shall disclose the nature of that conflict to the committee in sufficient detail to enable the committee to determine whether the member must resign from the committee.

If the association of any member of the nominating committee with the university is terminated or in any way significantly altered, or if for any reason, including resignation, any member is unable to carry out responsibilities on the committee, the nominating committee will request a replacement member, unless the committee has reached a stage in its deliberations where it deems such a replacement inadvisable.

B. Terms of Reference

It is understood that the committee shall be responsible for soliciting the views of those affected, including graduate students.

1. Reappointment at the End of a First Term
The first charge to the nominating committee will be to solicit, with the prior knowledge of the incumbent and by whatever means it may decide, the opinion of the Senate Graduate & Research Council, the Faculty deans and other persons affected, with respect to the reappointment of the incumbent. If the incumbent is found to be generally acceptable, the committee shall then determine the incumbent's willingness to accept reappointment. If the incumbent indicates willingness to accept, the committee shall recommend reappointment to the president Senate without considering other candidates. Upon receiving the report of the nominating committee and the recommendation of the Senate, the president shall recommend an reappointment to the Board of Governors.

2. New Appointments
If the incumbent is not to be recommended for reappointment at the end of a first term, or if the incumbent is nearing the end of a second term, or if the incumbent has died, resigned or been removed, then the following procedure shall be followed: the committee will invite nominations, by whatever means it considers appropriate, from any person or group; it will advertise the position internally, and also externally if this seems appropriate; and it will establish criteria against which nominations and applications may be measured.

The committee will consider all names placed before it and will develop a short list of candidates as its first step in proceeding towards a recommendation. These candidates will be invited to meet with the committee and/or with such other persons and/or groups as it may determine. After screening candidates, the committee shall select the person it regards as most suitable for the position and submit its recommendation for the appointment of that candidate, in confidence, to the members of the Senate Graduate & Research Council, and to the Faculty deans and the vice-president, academic & provost ("VPAP"). If the committee feels that two or more of the candidates are well qualified, it may choose to submit the choice between these, in confidence, to the members of the Senate Graduate & Research Council, and to the Faculty deans and the VPAP.

The members of the Senate Graduate & Research Council, and the Faculty deans and the VPAP will then have the opportunity to indicate the acceptability of each candidate, and their choice among candidates, in a secret mail ballot which shall be returned to the chair of the nominating committee. The results of the ballot shall be made known to the nominating committee. If the results of the ballot indicate that no candidate is acceptable to a majority of the members of the Senate Graduate & Research Council, and the Faculty deans and the VPAP, the nominating committee shall resume its screening activities. If the Senate Graduate & Research Council, and the Faculty deans and the VPAP generally approve a candidate, the nominating committee shall recommend the appointment of that candidate to the Senate President. When more than one candidate is generally acceptable and the ballot results indicate no clear preference, the nominating committee shall select the person it regards as most
suitable for the position and recommend the appointment of that candidate to the President Senate. If the results indicate that the candidate is unacceptable to a majority of the Senate, the nominating committee shall resume its screening activities. If the Senate approves the recommendation it shall be forwarded to the president. Upon receiving the report of the nominating committee and the recommendation of the Senate, the president shall recommend an appointment to the Board of Governors.

All such discussions, in the committee and in the Senate, will be carried out in confidence.

6. Removal of the Office Holder Before Expiration of Term
   A. General Principles
   The vice-president, university research may only be removed from office for cause. Cause is to be understood in relation to the duties of the vice-president, university research as indicated by all relevant university policies. Causes for removal include negligence, incompetence, unprofessional conduct, and inability to maintain the confidence of the university research community.

   Dismissal for cause from an administrative position is not to be confused with the dismissal for cause of a tenured faculty member. The criteria used and the procedures to be followed are different.

   B. Reconciliation
   In cases where the president becomes aware of serious problems, for example through individual submissions or a general petition, the president will, where appropriate, seek to mediate the situation as early as possible. Especially in cases of widespread disaffection or dissatisfaction with the vice-president, university research the process of reconciliation may involve the holding of a meeting with members of the Senate Graduate & Research Council for a full and frank discussion of concerns.

   C. The Setting-Up of a Formal Inquiry
   If the process of reconciliation fails or is inappropriate, then the president should determine whether there is sufficient evidence to warrant an inquiry into whether there is cause for removal. The vice-president, university research will be informed in writing of the president's decision and the basis for it, and be given an opportunity to respond. If the president believes that formal proceedings are necessary, the president will set up a formal inquiry. At the same time, the president may choose to suspend the vice-president, university research, without prejudice, financial or otherwise, for the period of the inquiry, if this is warranted by the general interests of the university and of the individuals involved, and is compatible with principles of natural justice. In the case of suspension, the president will appoint an acting vice-president, university research so as to facilitate the operation of research affairs during that time.

   D. Formal Inquiry
   The president will appoint a committee of three senior faculty members and inform the vice-president, university research. The vice-president, university research may challenge, in writing, a member or members of the committee for bias, apprehension of bias or conflict of interest.

   The committee shall determine its own procedures. However, in all its proceedings it shall be guided by principles of natural justice. In particular, it shall make sure that the vice-president, university research has full knowledge of every charge, and has every opportunity to respond to these charges. On completion of its work, the committee shall report to the president with a recommendation, supported by reasons, that the vice-president, university research either (1) continue in office (or be reinstated if temporary suspension has occurred) or (2) be removed for cause. The president will then take appropriate action. The report of the committee shall be made available to the vice-president, university research, the VPAP and, at the discretion of the committee, to other concerned parties within the Senate Graduate & Research Council.
FOR INFORMATION

Strategic Plan 2013-2018
The attached package is the first annual update to Senate describing progress towards Waterloo’s strategic goals. A similar package will be presented each year in the fall. This update, developed in consultation with numerous campus stakeholders, includes three key documents:

- **Progress and Impact – Fall 2014 Update**: This document presents baseline measures that will be monitored over the next four years and progress highlights from the current year’s initiatives. Further information on the baseline measures, as well as additional measures and information, can be found in the web interactive tool (uwaterloo.ca/strategic-plan-action). Please note that this tool will be launched at the beginning of October 2014.

- **Faculty Updates**: Faculty initiatives drive our strategic goals forward. This document presents key Faculty initiatives undertaken this past year, with a specific focus on Transformational Research and Academic Programming.

- **Strategic Implementation Plan**: This document offers a high level summary of the action plans for each theme. Action plans were developed by the theme leads in a consultative process over the course of fall 2013, and presented in January 2014.
strategic plan 2013-2018

PROGRESS AND IMPACT | FALL 2014 UPDATE

Learn more: uwaterloo.ca/strategic-plan-action
Message from the President

In 2013, the University of Waterloo adopted a bold and comprehensive strategic plan in pursuit of one core goal: ensuring our institution is recognized as one of the top innovation universities in the world.

We are pursuing this goal with relentless energy and optimism.

To sustain the spirit of accountability, transparency, and collegiality that has defined the strategic planning process to date, we have developed the first Strategic Plan Implementation Update for your review, organized around our eight key themes.

The report also includes summaries of key actions being implemented by each of the eight theme areas, the results anticipated by 2018, and information about how progress will be measured. Actions taken by each of our six Faculties in support of the strategic plan are also detailed.

This report will be updated and provided to the Board of Governors on an annual basis. Key implementation data will also be shared with the broader community using a web-based interactive tool.

The University of Waterloo is pursuing its strategic objectives with the talent and tenacity that defines great institutions and great communities — I am proud to reflect this ongoing work in the documentation enclosed herewith.

President and Vice-Chancellor
University of Waterloo

Learn more: uwwaterloo.ca/strategic-plan-action
Waterloo leads the world in experiential education and preparing world-ready graduates.
Action: Increasing the number and relevance of first co-op work experiences for students

Boosting First Work Term Success
Co-operative Education & Career Action (CECA) initiated eight pilot projects to address first work term success. Five have been completed and three are in progress. These pilots are aimed at supporting students and employers throughout the first work term experience. Results will be integrated into future planning to improve first work term experiences.

These pilot projects include hosting introductory co-op sessions and open houses about the Waterloo co-op process, piloting new models of co-op employment, increasing contact with student advisors, developing a co-op supervisor tool-kit, implementing a living-learning community, offering early access to co-op preparation activities and enhancing support for students during co-op work terms.

Action: Integrating work readiness into academic programming

New Career Readiness Certificate in the Works
Waterloo is beginning work on developing a career readiness certificate for Waterloo undergraduate students. A working group has identified key stakeholders to help understand important issues in developing the certificate. Once this information-seeking process is completed, the working group will identify recommendations and options for development.

Action: Creating and implementing an organizational and research framework to support innovative experiential education at Waterloo

Comprehensive New Program Supporting Co-op
WaterlooWorks is part of CECA’s systems strategy to replace JobMine, the current co-op and career recruiting system, as well as integrating the function of other standalone applications. The new system will have far greater functionality, including sophisticated search and sorting capability and automated dashboards and reminders. Working in partnership with Information Systems and Technology, a pilot of WaterlooWorks has been completed in the Faculty of Engineering at the School of Architecture, and a second pilot has begun. Initial feedback from students and employers has been encouraging, and opportunities for further input are ongoing.

