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<th>Time</th>
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<tr>
<td>3:30</td>
<td>OPEN SESSION</td>
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<td>3:35</td>
<td>Consent Agenda</td>
<td>Declaration</td>
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<td>Motion: To approve or receive for information by consent items 2-7</td>
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<td>3:35</td>
<td>2. Minutes of the 20 October 2014 Meeting</td>
<td>Decision</td>
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<td>3:40</td>
<td>3. Reports from Councils</td>
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<td>a. Graduate &amp; Research</td>
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<td>b. Undergraduate</td>
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<td>3:40</td>
<td>4. Report of the President</td>
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<td>a. Recognition and Commendation</td>
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<td>5. Reports from the Faculties</td>
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<td>3:50</td>
<td>7. Undergraduate Council Appointment</td>
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<td>3:50</td>
<td>Regular Agenda</td>
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<td>8. Teaching Presentation: Professor Kathryn Plaisance,</td>
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<td>Department of Knowledge Integration</td>
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<td>9. Business Arising from the Minutes</td>
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<td>a. Policy 44 – Research Centres and Institutes</td>
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<td>4:00</td>
<td>10. Report from Undergraduate Council</td>
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<td>4:10</td>
<td>11. Report of the President</td>
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<td>4:20</td>
<td>12. Q&amp;A Period with the President</td>
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<td>4:45</td>
<td>14. Report of the Vice-President, University Research</td>
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<td>4:55</td>
<td>15. Other Business</td>
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<td>5:00</td>
<td>CONFIDENTIAL SESSION</td>
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<td>16. Minutes of the 20 October 2014 Meeting</td>
<td>Decision</td>
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<td>5:05</td>
<td>17. Business Arising from the Minutes</td>
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<td>5:10</td>
<td>18. Report from the Vice-President, University Research</td>
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<td>Nominating Committee [to be distributed at the meeting]</td>
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<td>5:20</td>
<td>19. Other Business</td>
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JLA:tad 
7 November 2014

Logan Atkinson, University Secretary & General Counsel 
Secretary of Senate
University of Waterloo
SENATE
Minutes of the Monday 20 October 2014 Meeting


Guests: Nello Angerilli, Mario Coniglio, Mahejabeen Ebrahim, Donna Ellis, Peggy Jarvie, Carlos Mendes, Cathy Newell Kelly, Daniela Seskar-Hencic, Allan Starr, Bud Walker, 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

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

1. MINUTES OF THE 15 SEPTEMBER 2014 MEETING
Senate approved the minutes of the meeting as distributed.

2. REPORT FROM UNDERGRADUATE COUNCIL
   • Faculty Information and Regulation, Faculty of Science
     - Sixth and Seventh Courses. Senate approved the new Faculty rules for sixth and seventh courses as presented in the report.

     - Repeating Courses. Senate approved the amendments to the Faculty rules for repeating courses as presented in the report.

Senate received the remaining items in the report for information.

3. REPORT OF THE PRESIDENT
   Recognition and Commendation. Senate received the report for information.
4. REPORT OF THE VICE-PRESIDENT, ACADEMIC & PROVOST

Call for “University Professor” Nominations. Senate received the call for nominations for information.

5. REPORTS FROM THE FACULTIES

Senate received the reports for information.

6. COMMITTEE APPOINTMENTS

Senate approved 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.

Orchard and Porreca. Carried.

Regular Agenda

7. BUSINESS ARISING FROM THE MINUTES

Revision and Consolidation of Senate Bylaws. Senate heard the following 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 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.

Wray and Orchard.

Atkinson explained the process by which the proposed consolidation and revision of Senate bylaws was completed, and answered questions on certain of the processes embedded in the new bylaws.

The question was called, and the motion carried.

Senate heard a motion that Senate direct each of its committees and councils to review term limits for membership and the composition of those committees and councils, and that the Executive Committee review *ex officio* membership on Senate, and in each case report back to Senate at an early opportunity, not later than March 2015.

Richter and Wray. Carried.

**Publication Outlets.** Senate heard the following motion: 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 distributed by email to constituencies particularly affected by
such notices, and may further be provided in other places and ways as may be determined by the Secretariat & Office of General Counsel.

Skidmore and Bergman.

It was confirmed by Atkinson that, according to Secretariat & Office of General Counsel practice, the word “electronically” in the first paragraph of this motion means that senators are advised of general and special meetings by email.

The question was called, and the motion carried.

8. WATERLOO CENTRE FOR AUTOMOTIVE RESEARCH (WatCAR) PRESENTATION
Dixon introduced Duane Cronin, executive director and professor of mechanical & mechatronics engineering. Cronin reported on the centre’s areas of research to enhance automotive innovation and competitiveness.

Slides used in his presentation may be seen at https://uwaterloo.ca/secretariat-general-counsel/sites/ca.secretariat-general-counsel/files/uploads/files/watcar_20141020.pdf

9. REPORTS FROM COUNCILS
Graduate & Research
- **New Policy – Research Centres and Institutes.** Senate heard a motion to endorse and recommend that the president approve the draft policy on research centres and institutes as presented in the report.

Dixon and Freeman.