Action: Expanding the number and range of experiential education opportunities

Expanding Experiential Education
Waterloo is using multiple approaches and activities to increase awareness of co-op and expand the number and range of experiential education opportunities. These include:

► The addition of an “Employer referral” button to Waterloo alumni web portal
► A review of current experiential education practice at Waterloo is underway
► Consultation to date has revealed diverse perspectives on experiential education. Further exploration will result in clearer focus for a renewed working group
► Enhanced efforts to increase co-op work terms at various universities where students are engaged in research
► Presentations at important conferences (for example, invited speaker on co-op at IFC conference, MapWIST, Prague, University of Cape Breton and International Rankings Observatory conference on employability) about Waterloo’s co-op and experiential programs

Learn more: uwaterloo.ca/strategic-plan-action
Waterloo’s global leadership in entrepreneurship educates, supports, inspires, discovers and leads change that fuels economic growth and improves the human condition.
Action: Building student awareness and participation in entrepreneurship opportunities

**MBET Fuels Entrepreneurial Opportunities**

In September 2013, Dr. Ali Esmail, BSc, MD, a resident in the head and neck surgery program at the University of Manitoba, saw that the beginnings of a technological renaissance was occurring in medicine. Ali wanted to be among those who led this renaissance, so he took a break from his residency to pursue a Master of Business, Entrepreneurship and Technology (MBET) at Waterloo.

At MBET, Ali met fellow MBET student Vejay Gandier, and together they created Medlinx, a secure mobile collaboration platform that allows medical professionals to access information quickly and easily, and to share information with patients. Within one year, Medlinx has been valued at $5M and has attracted seed funding of over $375K in cash and grants. By the end of 2014, the team will have launched large scale pilots in Manitoba and Nova Scotia.

Action: Implementing infrastructure required to support entrepreneurship activities

**Entrepreneurship is diversifying at Waterloo**

Manufacturing is the largest market sector in Waterloo Region’s economy. As well, global markets are hungry for innovative new hard goods, not just software, digital media, and IT solutions. To respond to this need, Waterloo has created the Velocity Foundry, an incubator geared to support hardware innovation and invention. Several Velocity startups have already launched ventures with advanced manufacturing facilities in the Region and internationally, with annual sales in the millions. There are currently 25 startups in the Foundry.

As an example, three Waterloo Nanotechnology Engineering students are working on a startup called Lumotune in the Velocity Foundry program. Lumotune produces non-traditional illuminated displays, employing a new class of nanomaterials.

**Entrepreneurship in the Physical and Life Sciences**

Velocity Science was founded in response to the growing interest among Faculty of Science students for a dedicated, lab-based facility in which to prove their concepts and build out science-based start-ups. This on-campus discovery space and community, run in partnership between the Faculty of Science and Velocity, currently supports eight teams with 30 members who are building physical and life science startups. In addition to lab space, budding science entrepreneurs participate in Velocity community talks and events which have resulted in a number of active teams. Velocity Science’s close proximity to science and engineering faculty members enables its students to readily engage with researchers, whose guidance and mentorship is proving invaluable to the success of these promising early-stage startups.

**Action: Building new university-wide entrepreneurship programs and opportunities**

► A new course, BET 100 - Introduction to Entrepreneurial Behaviour, is being offered in fall 2014 to Waterloo students. The course will be of interest to those who wish to create their own venture, become a more entrepreneurial employee or start a social enterprise.

► A new six-course option, the Option in Entrepreneurship, started fall 2014 in the Faculty of Engineering

► A new eight course, cross campus Minor in Entrepreneurship is planned for September 2015

**Action: Building student awareness and participation in entrepreneurship opportunities**

► An entrepreneurship “homepage” website will be developed by 2015

**Action: Maintaining Waterloo’s reputation for entrepreneurial innovation**

► Plans are underway to host a highly prestigious Waterloo Innovation Summit (WIS) in the fall of 2015. WIS will be an internationally focused summit that will leverage Waterloo’s differentiated strengths, attracting leading speakers and addressing pressing contemporary issues.

► Two surveys will begin this fall: a survey of the entrepreneurial profiles of Waterloo alumni and a survey of selected Waterloo faculty, staff and students to determine the extent to which Waterloo is perceived by its own employees to be an “entrepreneurial university.”

Learn more: uwaterloo.ca/strategic-plan-action
transformational research

PROGRESS AND IMPACT | FALL 2014 BASELINE DASHBOARD

Waterloo aims to inform and transform disciplines, policies, and technologies by practise transdisciplinary research that pushes back the frontiers of knowledge. The transformational research theme will engage the Waterloo community in a shared passion for tackling the societal challenges of today and tomorrow.

Waterloo's share of tri-agency funding among U15, 2010-2012

Almost one-third of Waterloo's research funding is from partnerships with industry, 2013-2014

Waterloo annually engaged with over 30 of the top 100 Canadian R&D companies, 2011-2014

Source: Office of Research

Source: Office of Research
Action: Enhancing institutional infrastructure that supports and enables research excellence and impact

Supporting Researchers
Waterloo is investing in new infrastructure to lessen the administrative burden on researchers. Research funding programs are becoming more complex to manage with increased rules and regulations governing project funding, how funds are spent and reporting obligations. This creates a tremendous administrative burden for researchers.

In 2014-15 Waterloo will initiate the acquisition of a modern, state-of-the-art, user-friendly research data system that will capture information pertaining to research applications, funding and research outputs, (e.g., publications) in their totality. The new system will allow a more seamless approach to managing projects and tracking outcomes. At the same time, Waterloo will work internally with stakeholders to develop internal measures of research excellence and impact.

Action: Identifying and pursuing strategic opportunities to promote Waterloo research and researchers nationally and internationally

Award Winning Researchers
Three Waterloo researchers nominated by the Waterloo Awards Committee were successful in receiving the following prestigious awards.

Paul Thagard received the prestigious Killam Prize in recognition of his contributions in the humanities. Thagard’s transdisciplinary research bridges traditional divides between the humanities and sciences. His research uses scientific principles to answer age-old questions in the humanities – questions about knowledge, reality and morality. The Killam prize honours lifetime achievement in research.

Zhou Wang, a world-renowned researcher who has pushed the envelope of science in perceptual image and video quality assessment was awarded the E.W.R Steacie Memorial fellowship from the Natural Sciences and Engineering Research Council. Wang’s work has developed new standards for objectively measuring image quality, and is used in widespread commercial applications. This transformative research is developing next-generation ways to measure and improve the visual experience for a variety of multi-media applications.

The Pierre Elliott Trudeau Foundation recognized Professor Jennifer Clapp, from the Department of Environment and Resource Studies, for her work in the area of global environmental and food policy by awarding her a prestigious Trudeau Fellowship. Clapp is a pioneer in the academic field of global political economy and environment. Clapp’s interdisciplinary approach raises international awareness about the ways in which global economic trends are interconnected with food and environmental outcomes. Her research provides important insight for the development of global food policy in increasingly complex times.

Learn more: uwaterloo.ca/strategic-plan-action
outstanding academic programming

PROGRESS AND IMPACT | FALL 2014 BASELINE DASHBOARD

Action on Academic Programming will enhance the learning experience, reshape the traditional classroom and expand the impact and reach of Waterloo’s programs.

**Waterloo graduates’ perception of achieved goals**
Source: National Graduate Outcome Survey 2013

- Being able to get a good job: 79%
- Getting training for a specific career: 58%

**Waterloo graduates students’ perception of instructional quality**
Source: Canadian Graduate and Professional Student Survey 2013

- Overall quality of graduate level teaching by faculty: 20%

**Waterloo students’ perception of institutional emphasis on use of technology**
Source: National Survey of Student Engagement 2014

- Providing technology to help you learn, study, or complete coursework: 21%
- Teaching with new, cutting-edge technologies: 20%

**Enrolment in online courses, 2013**
Source: Institutional Analysis & Planning

- Online Course Enrolment: 33,677

**Participation in workshops on teaching innovations**
Source: Centre for Teaching Excellence 2013

- Total Workshop Participants: 86
- Count of Unique Participants: 77

**Waterloo graduate students’ participation in professional and transferrable skills workshops**
Source: Centre for Teaching Excellence 2013

- Workshops Offered: 632
- Workshop Participation by Graduate Students: 4,441

**Waterloo students’ willingness to take another fully online course**
Source: Centre for Extended Learning Survey 2013

- I would enroll in another fully online course: 38%

Learn more: uwaterloo.ca/strategic-plan-action
Outstanding academic programming

PROGRESS AND IMPACT | FALL 2014 HIGHLIGHTS

**Action: Expanding excellence in online learning programming**

**Provincial Direction-Setting in Online Learning**
In 2013-2014, Waterloo leveraged its extensive foundation in online learning to support the Council of Ontario Universities (COU) with the Ministry of Training, Colleges and Universities (MTCU) online learning initiatives. Waterloo provided project leadership for the Ontario post secondary sector in creation of “Ontario Universities Online” and is actively participating in the development of a provincial Centre for Excellence in Online Learning.

**Online Master of Social Work Launched in 2013**
The University of Waterloo’s Renison University College launched the first online Master of Social Work with a focus on health in 2013. The new full- and part-time program addresses different learner needs and incorporates many unique pedagogical and technological features, enabling local experiential learning and interaction with peers across the country. This new program is primarily online and asynchronous, allowing for greater access for working professionals.

**A Better Way to Develop Math Content for Online Delivery**
The University of Waterloo and Maplesoft, a leading provider of high performance software tools, have formed a partnership to develop open, online courseware in mathematics. The open courseware developed in this new environment designed for mathematical exposition, exploration, evaluation and enrichment, will be launched by Waterloo’s Centre for Education in Mathematics and Computing and will support high school students and teachers around the world taking, or teaching, pre-calculus and calculus courses.

**Action: Supporting and promoting excellence in academic programming**

**Exploring Learning Analytics to Improve Student Learning**
The University of Waterloo partnered with post secondary institutions to explore the potential of learning analytics with $5.4M funding through the Ministry’s Productivity and Innovation Fund. Waterloo has implemented a new learning analytics tool and is currently piloting its use in its online Master of Public Health (MPH) program. Leveraging this technology to collect data to inform improvements in the student learning experience holds promise beyond the MPH program.

**Using Technology to Support Excellence in Teaching**
In her large lecture courses in Psychology, Professor Hilary Bergsieker fosters student engagement using an educational technology called Top Hat. This learning technology allows Bergsieker to ask questions that students respond to using their laptops or other mobile devices. The system aggregates the students’ responses, providing Bergsieker with valuable data that helps her use relevant examples or decide whether or not to review material before moving on. Students also use Top Hat to ask questions.

**Action: Creating an academic environment to prepare graduates to address challenges and opportunities of the 21st century**

**Graduate Professional Skills Portal**
Waterloo has partnered with Ontario’s other five research intensive universities to develop and deliver a series of innovative professional skills training modules for graduate students. Housed within a centralized Graduate Professional Skills Portal launched in September 2014, the modules can be used in a hybrid, or blended, learning environment. The portal can also serve as a clearinghouse for additional open-source information and resources related to the development and scholarship of graduate professional skills training.

**English Language Competency Development**
Waterloo Faculties and administrative units are working towards implementing English language competency initiatives, including specialized course offerings and the incorporation of communications skills into existing courses. In addition, communications-related services will be made available to all graduate and undergraduate students at various locations across campus. Strategic development of standardized assessment practices (i.e. marker training programs) will help TAs and instructors provide effective feedback.

Learn more: uwaterloo.ca/strategic-plan-action
Global prominence and internationalization is fundamental to Waterloo’s research, partnerships, learning opportunities, field programs, alumni connections and work placements.

**Waterloo’s international research grant funding, 2009-2014**
Source: Office of Research

<table>
<thead>
<tr>
<th>Year</th>
<th>International Research Grants</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009/10</td>
<td>$14.8M</td>
</tr>
<tr>
<td>2010/11</td>
<td>$13.5M</td>
</tr>
<tr>
<td>2011/12</td>
<td>$18.7M</td>
</tr>
<tr>
<td>2012/13</td>
<td>$17.0M</td>
</tr>
<tr>
<td>2013/14</td>
<td>$17.4M</td>
</tr>
</tbody>
</table>

Note: Includes funding from the U.S.

**Waterloo co-op students on international work terms, 2013**
Source: Co-operative Education and Career Action

- **2013**: 2,010

**Countries where Waterloo students participated in international experiential learning programs, 2014**
Source: Waterloo International

**Waterloo alumni living abroad, 2014**
Source: Waterloo International

- **2013**: 2

**International students as a proportion of Waterloo’s graduates and undergraduate populations, 2009-2014**
Source: Institutional Analysis & Planning

<table>
<thead>
<tr>
<th>Year</th>
<th>Graduate</th>
<th>Undergraduate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009/10</td>
<td>27%</td>
<td>22%</td>
</tr>
<tr>
<td>2010/11</td>
<td>29%</td>
<td>29%</td>
</tr>
<tr>
<td>2011/12</td>
<td>32%</td>
<td>34%</td>
</tr>
<tr>
<td>2012/13</td>
<td>34%</td>
<td>35%</td>
</tr>
<tr>
<td>2013/14</td>
<td>35%</td>
<td>34%</td>
</tr>
</tbody>
</table>

**Waterloo’s international ranking, 2011-2014**
Source: Institutional Analysis & Planning

<table>
<thead>
<tr>
<th>Year</th>
<th>Times Higher Education</th>
<th>QS</th>
<th>ARWU (Shanghai) Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>201-225</td>
<td>160</td>
<td>151-200</td>
</tr>
<tr>
<td>2012</td>
<td>226-250</td>
<td>191</td>
<td>151-200</td>
</tr>
<tr>
<td>2013</td>
<td>226-250</td>
<td>180</td>
<td>151-200</td>
</tr>
<tr>
<td>2014</td>
<td>201-300</td>
<td>169</td>
<td>201-300</td>
</tr>
</tbody>
</table>

Released October 2014

Learn more: uwaterloo.ca/strategic-plan-action
global prominence & internationalization

PROGRESS AND IMPACT | FALL 2014 HIGHLIGHTS

**Action: Diversifying funding for international opportunities through partnerships, expanded philanthropy and set funding mechanisms for international scholarships**

**New International Partnership Grants**
The University of Waterloo initiated an internally-funded pilot program called International Research Partnership Grants (IRPG) to provide Waterloo faculty with seed funding to develop international research collaborations with institutions known for high quality research. The pilot was very successful. Enduring research collaborations were created with outstanding institutions around the world, including Harvard University, Tsinghua University, University College London and IIT Bombay.

This approach is being replicated to expand international research collaboration, extend impact to collaborative educational programs and deepen and broaden existing international collaborations. After six years of collaboration on nanotechnology with the University of Bordeaux, this collaboration is being extended to research and teaching in areas of focus including water, energy and aging. An agreement has been signed with Technion to share more than $1M in collaborative research funding to foster the creation of collaborative education and research programs with preferred global partners.

**Action: Partnering with international organizations and universities to expand reach**

**Strategic Networking for Increased Student Mobility**
The University of Waterloo joined CALDO in January 2014 to address key strategic goals in increasing internationalization at the university. CALDO is a consortium of Canada’s leading research universities that are committed to international education and research. The consortium focuses on developing strategic partnerships with Latin American governments, sponsoring agencies and groups of universities to enable students and researchers to gain privileged access to the wide range of programs and state-of-the-art research facilities at CALDO member universities. Joining this strategic network is an important way for Waterloo to increase enrollment of fully funded students and increase student mobility, both important strategic goals. The network also allows Waterloo to strengthen ties with top Canadian universities and to diversify reach to South America.

**Action: Facilitating student access to international experiential learning opportunities**

**Integrating Learning Outcomes with International Experiences**

“This exchange definitely made me a stronger, more confident person capable of taking on anything life has to offer!” Jonna Spadafore, *International Experience: Australia*

International experiences provide some of the deepest and most influential forms of experiential learning. The learning experience is complex and diverse. To fully benefit from this experience as a learning outcome, students need to fully explore and appreciate what they have learned and understand how this new, unfamiliar, and perhaps complex experience contributes to the learning achieved through direct experience. Waterloo is in the process of developing a learning framework for the Global Experience Certificate that will include learning outcomes and an action plan for experiential learning integration through international mobility.

Learn more: [uwaterloo.ca/strategic-plan-action](http://uwaterloo.ca/strategic-plan-action)
At Waterloo, a vibrant student experience involves the classroom, campus and community and builds a life-long connection.
Action: Implementing excellent services to support students, including electronic services

New Electronic Student Service Portal
The Student Success Office and Information & Systems Technology (IST) are developing a student electronic portal to support Waterloo students to access and manage their Waterloo information. This includes a single sign-on portal for students to be able to get the information they need, when they need it. The portal is currently in the beta-testing phase and will be rolled out to Faculties over the upcoming terms.

Student Portal Progress Timeline

<table>
<thead>
<tr>
<th>Winter 2013</th>
<th>Summer 2013</th>
<th>Fall 2013</th>
<th>Summer 2014</th>
<th>Fall 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project scope and charter developed</td>
<td>Multiple student consultation groups</td>
<td>Privacy and Security Impact Assessment (PSIA) established</td>
<td>Faculty of Environment students test portal</td>
<td>Additional student groups added to testing process by Faculty throughout the next six months</td>
</tr>
<tr>
<td>Project leadership identified</td>
<td>Student beta testers provide ongoing feedback</td>
<td>Portal widgets created</td>
<td>Additional student groups added to testing process by Faculty throughout the next six months</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Campus partners determine portal features and data availability</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Over 250 portal features developed</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Action: Creating a master plan for use of spaces that ensures social and study space is in place at Waterloo

Planning Waterloo Space
The Student Space Master Plan will outline how Waterloo’s campus will continue to be developed to ensure that exceptional social and study space is available for Waterloo students, faculty and staff. Planning for new academic buildings and new space in student service delivery areas will be integrated into the master plan to ensure that inclusive, people-centric spaces continue to be distributed across campus.
Waterloo’s success rests fundamentally on developing and implementing policies to recruit, hire, support and retain the best possible staff.

**Proportion of Waterloo’s employees by type, as of June 2014**
- Full-time staff and faculty comprise 53% of Waterloo’s employees
- 34% Staff
- 19% Faculty
- 13% Graduate Students
- 34% Casual and Temporary

**Proportion of hires by type, as of June 2014**
- 45% Internal Hires
- 55% External Hires

**Career progression of staff by type, as of June 2014**
- 42% Transfers
- 40% Temporary to Full-time
- 18% Promotions

**Overall, one and two year faculty and staff turnover, 2013**
- Overall turnover 3.7%
  - < 1 year service 18%
  - < 2 years service 22%

**Percent of staff attending annual staff conference, 2014**
- 52% Attended
- 48% Did not attend

**Top five therapeutic uses for prescription drugs accessed by employees through benefits plan, 2014 to date**
- Rheumatoid Arthritis 37%
- Blood Pressure 19%
- Depression 19%
- Skin Disorder 11%
- Diabetes 13%
ACTION: Attracting and retaining the highest quality candidates

The quest to hire and retain outstanding staff is vital to Waterloo’s success.

- Improving the human resources data management system and using data to understand Waterloo’s workforce. Information & Systems Technology and Human Resources will design and build a technology solution which will serve as a single-source of employee employment data. This will lead to a better understanding of Waterloo’s employees.

- Recruiting the best candidates. In 2014, Human Resources launched a strong recruitment strategy and will be moving to an online application process.

- Creating a robust employee onboarding program. The onboarding process – the process to orient and engage new employees – is critical for long-term retention of employees. Waterloo is building a comprehensive onboarding process for employees creating a consistent approach to orienting, training and socializing employees in the early stages of employment.