Dixon indicated that the proposed policy is the outcome of three years of research and consultation on the governance, scope, and limitations on powers of centres and institutes, intended to bring some order into the world of centers and institutes. Two reports to Graduate & Research Council, a drafting committee had done thorough work, and consultation had been extensive.

Senators raised a number of questions about the proposed policy, and received explanations from Dixon, including: the distinction between “research centres/institutes” and “university research centres/institutes” is largely an attempt to accommodate the names and approvals for several existing units; it is likely that “centers” will be more faculty specific, and institutes will be cross-faculty; the decision as to the category into which a particular unit will be placed will be made by Graduate & Research Council; it is assumed that delegates in section 10.3.1 of the proposed policy will be the associate dean, research, although this is not required; categories of membership in centres and institutes in Article 11 will evolve as units become more accustomed to the new policy and practice; the word “research” need not be included in the name of the centre or institute; research professors can be appointed directly to a centre or institute without the necessity of appointment to an academic department if the research professor is not intending to engage in graduate supervision.

Dixon agreed to consider the advisability and utility of the paragraph in section 10.3.8 allowing the governing body the power to “recommend appointment and removal of staff to the Responsible Officer.”

The question was called, and the motion carried.
Dixon advised that this ought to be a proud moment for Senate as it passes a model policy on research institutes and centers. The process will now begin to bring existing research centres and institutes into alignment with the new policy.

Undergraduate. Senate heard a consolidated motion to address the following matters:

- **Digital Arts Communication Minor, Drama and Speech Communication, Faculty of Arts.**
  To approve the Digital Arts Communication Minor as presented in the report.

- **English Language and Literature, Faculty of Arts**
  - **Technical Writing Minor.** To approve the Technical Writing Minor as presented in the report.
  - **Technical Writing Specialization.** To approve the Technical Writing Specialization as presented in the report.
  - **Global Literatures Specialization.** To approve the Global Literatures Specialization as presented in the report.

- **History, Faculty of Arts**
  - **Applied History Specialization.** To approve the Applied History Specialization as presented in the report.
  - **Global Interactions Specialization.** To approve the Global Interactions Specialization as presented in the report.
  - **Revolution, War and Upheaval Specialization.** To approve the Revolution, War and Upheaval Specialization as presented in the report.

Peers and Busch.

With respect to that portion of the motion related to “applied history,” Peers explained that this is akin to “public history” and is a common description for this sort of specialization in the United States.

The question was called, and the motion carried.

Senate heard a consolidated motion to address the following matters:

- **Drama and Speech Communication, Faculty of Arts**
  - **Three-year General Drama.** To approve amendments to the Three-year General Drama plan as presented in the report.
  - **Four-year General Drama.** To approve amendments to the Four-year General Drama plan as presented in the report.
  - **Honours Drama.** To approve amendments to the Honours Drama plan as presented in the report.
  - **Honours Drama Arts and Business (Co-op and Regular).** To approve amendments to the Honours Drama Arts and Business (Co-op and Regular) plan as presented in the report.
  - **Joint Honours Drama.** To approve amendments to the Joint Honours Drama plan as presented in the report.
- **Drama Minor.** To approve amendments to the Drama Minor as presented in the report.

Peers and Richter. Carried.

Senate heard a consolidated motion to address the following matters:

- **Political Science, Faculty of Arts**
  - **Honours Political Science Arts and Business (Co-op).** To approve amendments to the Honours Political Science Arts and Business (Co-op) plan as presented in the report.

  Peers and Busch. Carried.

- **Honours Political Science Arts and Business (Regular).** To approve amendments to the Honours Political Science Arts and Business (Regular) plan as presented in the report.

Peers and O’Connor. Carried.

Senate heard a consolidated motion to address the following matters:

- **Digital Arts Communication Specialization, Honours Arts and Business Co-op, Drama and Speech Communication, Faculty of Arts.** To approve the inactivation of the Digital Arts Communication Specialization.

- **English Literature in a Global Context Specialization, Honours English, English Language and Literature, Faculty of Arts.** To approve the inactivation of the English Literature in a Global Context Specialization.

- **Sociology Co-op, Criminology Specialization, Honours Sociology/Legal Studies, Sociology and Legal Studies, Faculty of Arts.** To approve the inactivation of the Criminology Specialization departmental co-op.

Peers and O’Connor. Carried.

- **Doctor of Optometry, Optometry and Vision Science, Faculty of Science.** Senate heard a motion to approve amendments to the requirement for admission to the Doctor of Optometry program as presented in the report.

  McMahon and Duncker.

  Among other things, this motion relates to the requirement that criminal records checks be done for entering students in the Doctor of Optometry program. Senators inquired about the requirement in pharmacy, and were advised that the matter is under consideration.

  The motion carried.

10. **REPORT OF THE PRESIDENT**

Hamdullahpur presented a wide ranging report, including: the United Way campaign is in full swing; the University hosted a very successful “Hack the North” event; at a recent meeting between the U15 and the Russell Group in the UK, agreement was reached on collaboration in many important areas; we have recently had visits from Premier Wynne and Minister Moridi (whose responsibilities combine the Ministry of Training, Colleges & Universities and the Ministry of Research & Innovation); as chair of U15 appeared before the House of Commons Finance Committee on questions of innovation and research; summary of results in recently released international rankings, in 5+ stars in the QS Stars ranking (one of a very few institutions in the world to achieve this ranking), with others results mixed. The THE ranking result has attracted most attention, but the result is difficult to read fully as we have improved in each of the ranking areas except reputation, and
slipped in the ranking overall. The explanation may reside in citation statistics, where some Canadian universities have many co-authors on a single paper that might be cited 1000 times. It is anticipated that this will be a one-time fluctuation, and that we should not change our approach nor compromise our integrity to improve our rankings.