- Achieving high workplace standards. Waterloo is the first university in Canada to seek certification as a Platinum Partner with Excellence Canada’s Excellence, Innovation and Wellness Program. In 2014, Waterloo’s Library will achieve the first Bronze certification from Excellence Canada. In each of the next three years, three to four new departments and Faculties will begin the certification process. Progress on these efforts will be reported on a department and Faculty basis throughout the year. In part, the Excellence Canada criteria provides an umbrella for continuous improvement, including how to examine the customer experience and engage employees for satisfaction and success.

Creating a healthy workplace. The 2014-2018 Healthy Workplace Plan will provide a framework to support the establishment and expansion of wellness programs and services. In 2014 Waterloo was selected by the Mental Health Commission of Canada to be an early adopter of the Psychological Health and Safety in the Workplace Standards. The awareness and profile of this initiative across campus is growing with opportunities for all staff to attend the Psychological Health and Safety in the Workplace workshop.

ACTION: Supporting employees throughout their career at Waterloo

- Creating a comprehensive leadership and management development framework. Ultimately this program will establish career paths for employees and support talented employees interested in pursuing leadership opportunities. Through a series of professional development events, the program will support employees in their ongoing growth and development. This will result in engaged employees whose skills and abilities can be utilized fully and their career development realized. A Leaders’ Forum developed through this process will continue to be a venue for leader development and networking.

- Providing leadership in process improvement. In 2015 Waterloo will host the International Lean Higher Education Hub Conference, a network of global practitioners working towards continual improvement in the higher education sector. Through education, networking and learning opportunities, the Lean HE Hub is a network of universities committed to effectiveness and efficiency of processes within higher education.

Learn more: uwaterloo.ca/strategic-plan-action
sound value system

PROGRESS AND IMPACT | FALL 2014 BASELINE DASHBOARD

Integrity, equity, diversity and a balanced life for students, faculty and staff are core values at Waterloo, and integral to fulfilling our mission as a leading institution of higher learning.

Waterloo new, tenured and tenure stream faculty hires by gender

Source: Statistics Canada Academic Staff System Survey, 2011-2013

<table>
<thead>
<tr>
<th>Year</th>
<th>Male</th>
<th>Female</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>35%</td>
<td>65%</td>
<td>100%</td>
</tr>
<tr>
<td>2012</td>
<td>35%</td>
<td>65%</td>
<td>100%</td>
</tr>
<tr>
<td>2013</td>
<td>50%</td>
<td>50%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Waterloo tenure and tenure stream faculty by rank and gender

Source: Statistics Canada Academic Staff System Survey, 2013

<table>
<thead>
<tr>
<th>Rank</th>
<th>Male</th>
<th>Female</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assistant</td>
<td>37%</td>
<td>63%</td>
<td>100%</td>
</tr>
<tr>
<td>Associate</td>
<td>30%</td>
<td>70%</td>
<td>100%</td>
</tr>
<tr>
<td>Full</td>
<td>18%</td>
<td>82%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Action: Supporting and promoting equity, diversity and integrity within the Waterloo community

Articulating and Validating Core Values
The University of Waterloo values integrity, equity, diversity and the harmonization of work and life responsibilities. By building a sound value system, Waterloo will foster an institution where students, faculty and staff feel valued and supported. Work on communicating and further developing and articulating Waterloo’s core values began with the strategic plan consultation process in 2014 and will continue into 2015.

Integrating Core Values into Policy
In 2013, the University of Waterloo’s Secretariat began a five year plan to review and revise policies. Policy 33 on Ethical Behaviour will be revised starting in late 2014.

Diversify the Faculty Complement
Mahejabeen Ebrahim, Waterloo’s new director of equity, has begun to work with the university community to lead, articulate and promote equity, diversity and inclusion through policies, programs and practice. A key effort has been to engage Faculty deans in the development of processes to hire diverse faculty.

Equity, Diversity and Inclusion Workshops for First Year Students
Waterloo has developed workshops for first year students to be offered in 2014-15. It is expected that almost two thousand first year students will attend these workshops. These workshops are aimed at deepening an understanding of human diversity, identifying strategies to promote respectful and equitable environments and inspiring and enabling students to act in a professional manner in diverse environments.

The need for a professional approach in both learning and work environments, anchored in core values that promote fully and fairly engaging diverse people, is not only ethically important, but vital to meet the unprecedented challenges of the current times. These sessions recognize that Waterloo students will experience a globalized world where opportunities to learn and work with diverse people are increasing.
Action: Supporting and promoting equity, diversity and integrity within the Waterloo community (continued)

**Online Academic Integrity Course for Graduate Students**
In the fall of 2013, an online module on Academic Integrity for graduate students was created to reinforce student’s understanding of the principles of academic integrity. This module augments existing educational initiatives relating to academic integrity.

**Unique Integrity Course for Staff**
Waterloo believes that personal integrity is the foundation for academic integrity. The Office of Academic Integrity and Organizational and Human Development (OHD) developed a groundbreaking workshop on integrity for staff in 2013. The “Integrity Matters” session was designed to promote integrity as a core value and to build staff awareness about “work, study, play, with integrity” at Waterloo. Over 90 staff members took the session in its first year. The session is now one of the regular staff development workshops available at Waterloo.

Action: Enhancing work-life policies and practices for all members of the university community

**Harmonizing Work and Life at Waterloo**
Waterloo opened a new day care centre, “Bright Starts,” the largest in Waterloo Region, to support university students, faculty and staff manage childcare needs. The campus facility is part of Waterloo’s commitment to the needs of families with young children. It also underscores Waterloo’s recognition of harmonizing work and life as an important priority for the well-being of faculty and staff at the University of Waterloo.
strategic plan 2013-2018
FACULTY UPDATES
2013 HIGHLIGHTS 2014
The University of Waterloo’s six Faculties are vital to achieving Waterloo’s Strategic Plan. This overview outlines strategic initiatives within each Faculty implemented throughout 2013-14 in primarily two areas – Transformational Research and Academic Programming. The Faculties’ contributions in other theme areas are no less important, and some of those initiatives are featured as well.

For more information, visit: uwaterloo.ca/strategic-plan-action
Strategic Initiatives: Research

» AHS is leading a Waterloo Aging Initiative with three purposes: to identify current capacity and activities in cross-lifespan aging research at Waterloo and to raise the profile and foster new initiatives and collaborations in this area. It is expected that 2014-15 seed research programs will enhance capacity to attract significant external funding in subsequent years. This will build on, and complement, a series of existing partnerships including those through the Schlegel-UW Research Institute for Aging and through the RBC Retirement Research Centre at the University of Waterloo.

» Canadian Institutes of Health Research (CIHR) has recently funded AHS research programs in aging at Waterloo, totaling almost $1.5M including:

- A landmark study aimed at improving the food intake, health and quality of life of older adults in long-term care homes under the leadership of kinesiology Professor Heather Keller, Schlegel Research Chair in Nutrition and Aging.
- An investigation of the impact of early-life factors such as education, academic performance, linguistic ability and genetics on cognitive resilience under Professor Suzanne Tyas, of the School of Public Health and Health Systems.
- A joint project with the School of Pharmacy to investigate frailty, medication use and related health outcomes for older adults receiving home care and long-term care services across Ontario under Professor Colleen Maxwell.
- A new AHS building and the renovation and repurposing of Tech Town will continue to accommodate and expand transformative research in applied health sciences at Waterloo. The new and renovated facilities will be a hub for individual determinants of health, performance and wellbeing assessment by a team kinesiology researchers. It will also support the development of an entrepreneurial model that blends a multi-disciplinary, multi-systems approach for both collaborative research purposes, and community interaction.

» Kinesiology Professor Richard Hughson and his team used the zero-gravity atmosphere on the Space Station - which speeds up changes that people normally experience as they age - to conduct experiments that will increase understanding about how aging affects the vascular system, and what can be done about it.

» The Canadian Index of Wellbeing, directed by Recreation and Leisure Studies Professor Bryan Smale, published its first provincial index report, How are Ontarians Really Doing?, the report suggests that improvements in Ontario’s quality of life have been sluggish compared to growth in the economy.

» The Chronic Disease Prevention Initiative led by the Propel Centre for Population Health Impact held three seed grant competitions, launching over 20 new multi-disciplinary research teams at Waterloo.

» Two of 14 prestigious national Public Health Chairs, sponsored by CIHR in conjunction with the Public Health Agency of Canada, have been awarded to Professors David Hammond and Scott Leatherdale, both of the School of Public Health and Health Systems. These appointments will help to fund their transformative research programs related to population health interventions that promote health and health equity.
Strategic Initiatives: Academic Programming

- AHS’ honours Bachelor of Health Promotion, launched in September 2013 was expanded in 2014 to include more undergraduate first year students.

- The Master of Health Informatics in Public Health and Health Systems is a professionally-oriented, course-based graduate program, offered on both a full- and part-time basis. Launched in September 2013, it is available as an online program.

- The new Master of Health Evaluation will begin accepting new admissions in fall 2015. This is Canada’s first professional online course-based graduate degree in health evaluation.

- The new AHS building and renovated Tech Town space will add multiple types of learning environments to the Faculty’s facilities to enhance experiential learning opportunities, create better learning spaces, increase graduate student space and build a sense of community through quality social spaces.

- Experiential tutorials are being developed for targeted core courses offered during students’ first term of study in AHS. These tutorials will build students’ ability to deal with the great health related questions of our time, bridge theory to practice and make early connections between classroom discussions and career.

- A tutorial plan is underway to develop new approaches for building communication skills; the plan will be based on high impact education practices including teamwork, problem-solving and communication in small groups to address complex problems in health and wellbeing.

- The AHS Teaching Fellow created a Teaching Champion team with representation from all AHS departments and has developed the AHS Teaching Award in 2013-2014 to recognize and reward teaching excellence.

- The AHS Teaching Fellow has also developed a strong community of practice with enhanced engagement and support of all AHS members who are involved in teaching and learning activities. This includes mandatory fulsome TA training for graduate students and (working with Centre for Teaching Excellence) mandatory faculty instruction regarding teaching, as well as optional one-on-one confidential mentoring of faculty and graduate students regarding teaching approaches and practices.

- Multiple connections between graduate and undergraduate academic curricula with community and outreach groups promote the application of learning into practice and provide added differentiating value to many AHS programs.
Strategic Initiatives: Research

Interdisciplinary research spanning engineering, philosophy, psychology and neuroscience is at the core of Professor Chris Eliasmith’s research. The Canada Research Chair in Theoretical Neuroscience’s contributions to interdisciplinary research were recognized when he was named an inaugural member of the Royal Society of Canada’s College of New Scholars. The new College specifically recognizes scholars who take advantage of interdisciplinary approaches to research for the advancement of understanding and the benefit of society.

The interdisciplinary Games Institute formed new partnerships with Maple Leaf Sports and Entertainment to crowd-source a hockey history archive, and with Holland Bloorview Kids Rehabilitation Hospital to explore medical uses of games.

Professor Jennifer Roberts-Smith received a 2014 Ontario Early Researcher Award to create online learning environments that engage audiences with live performance. She and her team will work closely with the Stratford Festival to build an interactive interface of new educational games and digital learning tools to complement Stratford theatrical performances.

Professor John Turri, a previous recipient of Ontario’s Early Researcher Award (2012) has founded the Philosophical Sciences Lab. Turri’s lab is one of only a few in North America that is forging close links between psychology and philosophy.

A find by two Waterloo anthropology professors, Robert Park and Douglas Stenton, led researchers to locate one of two famed ships in the lost Franklin Expedition. Park and Stenton were surveying Arctic islands for human habitation and migration patterns when they found two artifacts linked to the British Royal Navy on an island. The finds confirmed Inuit oral testimony and gave the research team the clues they needed to renew underwater sonar searching in the area. The ship was located and a key mystery in Canadian history was solved. Park’s research on Arctic colonization was published in Science in August 2014.

History professor Susan Roy, a recipient of an Early Researcher Award in 2014, is forging close partnerships with museum curators and First Nations communities in British Columbia and Ontario to develop resources that deliver culturally appropriate research on the history of Canada’s indigenous peoples.

Strategic Initiatives: Academic Programs

Building on the success of the minor in Human Resources Management, the Faculty of Arts is launching a series of new career / skills oriented minors. New minors have been introduced in International Studies, International Finance, Digital Arts Communication, Public Policy and Administration and Technical Writing. More options for minors are under development.

Departments and programs are working to make Arts’ academic programming more transparent and flexible for students. This effort will facilitate greater interdisciplinarity by enabling students to combine majors and minors more easily.
The School of Accounting and Finance and the Department of Economics are working together to develop a new professional graduate degree, a Master of Finance and Economics.

Arts has enhanced graduate students’ professional training with workshops and web-based resources to develop their transferrable skills. These efforts are designed to help both master’s and doctorate graduates build successful careers either within or outside academe.

Strategic Initiatives: Experiential and Entrepreneurial

Arts student Desmond Choi is a prolific entrepreneur. Over the past ten years, he has founded several businesses, including a Mappedin application which he pitched to CBC TV’s Dragon’s Den, and his newest venture, SparkGig. Currently in fourth-year Sociology, Choi is a also member of Velocity, Waterloo’s interdisciplinary incubator that helps students grow their enterprise. Choi and his SparkGig team were recently invited to the BMO Financial Group Apex Business Plan Competition where they received the Entrepreneurial Powerhouse Award for Waterloo.

Waterloo’s MDEI student Carlos Saavedra and his University of Guelph partner Jason Ernst are launching a new startup, having won the first Canada Open Data Experience (CODE) in 2014. The 48-hour hackathon challenged participants to create an application that would better the lives of Canadians. Saavedra and Ernst built “newRoots,” an app that matches new immigrants with Canadian cities that offer the greatest opportunity for success. They hope to release the fully-featured online application within months.

Strategic Initiatives: Teaching Excellence

Arts’ two Teaching Fellows (TF) have launched a series of both online and in-person initiatives. These include: a ‘Pedagogy Picnic’ series of lunchtime talks in which professors share proven teaching innovations which were video-recorded and posted online; regular TF blog posts with insights and useful links; an online newsletter; a video series with tips for optimizing LEARN. Arts TFs are also giving special focus to strategies for accessibility, diversity and inclusivity in Arts teaching and learning.

Waterloo’s Stratford campus is developing internship opportunities for Master of Digital Experience Innovation (MDEI) and Global Business Digital Arts (GBDA) students with a diverse range of industry partners, including Canadian Tire, Globe and Mail, Christie Digital, Google, D2L, and Open Text.

Alumna and lecturer in Spanish, Camelia Nunez has developed and launched a language learning product called Milao, a chat-based app aligned with university curriculum for beginner language courses. Conceived during her time in the MBET program, Nunez says, “Great ideas do come from arts and humanities—and when you combine them with science, great things can happen.”
Strategic Initiatives: Research

Waterloo Engineering was ranked in the Top 50 in the world in the engineering and technology field for the third year in the row by the Academic Ranking of World Universities (Shanghai Ranking).

Over the past year, the Faculty identified broad research themes and specific technology areas to inform Engineering’s strategic research thrusts in new and emerging research fields and legacy research. Four main themes were identified: (i) uniting the digital universe with focus on 5G wireless technologies; (ii) machine intelligence including applications to manufacturing; (iii) powering economies with focus on energy storage; and (iv) advancing the human condition through connected infrastructure, bio-engineering, healthcare and water technologies.

Engineering has intensified nomination efforts for national awards, resulting in new prestigious awards in 2013-14, including:

- **Professors Amir Khajepour** and **Raafat Mansour** were awarded the Professional Engineers of Ontario Research and Development Award in 2013 and 2014.
- **President Feridun Hamdullahpur** was inducted as a Fellow of the Canadian Academy of Engineering.
- Two faculty members were awarded **Tier II Canada Research Chairs**, in healthcare operations and in medical imaging systems.
- Seven assistant professors received the Ministry of Research and Innovation **Early Researcher Awards** in 2014.
- A major $1M project funded by the Ontario-China Research and Innovation Foundation will enable development of durable fuel cell powertrains for clean bus applications.
- **Unique in Canada** for its scale, technical specifications and capabilities, the $15M Centre for Intelligent Antenna and Radio Systems (CIARS) opened in 2013. It will enable new developments in very high radio-frequency devices and electromagnetics applications.

Strategic Initiatives: Industry Partnerships

- **Prof. Adrian Gerlich** was named the **NSERC/TransCanada Industrial Research Chair** in Welding for Energy Infrastructure, cementing a 15-year relationship with TransCanada Corporation.
- Four engineering professors were awarded highly competitive **NSERC Strategic Grants** with industry support in 2013-14.
- Three professors secured $5M for their **Automotive Partnership Canada** research projects with Tier I auto manufacturers.
Engineering professors were awarded more than 55 NSERC Engage grants for their new research collaborations with industry in 2013-14.

Strategic Initiatives: Academic Programming and Teaching Excellence

Engineering launched a new undergraduate program in Biomedical Engineering, receiving over 700 applications for 45 spaces, and expanded the undergraduate Mechatronics Engineering program.

One in four applicants selected Waterloo as their first choice among 15 engineering schools in the province. Applications from Ontario increased by 17.5% in 2014, well above the provincial average. Due to such high demand, more than 1,300 students with 90+ high school averages could not be offered admission in fall 2014.

Engineering’s Associate Dean for Teaching established the Engineering Teaching Development Committee, a community of practice with teaching champions engaged in each department.

The Dean of Engineering established the Waterloo Engineering Award for Teaching Assistantship in Architecture, to recognize excellence among TAs.

In 2013-14, $1.5M was invested to improve learning facilities through the Vision 2015 Undergraduate Lab Enhancement Initiative, bringing the total to date to $4.5M.

In 2013-14, students in 13 courses benefited from the improved learning environment established by extensive renovation of the first-year WEEF Lab.

Strategic Initiatives: Entrepreneurial Opportunities

The Conrad Business, Entrepreneurship & Technology Centre in Waterloo Engineering launched a new undergraduate option in entrepreneurship in fall 2014.

In the past year, over $820K has been raised to support Engineering Capstone Entrepreneurship Awards and pitch competitions and to launch the Engineer of the Future Trust which provides micro-seed funding for student entrepreneurs.

Numerous startups have emerged from Engineering Capstone Design Projects, including Dominic Toselli’s 2014 project, Petro-Predict, which he co-founded with a fellow student. Toselli was named one of Maclean’s Future Leaders under 25 and his startup won two top awards at the 2014 Ontario Centres of Excellence Discovery Conference.

Prof. Costas Tzoganakis and his startup Tyromer won the TiE50 award, a prestigious Talent Ideas and Enterprise (TIE) Silicon Valley honour awarded to only 50 companies worldwide.

Strategic Initiatives: Internationalization

Waterloo Engineering established an Associate Dean International role in 2014.

Record levels of Waterloo Engineering undergraduate students participated in international experiences. In 2013 there was a 42% increase in students participating in international exchanges and a 32% increase among those participating in international co-op work terms over the prior year.

New international research and academic partnerships are being developed with leading global universities including UC Berkeley, Nanyang Technological University in Singapore, Hong Kong University of Science and Technology, the University of Bordeaux and Karlsruhe Institute of Technology.