With respect to the Canada First Research Excellence Fund, rules seem to change as different ministries gain input. It is not yet known exactly how this fund will be administered and what the eligibility criteria might look like.

Research Infosource has ranked the University of Waterloo as the #1 comprehensive research university in Canada for the 7th year in a row, with a jump to 12th overall.

Last week we hosted the president and others from Nanjing University, one of the top five universities in China, with more graduate students than undergraduates, but also ranking #1 in undergraduate education in China. We continue to talk with Nanjing about the possibility of large scale inter-institutional collaborations.

Strategic Plan 2013-2018. Hamdullahpur asked Orchard to present the first year-end report on strategic plan implementation. He thanked Daniela Seskar-Hencic and her colleagues in Institutional Analysis & Planning, the theme leads, and the entire University community for sharing the responsibility. He noted how impressed he is with the plan, as one for the entire University community. Orchard provided a brief review of the first year’s activities, including establishing action plans and assigning resources for each theme. Planning continually maps back to the original plan to ensure that we continue on the proper path. Further, Orchard provided an update on the accountability framework, important metrics to be used in measuring progress, and referred senators to the accountability website for greater detail.

Slides used in his presentation may be seen at https://uwaterloo.ca/secretariat-general-counsel/sites/ca.secretariat-general-counsel/files/uploads/files/strategic_plan_20141020.pdf

11. Q&A PERIOD WITH THE PRESIDENT
Hamdullahpur was asked to cite more particulars about the drop in the THE ranking, especially because it appears we had dropped in both the research score and the teaching score. Hamdullahpur deferred to Seskar-Hencic, who advised that our difficulty arises in the reputation score, and that the methodology is completely opaque, although weighted very highly at 30% of the overall score. She reported that the only hard indicator we have dropped in is citations.

Further on the question of rankings, Hamdullahpur was asked how serious we are about teaching quality if we are slipping in the results on that item. Senate was advised that we do have support for faculty in place to assist in improving teaching, and it is a matter of professional integrity that we maintain high standards throughout our careers. Senate was provided with a summary of ways to measure effectiveness in teaching, primarily through national surveys of both undergraduates and graduate students. The Center for Teaching Excellence is also involved in assisting new faculty. Throughout the academic year, members of faculty are encouraged to take part in sessions led by the CTE. An analysis of course evaluations is currently underway to assist us in monitoring changes in teaching.

A question was asked about the University’s approach to improving student to faculty ratios. Hamdullahpur advised that the only solution is to hire more faculty. We must continue to find ways to
admit more students, but this need is having an adverse impact on the student to faculty ratio. Senate was advised that the student to faculty ratio is not a metric used in the “vibrant student experience” theme in the strategic plan, but it is a key indicator reported on an annual basis.

Senators asked about the planned use of space being vacated as administrative units move into the EC group of buildings, and were advised that plans are still being developed in that respect.

Hamdullahpur and Atkinson advised that Police Services has developed a protocol to assist in ensuring that planned speeches and presentations take place without interruption, further seeing to the University’s commitment to freedom of expression and academic freedom.

Orchard was asked about the metrics chosen to measure progress in each of the strategic planning themes, and how those metrics were determined. Senate was advised that the metrics chosen for the hard copy summary of progress were chosen by the theme leads after consultation, but that the accountability website has a full suite of metrics for review. Senators were encouraged to submit their ideas to Seskar-Hencic for follow up.

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

Report from the Fall Break Task Force. The provost provided this report for information, summarizing the process by which it was generated. He advised that students will hold a referendum on the question later this fall.

Senators asked a number of questions about this report, and were provided with additional information, including: one option not mentioned in the report was the idea that “no grade components are to be assigned during the two days following any mid-fall break”; the Task Force was asked to look at a break in the style of other universities, and was not rushed in its deliberations; in the development of recommendations, the focus was on the best interests of the students and not on any pre-determined time period or duration; an earlier start to the term was thought by some to be unworkable, but it was confirmed that, in the opinion of the task force, this would likely be the best alternative, given that it is driven in part by scheduling considerations during exam time and other factors; some concern about the lack of evidence that a fall break is needed, based on stress, and a fall term break could potentially have a negative impact on the quality of the course; concerns about measuring the effectiveness of a break, and whether the impact of the winter term break is instructive; some argument exists that the reading week ought to be later in the term than October to be more meaningful, and there was comment that some teaching and evaluation methods can spread the anxiety more evenly through the term; the purpose of a fall reading break must be thoroughly understood before making any commitment; any recommendations on final implementation will come back to Senate for full debate and approval.

With respect to next steps, students will have a referendum on the question in early November. Once the results are known, the task force will meet again and develop questions to support further consultation. Then, a recommendation will be developed and brought to Senate.

A review of the winter term reading week will go ahead no matter what the outcome of the referendum.

Amendments to Policy 68 – Vice-President, University Research. Senate heard a motion to approve amendments to Policy 68 – Vice-President, University Research as presented in the report.

Orchard and Wray. Carried. It was noted that Dixon abstained.
**Degrees, Diplomas and Certificates.** Senate heard a motion to approve the lists of candidates for degrees, diplomas and certificates as recommended by the faculty councils and the associate provost, graduate studies, and to authorize the chair, the registrar and the associate provost, graduate studies to add to or change the lists of candidates for degrees, diplomas and certificates as approved at the meeting on 20 October 2014.

Darling and Guild. Carried.

13. **REPORT OF THE VICE-PRESIDENT, UNIVERSITY RESEARCH**

Dixon reported that, of 13 available chairs in Applied Public Health available from the Canadian Institutes of Health Research nationally, two will be awarded to University of Waterloo researchers. Congratulations were extended to Professors Dave Hammond and Scott Leatherdale, both of the School of Public Health and Health Systems. Chairs are valued at $185 thousand per year for five years.

14. **OTHER BUSINESS**

There was no other business.

Senate convened in Confidential Session.

Logan Atkinson

University Secretary & General Counsel

21 October 2014
Senate Graduate & Research Council met on 6 October 2014 and agreed to forward the following items to Senate for information. These items are recommended for inclusion in the consent agenda.

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

**FOR INFORMATION**

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**RENEWAL OF CENTRES AND INSTITUTES**

**Southwestern Ontario Research Data Centre (SWORDC)**

Under the current direction of Lori Curtis, SWORDC improves data access by giving researchers across Canada access to detailed micro-data from a range of survey, census and administrative data. This access serves to expand the pool of skilled quantitative researchers and trains the next generation of Canadian researchers, improving communication between social scientists and the potential users of the knowledge they create.

Founded in 2001 and approved by Senate in 2009, the centre’s operations are supported by annual contributions from the university and partner universities, and from a share of block grants received from Tri-Council agencies. Operating as a Statistics Canada branch office allows researchers to access to master files of many Statistics Canada surveys, both longitudinal and cross-sectional. Since its approval in 2009, the centre has facilitated dozens of publications and has completed nearly 200 research contracts since 2001. SWORDC has also taken a lead role in conferences, sessions and workshops, and has furthered graduate education at the masters and doctoral level.

In recognition of the solid track record and growing reputation of the centre, on behalf of Senate council approved its renewal for a five-year term ending October 2019.

**PROGRAM REVIEWS**

**Architecture**

On behalf of Senate, council reviewed the MSc program in architecture offered by the School of Architecture in accordance with the university’s Institutional Quality Assurance Framework. Based on the material presented in the Final Assessment Report (Attachment 1), and the report of the reading subcommittee formed by council to review in depth the self-study and program materials, as well as to request additional information and provide recommendations, the program was found to be of good quality.

**Augmented Review – Programs in School of Public Health and Health Systems**

Please see Senate Undergraduate Council report (consent).

**CURRICULAR MODIFICATIONS**

On behalf of Senate, council reviewed and approved course changes and course inactivations for the Faculty of Applied Health Sciences (therapeutic recreation), the Faculty of Arts (psychology) and the Faculty Mathematics (statistics and actuarial science).

**SCHOLARSHIPS AND AWARDS**

On behalf of Senate, council approved the creation of the Toyota Canada Automotive Safety Graduate Scholarship.

**NEW AND CONTINUING MEMBERSHIPS**

On behalf of Senate, council approved the membership recommendations for the Human Research Ethics Committee.

Jim Frank  
Associate Provost, Graduate Studies

George Dixon  
Vice President, University Research
Final Assessment Report
Architecture (MArch)
August 2014

Review Process

The review process was led by the outgoing Director of the School of Architecture, Rick Haldenby. Following the undergraduate review, and the accreditation review by the Canadian Architectural Certification Board in 2011, faculty, staff and students were engaged in 2012 in the Vision 2015 Planning process in the Faculty of Engineering. The work undertaken by various committees informed the self study which was completed in fall 2012. An alumni survey was also undertaken which provided input.

The review team consisted of Dr. William Braham, Director of Master of Environmental Building Design Architecture, University of Pennsylvania, and Professor Christine Macy, Dean of the Faculty of Architecture and Planning, Dalhousie University. The internal reviewer was Rhona Hanning. The site visit occurred on June 26-27 2013. The reviewers’ report was received July 28 2013 (slightly outside the usual two-week timeframe, due to holiday and travel schedules).

The School Director’s term ended in December 2013. Although the assessment of the MArch Program contained in Section 2.1 (b) sums up its considerable strength, given that the Review Committee has made recommendations that there be modifications to the structure, it was decided that the new Director Dr. Ila Berman would undertake a planning retreat to evaluate new directions and opportunities. Hence the School response was received much later than the normal 10 weeks following receipt of the review.

The previous graduate review (2006-07) ranked the Program as “Good Quality with Report”, where the School was asked to report in 2009 on the adequacy of library resources and adequacy of student support. The report also flagged two additional issues to be examined at the next cyclical review, namely number of core faculty, and time to completion. The requested report was submitted in 2010. The Appraisal Committee of OCGS asked for further clarification on the two issues, and a response was submitted in October 11 on the two topics (library resources and student funding). This response was deemed satisfactory.