Strategic Initiatives: Experiential Education

In addition to its mandatory co-operative education program, Engineering has been developing a new approach to engineering education that emphasizes integrated learning beginning from first year. Some programs are already piloting common projects and clinic-based courses, and activities for all programs are being developed by a multi-department Engineering Ideas Clinic™ Task Force.

Engineering Ideas Clinic™ space planned for the new Engineering 7 building is being designed to support experiential learning. This space will support multi-disciplinary Clinic activities/modules to inspire creativity, inquiry, ideas generation, team work and interest in entrepreneurship among 1,500 first year engineering students in 13 programs.
Strategic Initiatives: Transformational Research

Professor Kathryn Plaisance organized the second Communities of Integration Conference in 2014 bringing together scholars in philosophy, sociology, and science and technology studies who study collaboration and interdisciplinarity.

BioFuelNet is a new partnership with the University of Guelph that will examine greenhouse gas emissions and soil carbon and nitrogen transformations in poplar and willow biomass plantations.

New research awards:

- Professor Jennifer Clapp was awarded a Trudeau Fellowship to support her research on global environmental sustainability and food security.
- Professor Peter Johnson received a Canada Foundation for Innovation - Leader’s Opportunity Fund for a new testbed for merging geographic information and mobile technology.
- The Social Sciences and Humanities Research Council (SSHRC) awarded Professor Amelia Clarke an SSHRC Insight Grant of over $300K over five years to research how cross-sector social partnership achieve sustainability goals.
- Professor Dawn Parker is leading an international research collaboration titled Mining Relationships Among variables in large datasets from ComplEx systems (MIRACLE). Funded by the SSHRC, this transformative research is working to provide more automated means of discovering and understanding complex relationships. Locally, this work is a key component of foundational research on the impacts of Waterloo Region’s new LRT system.
- AHS, Environment and Science have announced the cross-appointment of former Canadian astronaut Chris Hadfield as a professor in aviation and related programs across all three Faculties.
- Professor Dan Scott’s study on climate change revealed only six of the previous Winter Olympics host cities will be cold enough to reliably host the Games by the end of this century if global warming projections prove accurate. The report was featured in more than 220 media outlets in 23 countries around the world including, Globe and Mail, New York Times and The Guardian.

Strategic Initiatives: Research Partnerships

The Centre for Ecosystem Resilience and Adaptation and the Department of Environment and Resource Studies has built a strategic alliance with the Ontario Aggregate Resources Corporation to examine systematic approaches to stewardship and ecological restoration of quarries and related operations.

A partnership between the Canadian Space Agency, MacDonald, Dettwiler and Associates Ltd. and Professor LeDrew’s team at Waterloo’s Canadian Cryospheric Information Network, has made a new map of the Antarctic available to the public, free of charge. This partnership between the Canadian Space Agency, MacDonald, Dettwiler and Associates Ltd. and Professor LeDrew’s team at Waterloo’s Canadian Cryospheric Information Network, has made a new map of the Antarctic available to the public, free of charge. The map helps scientists worldwide to gain new insight into ice cover and the effects of climate change.

Professor Derek Robinson is continuing research to evaluate land use modeling focused on estimating market potential and location allocation. This is funded by an NSERC Discovery Grant, a Mitacs Accelerate Grant and industry partnership with Lowes Canada.

The University of Waterloo is only the second Canadian university to be accepted as a member of the Rocky Mountain U.S. Co-operative Ecosystem Studies Unit (CESU). This is a network which brings together over 300 scientists, resource managers, students, and other conservation professionals to improve and disseminate knowledge for managing natural and cultural resources in the Rocky Mountain Region.
Strategic Initiative: Academic Programming

- **A new specialization** in Knowledge Integration (KI), Collaborative Design Specialization (CDS) **designed collaboratively** by students, staff and faculty, allows students to develop a concentration in design thinking, skills and practices.

- The **new professional Master's program**, Master of Climate Change, launched in the fall 2013 term, is the **first of its kind** in North America.

- The School of Environment, Enterprise and Development **created the Master of Sustainability Management** with the first cohort entering the program in 2013-14.

- The School of Planning has launched a **new online master's degree in planning**. This degree taps into demands from professionals working in urban planning, design and related fields.

- The Faculty of the Environment established **Green TEA**, an **online resource** designed to provide professors, instructors and tutors with information that can be used to **enhance their teaching**.

Strategic Initiatives: Integrating Experiential

- Luna Khirfan traveled to the island of Tobago with a select group of planning and geography students to research ways communities there could adapt to **rapidly changing climate**.

- Educational partnerships with the Ontario Ministry of Natural Resources and Forestry, the Ontario Ministry of the Environment, Ontario Parks, the Niagara Escarpment Commission, Parks Canada, Conservation Ontario and over 20 consulting companies **provide exceptional experiential education opportunities** for students through co-op work terms.

- The Environment and Business (ENBUS) class expanded in 2013-2014 to host more than 25 fourth year capstone projects. These projects, provide **vital experiential education opportunities**, with companies and organizations like MTS Allstream, McDonalds, HP and WWF.

- As part of their fourth year capstone projects, Professor Jennifer Lynes’ students partnered with folk rock musician and sustainable communities activist Jack Johnson to understand how Johnson’s 2013 theater tour **integrated community-based social marketing ideas** with the musician’s **social action network**. All at Once. Lyne and her students will provide advice on how to further develop Johnson’s social action network.

Strategic Initiatives: Internationalization

- The University of Waterloo, led by the Faculty of Environment and with support from the President’s Office, has **applied to the United Nations Framework Convention on Climate Change (UNFCCC) to become an accredited Conference of Parties**. This initiative arose from Waterloo’s participation as part of a delegation at the 19th Conference of Parties (COP19) to the UNFCCC in Warsaw in 2013.

- Both the International Development program and the Master of Development Practice programs supported students in **international field placements** in Africa, Asia (including the Middle East and South Asia), South America and Europe.

- As part of an **annual teaching expedition** 17 students studying tourism policy and planning travelled to Mount Everest in Nepal to study tourism’s effect on the popular climbing destination.
Strategic Initiatives: Research

» Waterloo placed among the top 25 universities in the world in two subject areas according to the 2014 QS World University Rankings by Subject. Waterloo Mathematics placed 24th in both Computer Science & Information Systems and Mathematics.

» Faculty members in Mathematics have recently received substantial infrastructure funding from Canada Foundation for Innovation (CFI) and Ontario Research Fund (ORF) for the two focus areas identified in the Faculty Strategic Research Plan: cybersecurity (over $1.3M) and big data (over $1.1M). These initiatives include “Privacy Enhancing Technologies at a Global Scale”, a cybersecurity project led by Ian Goldberg (Computer Science), and “Research Infrastructure for Computational Analytics on Big Data in the Cloud”, a big data project led by Ashraf Aboulnaga (Computer Science) and Hans De Sterck (Applied Mathematics). With this infrastructure in place, Mathematics has now started major research initiatives in these areas.

» Professor Jim Geelen (Combinatorics & Optimization) and co-authors from New Zealand and the Netherlands solved a famous conjecture which had been unsolved for 40 years. They announced the proof of Rota’s Conjecture in the August 2014 issue of the Notices of the American Mathematical Society.

» Ground-breaking work by Professor David McKinnon (Pure Mathematics) and a co-author from Queen’s, has been accepted for publication in Inventiones Mathematicae, the world’s leading mathematics research journal. Their paper has led to many speaking invitations at prestigious conferences around the world.

» Professors Yulia Gel, Mary Thompson and Peter Carrington (Statistics & Actuarial Science) started a new five-year project funded by a $240K Insight Grant from the Social Sciences and Humanities Research Council in “Modeling Evolution of Digital Social Networks.”

» Mathematics faculty members recently received recognition for their contributions to research:

» Mary Thompson (Statistics & Actuarial Science) won the 2014 Distinguished Service Award from the Statistical Society of Canada.

» Ken Davidson (Pure Mathematics) won the 2014 David Borwein Distinguished Career Award from the Canadian Mathematical Society.

» Ondrej Lhotak (Computer Science) won a 2013 Outstanding Young Computer Science Researcher Award from the Canadian Association for Computer Science.

Strategic Initiatives: Academic Programming

» In partnership with Arts, St. Jerome’s University and Renison University College, the Faculty of Mathematics has revamped and bolstered how communication skills are taught to math and computer science students. Beginning in the fall 2014, students in the Faculty will complete two communications courses.

» To optimize learning opportunities, class sizes in communications courses will remain small, around 25 students.
Waterloo Mathematics developed new initiatives to address presentation skills and incoming students participated in self-placement exercises to assist in the selection of appropriate communication courses.

The Centre for Education Mathematics and Computing (CEMC) has initiated an outreach project to develop free online secondary school courses in pre-calculus and calculus. The courseware, designed to support both teachers and students, will be launched in fall 2014. The Faculty has partnered with Maplesoft to design an online course deployment platform that can house courseware and can also be used to develop university-level courses. This platform supports:

- exposition, exploration, evaluation, exercises and enrichment in a single space;
- allows for multiple language support;
- meets Ontario’s new accessibility legislation; and
- can be deployed worldwide, with the ability to support millions of users.

Mathematics is working to improve student academic experiences, and address challenges in assessing student performance in large, multi-section courses. A single offering of MATH 137, involves 1600 students, 10 instructors, 20 graduate TAs and 40 undergraduate markers, providing several challenges: time to mark and return assignments, collection and return of paper and academic integrity violations.

The Faculty is exploring opportunities to harness technological innovation to better serve students. Mathematics is currently testing new marking software called “Crowdmark.” It will improve students’ academic experience by getting them feedback more quickly and efficiently.