The 2011 accreditation review praised particular strengths of the program:

- the community of scholars, balancing practice and research skills;
- the unique degree format dependent on the strength of the pre-professional program gave the MArch a remarkable freedom from professional requirements and allowed it to focus on an independent, research-oriented thesis project;
- the Cambridge campus, which is a wonderful space and a source of pride to the community; and
- the integration of a broad set of courses, the Rome studio and Co-op placements into the curriculum as part of the Cultural History focus, leading to “an extended and comprehensive discussion of natural and built environments in the light of different values and notions of physical, political and spiritual order.” (CACB review section 5, reproduced in 2012 March Self Study document p84).
The accreditation review also highlighted some concerns:

- whether the operating budget for a separate campus had been satisfactorily established;
- that there was at the time of the review only one full Professor in the School, although with the new Director and promotions to rank since the accreditation, this has increased to five;
- curriculum development; in particular the difference between the density and demands of the BAS curriculum, and the very self-directed nature of the MArch, and the times to completion; and
- the fully independent thesis limits the further alignment of the graduate program with institutional goals of increased research excellence and the attraction of international students.

**Characteristics of the Program**

Professional education in Architecture in Canada began to change in the 1990’s, when the traditional five-year program (a 3-year pre-professional program and a 2-year BArch) gave way to a four-year undergraduate degree followed by a Master’s degree. Three schools offered a 3-4 year Master’s (for undergraduates without the BArch) but Waterloo opted to move to a four-year BAS (with additional co-op terms) and to add an MArch which accepted its first students in 2000. The MArch is the essential requirement for accreditation, and the requirement for entry to professional practice.

The Waterloo Master’s differs somewhat from others, in that many of the elements required for professional accreditation are in fact completed at the undergraduate level, which (along with the substantial co-op experience) renders the graduates from the BAS exceptionally well-prepared. As a result, the curriculum of the Master’s can be more open, and all students complete a self-directed thesis. It means that Waterloo BArch graduates have an incentive to remain in Waterloo for the MArch (otherwise they will have to repeat several elements in a Master’s elsewhere), but also that it is more difficult for BAS and BArch graduates from elsewhere to take their Master’s at Waterloo, as they typically require an additional year or more of preparatory elements.

Most students in accredited professional MArch programs complete a thesis, and in institutions across North America this may take one of various forms, from directed research studios to fully independent research theses. The MArch structure is unique in relation to other disciplines in that thesis programs most often combine traditional research with design. At Waterloo research methodology is taught in the first semester of the MArch program (M1), although its form, which is typical for MArch theses at most architectural schools is distinct from research courses in other fields in that it is studio-based and combines the study of research and design methodologies with program development and precedent analysis. The content and structure of this coursework is already being augmented in response to the recommendations of the review.

Post-professional Masters programs in advanced areas of specialization in addition to offering a doctorate is something that Waterloo Architecture is also considering.

**Significant strengths of program**

The School has an excellent reputation. 2012 AZURE Magazine ranked it among the top five in North America. Graduates have little difficulty in getting jobs in the field within 6 months of graduation, and all the alumni responding to the survey were employed. Almost two-thirds were employed in architecture firms, with the others publishing and exhibiting design research, or teaching or engaged in further study. Master’s students have many achievements; one
won the first NSERC Innovation award to go to an Architecture student; every year half-a-dozen win OGS and SSHRC fellowships; graduate students have over the last 12 years won two CMHC Housing Research Awards and three Canadian Green Building Council scholarships; four thesis projects have resulted in buildings.

The School of Architecture at Waterloo is the only one in Canada with a permanent international campus, and graduates work in more than 20 countries worldwide. Many students undertake international co-op terms.

**Academic Programs Offered: Master’s program goals**

The School currently offers the BAS in addition to the MArch.

The Master’s program aims:

- to prepare students for professional practice;
- through a self-directed research thesis to provide graduates with superior research skills and areas of individual specialization; and
- to advance knowledge in architecture through research and engagement in practice.

**Specific Learning Outcomes**

There are 31 Student Performance Criteria (SPC) required for professional accreditation, organized according to four categories, intended to foster an integrated approach to learning that cuts across subject categories:

A: Critical Thinking and Communication [9 SPC]

B: Design and Technical Skills [12 SPC]

C: Comprehensive Design [4 SPC]

D: Leadership and Practice [6 SPC]

These criteria, in turn, encompass two levels of accomplishment:

- Understanding: means the assimilation and comprehension of information without necessarily being able to see its full implication,
- Ability: means the skill in using specific information to accomplish a task, in correctly selecting the appropriate information, and in applying it to the solution of a specific problem.

All but two of the criteria in section B, and all four of the criteria in section C, are achieved in the undergraduate program; the other criteria are specific learning outcomes of the graduate program (see Self Study for details). The six criteria from section D are developed throughout both the BAS and the MArch. The nine criteria in section A are closely related to some of the Graduate Degree level Expectations.