Building on the success of the online Master’s of Mathematics for Teachers (MMT) professional masters program, the Faculty began a multi-year experiment in online teaching by moving core courses online. Algebra is complete, statistics is under development and calculus is in the planning stages. These digital assets have also been multi-purposed for advance preparation in flipped classrooms or as review material in more typical lectures. In the latter case, over 80% of in-class students in large classes (> 1,000) students regularly review material online.

The Faculty offers one course through the Ontario Universities Online (OUO) project. While there is interest in making more Faculty courses available to Ontario university students through OUO, the very short timelines imposed by OUO makes meeting production standards challenging.

CEMC is developing courseware to support computer science in high school, and with early university students. The targeted release date for these projects is fall, 2015.

The Faculty has partnered with Maplesoft to develop the world’s first complete science, technology, engineering and mathematics (STEM) disciplines authoring environment for online courses. This will reduce the cost and time involved to develop dynamic and rich courseware that supports the exposition, exploration, evaluation, exercises and enrichment model. This effort is being coordinated through the Centre for Extended Learning with support from the Centre for Teaching Excellence.
Strategic Initiatives: Research Partnerships

In January 2014, the Faculty of Science hosted a delegation from Soochow University for a workshop to explore potential new research partnerships. Excellent progress was made leading to the establishment of two new collaborations between principal investigators from the two institutions. Interactions are ongoing and should result in more partnerships soon.

In May 2014, the University of Waterloo hosted a delegation of researchers from the University of Bordeaux for a workshop entitled, “Path to a privileged partnership” which was organized by chemistry Professor Eric Prouzet.

Physics and astronomy faculty member Professor Michel Fich is Canada’s lead scientist on an international consortium of institutions to build the Cerro Chajnantor Atacama Telescope (CCAT), the world’s largest, single dish submillimetre telescope located in Chile. CCAT is scheduled to be operational by 2020.

Professor Nancy Waite of the School of Pharmacy is co-lead, along with Dr. Lisa Dolovich (Faculty of Medicine, McMaster University) of the newly established Ontario Pharmacy & Research Collaboration (OPEN). OPEN seeks to assess the quality, outcomes and value of recent and emerging medication management services.

Fall 2014 will see international researchers from the Korea Advanced Institute of Science and Technology and the Korea Institute of Science and Technology visit Waterloo. Significant research partnerships between the institutions and Waterloo are anticipated.

Strategic Initiatives: Research Areas

One-third of the members of Waterloo’s Institute for Quantum Computing (IQC) are Faculty of Science researchers. Learn more about IQC at uwaterloo.ca/institute-for-quantum-computing.

Science’s key role in the Water Institute is driving research of strategic importance to the University of Waterloo’s prioritization of this field. Find out more about Waterloo’s Water Institute at water.uwaterloo.ca.

30 of 77 faculty members that make up the Waterloo Institute for Nanotechnology (WIN) – one of Canada’s premier institutions for nanotech research – are based in the departments and schools that make up the Faculty of Science. Learn more about WIN at uwaterloo.ca/institute-nanotechnology.

The Faculty of Science’s Linda Nazar, a chemistry professor cross-appointed with WIN, a Canada Research Chair in Solid State Materials and an eminent researcher in new materials for energy storage and conversion, earned the recognition of being a Thomson Reuters “Highly Cited Researcher” in 2014, one of only 90 researchers in Canada to receive the distinction.

Strategic Initiatives: Research Partnerships

In 2013-14, Science had more than 100 active industrial research partnerships, roughly one-third of which were new partnerships formalized over the prior year.
Working with partners at Ontario Centres of Excellence, Waterloo’s Office of Research, the Centre for Bioengineering and Biotechnology and the Faculty of Engineering, the Faculty of Science organized and participated in the on-campus Devices and Sensors networking event to support the creation of new partnerships and to showcase research of relevance to industry.

New promotional material to support new partnerships, “Science Industrial Partnerships,” is in development.

Strategic Initiatives: Research Commercialization

Velocity Science was established in 2014 as a partnership between the successful University of Waterloo entrepreneurship program and the Faculty of Science as a place for student-led, commercially-orientated research to be validated and to foster the establishment of student-led startups in the life and physical sciences. Velocity Science includes lab space with 24-hour wet lab access, high-tech equipment, technical resources and basic consumables that students can use to develop, test and implement their startup ideas. The community also provides mentoring from successful entrepreneurs, and opportunities to collaborate with peers and share knowledge and expertise.

Strategic Initiatives: New Academic Programs

A new Bio-based Chemistry program was introduced in 2014. The program, a joint international B.Sc. program with the Universities of Bordeaux and Toulouse in France, offers students the opportunity to acquire the scientific and professional skills required for chemists in bio-based chemistry. This emerging discipline spans the design of chemicals and materials from renewable resources via an integrated approach that combines the expertise of the chemist with the principles of green chemistry and resource management.

Strategic Initiatives: Strengthening Excellence in Teaching

“eValuate” is a completely online course evaluation tool that has been developed by the Faculty of Science. The tool offers students the opportunity to complete course and professor evaluations using a laptop, mobile device or home computer. The tool was implemented in Science as a pilot in 2013 and is now being used for all 2014 courses. Other Faculties are in the process of adopting the program.

Building on existing expertise in online course delivery, the Faculty of Science submitted a proposal for six online courses in biology, chemistry and physics. This will permit students to obtain credits for all, or part, of a first year science lecture program before physically arriving on campus. Science successfully received funding for five of these six submissions, making Waterloo Science clearly a preferred option for students interested in online B.Sc. programs.
Innovation research: Waterloo will be a leader in U15 universities' research activity and partnership. Waterloo will have increased research excellence, innovation, and diversity in their environment and partnerships with top universities in selected world regions. The top 25 entrepreneurship and innovation rankings will see Waterloo retaining its position as the most innovative university. Waterloo's innovation system will continue to fuel the formation of new ventures, startups, and innovative research productivity and impact. The impact of Waterloo's innovation system will be more widely recognized and traceable to Waterloo's legacy and inter/transdisciplinary areas. The impact of Waterloo's research and researchers nationally and internationally will be optimized. Waterloo's employees will support and enable research and researchers nationally and internationally in their management and leadership skills. Opportunities to promote Waterloo's research successes will be more evident to a variety of audiences, including industry and society. Waterloo will become a destination of choice for attracting and retaining the highest quality candidates and faculty. There will be a reduction in reported absences from work, and there will be a first-year onboarding program for new employees.}

Transformational research: Waterloo will maintain and improve research performance in international rankings, especially in the sciences. More prestigious awards for faculty and students will be recognized internationally for excellence in education, research, and scholarship. The impact of Waterloo's research productivity and impact will be more widely known among important stakeholders. Waterloo will have increased research activity and partnerships in new, emerging, interdisciplinary and legacy areas. The first two-year turnover rate will be reduced, and more graduates from Waterloo will retain a Maclean’s Canada certification process. A greater proportion of Waterloo's staff will participate in educational opportunities regarding work-life balance. More students will pursue research in new, emerging, legacy and inter/transdisciplinary areas. The number of policies or academic / administrative support programs, activities and services for students and faculty will be increased.

Uniquely entrepreneurial university: Waterloo's employees will experience career progression and mobility. A Healthy Workplace Plan will guide wellness programs, activities and services. A greater proportion of Waterloo's employees will attend the annual staff conference. Waterloo supports work-life balance and bereavement leaves is provided. Support for faculty members taking parental, sabbatical and bereavement leaves is provided. There will be a reduction in reported absences from work, and there will be a first-year onboarding program for new employees. More students will participate in entrepreneurship courses and programs. More programs and Faculties will have entrepreneurship programs and opportunities. More students will participate in a broader range of entrepreneurship, innovation and wellness programs and initiatives. More sponsored and diversified research funding is generated for startups and the entrepreneurial innovation ecosystem. More publications in new, emerging, legacy and inter/transdisciplinary research areas will be of the highest standard.}

Sound value system: Waterloo will develop and articulate core values. More students will participate in entrepreneurship courses and programs. More programs and Faculties will have entrepreneurship programs and opportunities. More students will participate in a broader range of entrepreneurship, innovation and wellness programs and initiatives. More sponsored and diversified research funding is generated for startups and the entrepreneurial innovation ecosystem. More publications in new, emerging, legacy and inter/transdisciplinary research areas will be of the highest standard.}

Robust implementation-employee relationship: A new recruitment strategy will be rolled out to all departments and faculties. A first-year onboarding program will be created. The first two-year” turnover rate will be reduced. Exit interviews will be conducted with all departing employees. Waterloo will achieve recognition as an organization that exemplifies best practices. All employment practices at Waterloo will be based on standards of excellence, innovation, and wellness. There will be a reduction in reported absences from work as the result of illness and or disability. A Healthy Workplace Plan will guide wellness programs, activities and services. A greater proportion of Waterloo's employees will attend the annual staff conference. Waterloo's employees will experience career progression and mobility.

Strategic Implementation Plan 2013-2018

- **Actions**: Supporting and promoting equity, diversity and integrity within the Waterloo community
- **Progress Indicators**: Equity office and Director of Equity established, Equitable recruitment strategy for faculty established, Number of graduate students that have taken an online module on Academic Integrity, Number of staff that have taken the “Integrity Matters” workshop, Number of students and employees that attend equity-related development sessions, Number of employees who attend inclusion workshops, Progress on development and articulation of core values, Number of departments that have been certified by the Excellence Canada Program, Policy 33 on Ethical Behaviour has been revised, Number of policies or academic / academic support unit level strategic plans where core values are articulated, Number of faculty, staff and students who use Bright starts childcare facility, Support for faculty members taking parental, sabbatical and bereavement leaves is provided.