**Faculty**

At the end of the reporting period for the Self Study (June 2012) there were 19 faculty members able to supervise in the Master’s (and one individual set to begin July 1 2012). Of these, 18 were tenure stream, and 2 were Lecturers. There was in addition one cross-appointed faculty member, and also adjunct faculty who serve on committees.
Faculty members have won many distinguished awards and prizes:
- Fellow of Royal Architectural Institute of Canada
- Governor General’s Medal in Architecture
- Canada Council Prix de Rome
- North American Gold Holcim Award
- Association of Collegiate Schools of Architecture Design Award (3)
- Canadian Architect Award of Excellence (2)
- North American Wood Design Award
- Member, Royal Canadian Academy of Arts
- National Jewish Book Award
- Representing Canada at the Canadian Pavilion of the Venice International Architectural Biennale

Research funding averages around $300,000/year, about half from TriCouncil agencies, and the balance from largely public sector/non-profits, and a modest amount from the private sector. As noted in the review: ‘one third of the faculty are highly productive researchers or research-practitioners, with between eight and 18 research outcomes per year (eg. grants received, peer reviewed publication in significant journals, juried design awards and exhibitions, etc.). One has exceptional productivity at 40 such outcomes annually. Another third are averaging between four and seven research outcomes annually.’ Over the period since the past review, faculty have each published on average either one book chapter or one refereed journal article each per year; presented one conference paper and one or two invited presentations per year, had one design or creative project each per year, and one exhibition of their work/curated an exhibition/published design work. Of course some faculty focus more on the scholarly publications, while others focus more on the design and creative projects and exhibitions, so this represents an overall average.

Staff

The faculty are supported by 12 full-time staff (not including security services staff, and co-op students on temporary contracts).

Students

The large majority of students come from the Waterloo BAS program. External applicants from an appropriately accredited school can be accepted, but typically need to do one or two qualifying terms, if not more. Master’s student numbers have grown since the program began.

Although the program is described as requiring three terms, in practice the average time to completion over the last decade has averaged seven to eight terms, and hence there are typically closer to 150 students in the program at a given time (peaking at 182 in 2009/10). No students have transferred to other programs during the program’s history, and on average only three students a year withdraw, indicating a very high completion rate.

About half of the students enrolled are funded (related to the fact that somewhat less than half are in the three terms in which the program is officially supposed to be completed). The average funding per student is around $12,000/year, and most students have the opportunity of being a teaching assistant at least once. Students have
also been successful in winning external scholarships as well as internal university scholarships. Given that only half the students are funded at a given time, average funding per student (all students) is closer to $5000. This is however higher than at other Canadian schools for the MArch, since students taking professional degrees are typically not guaranteed funding.

The caliber of the students is evidenced by their excellent success in publications, conference presentations, exhibits, awards and scholarships (detailed in the Self Study).

The alumni survey showed that graduates found employment promptly after graduation, and the large majority remained in the profession at the time of survey. Of about 32 who responded, just less than half reported publications/conference presentations/exhibits.

Space
As befits a School of Architecture, “(t)he new building in Cambridge is a first-rate facility, custom-designed for the requirements of the School of Architecture” (Reviewers' report).

Reviewers' Observations:

The reviewers provided a long and detailed report, and commented very positively on various aspects of the program:

“Overall, the quality of student theses is very good…Quality indicators include a large number of design awards received by students in the past six years, many from the Ontario Association of Architects.”

“…the School has a national reputation for producing exceptionally qualified alumni..”

“By and large, the program produces excellent work.”

“…the co-op based BAS degree, … is arguably the strongest undergraduate program in Canada..”

“The Vision 2015 Strategic Plan of the Faculty of Engineering identifies four general goals specific to graduate education: increase graduate enrolment, improve graduate programs, improve graduate operations, and enhance graduate student experience. The program’s activities since the last external review have been consistent with all these goals.”

They also made a few concluding observations, along with a very few succinct recommendations:

1. Because the accredited degree is the combined BAS-MArch, most students expect to proceed from the undergraduate to the graduate program (provided they maintain the requisite academic standing).
2. The BAS provides an excellent foundation for advanced work in the design studio and in design research, but does not adequately prepare students for independent research.
3. The graduate cohort is large and students have developed their own support systems, including a graduate society and research clusters.
4. Although most students complete the Master of Architecture, progress through the program is slow, requiring on average 2.5 years in addition to the five years required to complete the BAS. This makes the duration of an accredited architecture degree from Waterloo the longest in Canada.

Reviewers’ Summary and Recommendations

1. The faculty reflect on the role of research in a professional school of architecture and to other graduate programs within the field, its relationship to innovative design practice, and to research conducted elsewhere in the university.
2. That because of its unique structure, the program has been limited in its ability to attract more international students, which might be addressed with both an enhancement to the structure of the existing program to support these students and additional graduate degree offerings such as a non-professional or post-professional Masters programs.
3. The faculty consider creating a one-year coursework-based Master of Architecture option, followed by a post-professional research Master degree with thesis.

Response to Recommendations

As a response to the recommendations of the OCGS Reviewers’ Report the new Director of the School set up an Architecture Curriculum Committee and held a strategic planning retreat with the School of Architecture faculty to have an in-depth discussion in response to the external review and its recommendations. This was followed up with an environmental scan of its aspirant peer programs, and an internal assessment and curricular review of both the undergraduate and graduate programs at the School. The intention of this process is:

- to develop strategies and adjust the curriculum to strengthen and refine the MArch program and its structure;
- to enhance the program to better attract international graduate students and those coming from outside institutions;
- to improve retention and completion rates of graduate students; and
- to plan for the development of additional offerings at the graduate level.

To facilitate a holistic approach, the MArch curricular review was developed in concert with a curricular review of the BAS program to respond, not only to issues within the graduate program, but also, given that the MArch is the first professional degree to which the BAS leads, to the transition between programs. A summary of the results of this process and the proposed modifications to the program to respond to these recommendations is below.

Program Modifications Phase I:
Eliminate the “Qualifying” terms for external applicants to the MArch program

Graduates of Waterloo’s BAS have already completed the Comprehensive Building Design requirement for professional certification as part of their undergraduate training. Graduates of most other pre-professional (undergraduate programs) from other institutions in Canada and internationally typically need to complete this requirement as part of their graduate professional training.
The University Senate approved in June 2014 the School of Architecture’s major modification, namely to offer required courses for the Comprehensive Building Design requirement at the graduate level, such that applicants from other universities could enter the graduate program at Waterloo directly, rather than having to undertake qualifying terms. Graduates from the Waterloo BAS would be exempted from these courses, based on prior completion as part of the BAS, which is a longer program than most pre-professional undergraduate programs taught elsewhere.

The above set of modifications will bring the MArch program into alignment with the structure and accreditation requirements of the discipline, while also supporting the internationalization of the program, and the cohesion of the entering graduate class.

**Program Modifications Phase II: MArch Curricular Revisions**

The strategic planning and curricular review process over the past year has lead to a series of proposed modifications to the MArch program (that will be submitted to the university in the fall of 2014) to strengthen the structure of the program, to improve graduate retention and completion rates and to attract a larger pool qualified students from other institutions to graduate study at Waterloo Architecture. These modifications are consistent with three elements of the University’s strategic plan 2013-17, namely: research excellence and impact, educational quality, and student opportunities.

a) **Co-op Opportunities for Graduate Students coming from other institutions**

Given that co-op is a recognized strength of University of Waterloo, as well as in the BAS program, it is proposed to offer a co-op/internship experience at the end of the first year of the MArch, for students entering from other institutions. This is an important enhancement to their professional training. This curriculum modification will be brought for approval in fall 2014.

b) **International Opportunities: Global Cities Electives**

The Rome Program is one of the essential components of the pre-professional curriculum exposing students first-hand to the study of architectural history and contemporary urban environments. Building upon this legacy the School is planning on offering this opportunity to external students after the first year of the MArch program, while expanding its global study initiatives through an augmented series of study abroad electives focused on international architecture and urbanism in Europe, Asia and South America. These new curriculum options will be brought through the approval process starting in 2014-15.

c) **MArch Thesis Structure revisions:**

The School proposes to address the reviewers’ suggestions regarding the role of research, and in particular how this impacts the MArch thesis. It is intended first to provide more opportunities for advanced architectural research at the upper level of the undergraduate program. It is intended to explore enabling undergraduate students to complete the BAS at the end of the winter (rather than the spring) to improve retention and to help them prepare for the thesis, and enable a smoother transition into the graduate program, and on the other hand, to provide a more developed structure in the MArch program in support of advanced design research.
i) Thesis Research and Design
The new curriculum proposal will transform the existing one semester Arch 692 studio into a more highly structured
and coordinated two-semester thesis research and design sequence to better support and direct the development of
MArch thesis work and to more substantially incorporate innovative design research into the program. The two-
semester sequence is a standard thesis framework for most graduate first professional architectural degree programs
and will bring the Waterloo MArch into better alignment with the academic calendar and structure, available support
systems and expectations of its peer and aspirant peer institutions. The first semester would be dedicated to thesis
research and the second semester to thesis design and/or development, followed by a minimum of one additional
independent semester for thesis completion and documentation. Thesis studios will allow for review of students’
work at the end of winter term, with final presentation of theses at the end of spring term.

Students who wish to extend their thesis development period—to allow them to work as graduate research assistants
on special projects with faculty, supplement their education with additional opportunities to obtain teaching
experience through graduate teaching assistantships, or travel in support of their research—will be able to do so, up
to a maximum of three additional consecutive semesters (one year) to complete their degrees.

For external students, the MArch degree would therefore take a minimum of two and maximum of three years to
complete. For students with a BAS degree, the MArch degree program would take a minimum of one year (3
semesters) and a maximum of two years (6 semesters) to complete.

ii) Architectural Analysis and Research Methodologies
In addition to the restructuring of the thesis research and design studio sequence, a new course in architectural
analysis and research methodologies will be offered in the fall semester as a companion course to the thesis
research and design studios. This course in architectural analysis and research methods is intended to better enable
students to position their work within the context of a larger theoretical discourse while giving them the
methodological tools for precedent, program and site analysis, to prepare them for the undertaking of an architectural
or urban thesis.