- **Anticipated Results**: Waterloo will attract and keep high quality candidates, Waterloo will be a leader in U15 universities' research activity and partnership. Waterloo will have increased research excellence, innovation, and diversity in their environment and partnerships with top universities in selected world regions. The top 25 entrepreneurship and innovation rankings will see Waterloo retaining its position as the most innovative university. Waterloo's innovation system will continue to fuel the formation of new ventures, startups, and innovative research productivity and impact. The impact of Waterloo's innovation system will be more widely recognized and traceable to Waterloo's legacy and inter/transdisciplinary areas. The impact of Waterloo's research and researchers nationally and internationally will be optimized. Waterloo's employees will support and enable research and researchers nationally and internationally in their management and leadership skills. Opportunities to promote Waterloo's research successes will be more evident to a variety of audiences, including industry and society. Waterloo will become a destination of choice for attracting and retaining the highest quality candidates and faculty. There will be a reduction in reported absences from work, and there will be a first-year onboarding program for new employees. More students will participate in entrepreneurship courses and programs. More programs and Faculties will have entrepreneurship programs and opportunities. More students will participate in a broader range of entrepreneurship, innovation and wellness programs and initiatives. More sponsored and diversified research funding is generated for startups and the entrepreneurial innovation ecosystem. More publications in new, emerging, legacy and inter/transdisciplinary research areas will be of the highest standard.

- **Strategic Implementation Plan 2013-2018**:

  - **Actions**: Creating and promoting an institutional infrastructure that reflects Waterloo's value system, Enhancing work-life policies and practices for all members of the university community, Equity office and Director of Equity established, Equitable recruitment strategy for faculty established, Number of graduate students that have taken an online module on Academic Integrity, Number of staff that have taken the “Integrity Matters” workshop, Number of students and employees that attend equity-related development sessions, Number of employees who attend inclusion workshops, Progress on development and articulation of core values, Number of departments that have been certified by the Excellence Canada Program, Policy 33 on Ethical Behaviour has been revised, Number of policies or academic / academic support unit level strategic plans where core values are articulated, Number of faculty, staff and students who use Bright starts childcare facility, Support for faculty members taking parental, sabbatical and bereavement leaves is provided.

  - **Progress Indicators**: Waterloo will attract and keep high quality candidates, Waterloo will be a leader in U15 universities' research activity and partnership. Waterloo will have increased research excellence, innovation, and diversity in their environment and partnerships with top universities in selected world regions. The top 25 entrepreneurship and innovation rankings will see Waterloo retaining its position as the most innovative university. Waterloo's innovation system will continue to fuel the formation of new ventures, startups, and innovative research productivity and impact. The impact of Waterloo's innovation system will be more widely recognized and traceable to Waterloo's legacy and inter/transdisciplinary areas. The impact of Waterloo's research and researchers nationally and internationally will be optimized. Waterloo's employees will support and enable research and researchers nationally and internationally in their management and leadership skills. Opportunities to promote Waterloo's research successes will be more evident to a variety of audiences, including industry and society. Waterloo will become a destination of choice for attracting and retaining the highest quality candidates and faculty. There will be a reduction in reported absences from work, and there will be a first-year onboarding program for new employees. More students will participate in entrepreneurship courses and programs. More programs and Faculties will have entrepreneurship programs and opportunities. More students will participate in a broader range of entrepreneurship, innovation and wellness programs and initiatives. More sponsored and diversified research funding is generated for startups and the entrepreneurial innovation ecosystem. More publications in new, emerging, legacy and inter/transdisciplinary research areas will be of the highest standard.
Strategic Implementation Plan 2013-2018

**Experiential education for all**

- **Actions**
  - Creating and implementing an organizational and research framework to support experiential education at Waterloo
  - Expanding the range of experiential education opportunities and employers
  - Building a research program for experiential education

- **Progress Indicators**
  - Waterloo students will participate in a broader range of work-integrated educational experiences
  - More Waterloo faculty will engage in research, publish and attend conferences on experiential education

- **Anticipated Results**
  - Waterloo will have a strengthened experiential education infrastructure with a wider range of experiential education opportunities
  - Waterloo researchers will be world leaders in experiential education, research and practice
  - Waterloo first year students will have more academically relevant placements
  - Closer integration between research opportunities and co-op work terms
  - Expanded experiential learning opportunities

**Global prominence & internationalization**

- **Actions**
  - Diversifying funding for international opportunities including scholarships
  - Facilitating student access to international experiential learning opportunities
  - Integrating policies and resources and optimizing administrative functions to better support internationalization
  - Partnering with international organizations to expand reach
  - Expanding research networks

- **Progress Indicators**
  - More funding available for a more diverse range of international mobility opportunities, including collaborative and degree programs
  - Greater awareness and understanding of learning outcomes for international experiential opportunities
  - Strong organizational infrastructure supporting internationalization
  - International students report greater satisfaction with administration
  - More Waterloo students and staff report receiving support for increased international mobility

- **Anticipated Results**
  - Waterloo students will participate in a range of international study / work opportunities
  - Waterloo graduates will be “world ready” for a culturally diverse international environment
  - Organizational policies, processes and infrastructure will facilitate international connectivity among students and faculty
  - More Waterloo students and staff report receiving support for increased international mobility
  - More international partnerships with a wider diversity of countries and world-leading programs and institutions
  - More funding available for international research grants and collaborative partnerships
  - More international students receive scholarships and bursaries
  - More international students from a more diverse range of countries enrol in, and graduate, from Waterloo

**Outstanding academic programming**

- **Actions**
  - More Waterloo programs are rated among the best in the world
  - Waterloo programs are rated higher in international rankings
  - A greater proportion of high quality students choose to attend Waterloo
  - More Waterloo doctoral students and post doctoral fellows receive prestigious awards

- **Progress Indicators**
  - Creating an academic environment to prepare graduates to address challenges and opportunities of the 21st century
  - A greater proportion of Waterloo graduates are successful at gaining employment
  - Increased proportion of Waterloo graduates will have enhanced communication skills
  - Increased graduate student participation in professional and transferable skills training

- **Anticipated Results**
  - Waterloo students will have a comprehensive Space Master Plan
  - Waterloo will offer more online courses and fully online programs and courses and be highly satisfied with that experience
  - Waterloo will be a nationally recognized leader in academic online programming
  - Waterloo will have a Space Master Plan
  - Waterloo will have high quality teaching and learning spaces
  - Waterloo’s excellent teaching and learning spaces will be further developed and recognized

**Vibrant student experience**

- **Actions**
  - Implementing excellent services to support students, including electronic services
  - Implementing a Student Relations Management Approach for university services
  - Identifying, developing and delivering services and programs to optimize student potential
  - More Waterloo students will participate in peer support programs
  - Waterloo students will spend more hours in co-curricular activities

- **Progress Indicators**
  - More students feel supported through university services
  - More Waterloo students feel “a part of the university”
  - More Waterloo students will participate in peer support programs
  - Waterloo students will spend more hours in co-curricular activities
  - More Waterloo programs which contribute to leadership skill development will be implemented

- **Anticipated Results**
  - Waterloo students will more easily access information they need
  - Waterloo students will experience better customer service
  - Waterloo students will have a better university experience
  - Waterloo students will have a comprehensive Service Master Plan
  - Waterloo will have a comprehensive database of community-based campus space
  - Waterloo will have a comprehensive Service Master Plan
  - Waterloo will identify collaborative / community-based campus space

**Creating and implementing an organizational and research framework to support experiential education at Waterloo**

- **Actions**
  - Expanding the range of experiential education opportunities and employers
  - Building a research program for experiential education

- **Progress Indicators**
  - Waterloo students will participate in a broader range of work-integrated educational experiences
  - More Waterloo faculty will engage in research, publish and attend conferences on experiential education

- **Anticipated Results**
  - Waterloo will have a strengthened experiential education infrastructure with a wider range of experiential education opportunities
  - Waterloo researchers will be world leaders in experiential education, research and practice
  - Waterloo first year students will have more academically relevant placements
  - Closer integration between research opportunities and co-op work terms
  - Expanded experiential learning opportunities

**Creating a recognition and incentive program to encourage instructors to incorporate experiential opportunities into non-co-op programs**

- **Actions**
  - Integrating work readiness into academic programming
  - Increasing the number and enhancing the quality of relationships with a diverse range of co-op employers

- **Progress Indicators**
  - Overall, Waterloo students will report higher rates of employment after graduation
  - Number of active co-op employers which are relevant to programming
  - Proportion of co-op employers who are professionally credentialed

- **Anticipated Results**
  - Waterloo graduates will be work ready upon graduation
  - Waterloo will have relationships with more co-op employers which are relevant to co-op needs programming

**Expanding globally**

- **Actions**
  - Diversifying funding for international opportunities including scholarships
  - Facilitating student access to international experiential learning opportunities
  - Integrating policies and resources and optimizing administrative functions to better support internationalization
  - Partnering with international organizations to expand reach
  - Expanding research networks

- **Progress Indicators**
  - More funding available for a more diverse range of international mobility opportunities, including collaborative and degree programs
  - Greater awareness and understanding of learning outcomes for international experiential opportunities
  - Strong organizational infrastructure supporting internationalization
  - International students report greater satisfaction with administration
  - More Waterloo students and staff report receiving support for increased international mobility

- **Anticipated Results**
  - Waterloo students will participate in a range of international study / work opportunities
  - Waterloo graduates will be “world ready” for a culturally diverse international environment
  - Organizational policies, processes and infrastructure will facilitate international connectivity among students and faculty
  - More Waterloo students and staff report receiving support for increased international mobility
  - More international partnerships with a wider diversity of countries and world-leading programs and institutions
  - More funding available for international research grants and collaborative partnerships
  - More international students receive scholarships and bursaries
  - More international students from a more diverse range of countries enrol in, and graduate, from Waterloo
  - A greater proportion of faculty and staff will be internationally mobile