iii) Elective Coursework in support of Thesis
Students currently take elective coursework as a support for thesis research. The addition of a new core architectural
theory course as well as required elective coursework in the areas of history/theory, building and environmental
technologies, digital media, and urbanism and landscape that will be introduced to the undergraduate curriculum in
the final year of the BAS program will not only encourage students to explore advanced research areas before they
embark on thesis, but will also enable the expansion of offerings through the vertical sharing of 500 level electives in
support of thesis research.

d) Funding Support for Graduate Students
The School has several avenues for improving financial support for graduate students. This will also be facilitated by
ensuring graduates from the BAS who wish to complete in 12 months, can do so: since currently most graduate
students are funded in the first 12 months of the MArch.

e) Promote the Program Internationally through Publication, Exhibition and Outreach
The Graduate Program must become as well known internationally as the undergraduate program is nationally. Future efforts for the program include enhancing the vehicles used to communicate about the School through publication (physical and digital), lectures/symposia, exhibition and other forms of outreach. The international reputation of the architecture faculty is also a key contributor to the promotion of the program as are opportunities for students to study with prominent visiting faculty from other academic institutions.

Program Proposals Phase III:
Non-professional and Post-professional Design programs

As a final phase to the strategic planning efforts, in the coming year the School of Architecture will be further developing its proposal for a new Integrated Design program with both undergraduate and graduate degrees that focuses on the need for design in the contemporary digital industry. The new design program will operate at the nexus of industrial design, communication design and interaction design as well as emerging fields in new digital design technologies. These degree programs will be grounded in coursework in relation to five parallel academic streams in: design, culture, technology, communication and entrepreneurship.

As part of this process, the Architecture School will also be exploring the potential of post-professional degree programs in additional areas of architectural specialization such as urban design and landscape, cultural history/theory, material technologies and other areas of advanced inquiry that would enable graduate students to further their study at the School.

<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>Phase 1: Eliminate requirement for qualifying year for students with Bachelors from elsewhere</td>
<td>Director</td>
<td>Not needed</td>
<td>Effective June 2014</td>
</tr>
<tr>
<td>Phase 2: Curriculum changes to MArch</td>
<td>Director</td>
<td>Director to discuss with Dean and Provost, if/as more resources are needed</td>
<td>Curriculum to be reviewed and approved 2014/15, Effective Sept 2015</td>
</tr>
<tr>
<td>- Co-op possibility for students from non co-op undergraduate programs</td>
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<tr>
<td>- Provide more international opportunities, especially for those who did not attend Rome program</td>
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<tr>
<td>- Revise curriculum to support timely thesis completion</td>
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<tr>
<td>- Improve graduate funding support</td>
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<tr>
<td>- Enhance program promotion and outreach</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Phase 3: New programs in Integrated Design</td>
<td>Director</td>
<td>Dean/Provost</td>
<td>Effective Sept 2016 or thereafter</td>
</tr>
</tbody>
</table>

This report will be discussed at the Senate Graduate and Research Committee on September 8 2014, and the October 2015 meeting of Senate.
Senate Undergraduate Council met on 9 September 2014, 7 October 2014 and 4 November 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 calendar dates, a change to an academic plan 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.


FOR APPROVAL [effective 1 September 2015]

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CHANGES TO ACADEMIC PLAN

- **Faculty of Science**
  - **Department of Biology**
  - **Biomedical Sciences**

  1. **Motion:** To approve changes to the honours biomedical sciences plan as presented.

  (strike-through = deleted text; underline = new text)

  *Advisors:* D. Miskovic, C. Duxbury, and S. Whyte

The Faculty of Science Biomedical Sciences Academic Plan prepares graduates for entry into a comprehensive array of professional programs in the health care field. Core subjects are offered which are common for the majority of professional programs. These are supplemented with a significant number of elective courses which allow students to tailor their programs to meet the admission requirements for programs in optometry, medicine, dentistry, physiotherapy, occupational therapy, pharmacy, forensics, and radiotherapy or to pursue graduate studies in the health disciplines. Students are strongly urged to consult the admission requirements of the professional schools of interest to aid their choice of electives.

Students must maintain an overall cumulative average of 60% and a cumulative average of 65% in all Science courses in order to be eligible to continue in the plan. In order to graduate, the following requirements must be met:

1. Successful completion of at least 22.25 units (including labs); of the 22.25 units that are required, at least 16.75 must be from the Faculty of Science.
2. No more than 3.0 "SCI"-labelled units may be used.
3. Mandatory courses as listed below.
4. Two courses (1.0 unit) of Biology courses must be from BIOL 441, 442, 444 or 473. An additional five courses (2.5 units) of 300- or 400-level Biology courses of which three courses (1.5 units) must be from the 400-level. A minimum of 3.0 Science elective units is required (at least 2.5 units must be obtained at the 300- and 400-level, exclusive of SCI-labelled courses).
5. Enrolling in a course for a third time after two previous unsuccessful attempts is normally not permitted (see Faculty of Science policy on repeating courses).
6. A minimum of 2.0 lecture units from the list of "complementary elective" courses.
7. The balance of units are derived from "free elective" courses.
8. Completion of the English Language Proficiency Examination (ELPE).
### Legend

Symbol/Abbreviation | Description
--- | ---
* | Biology elective must be from the following: BIOL 110, 120, 211, 225
** | Of the eleven (5.5 units) elective courses, it is recommended that one course (0.5 unit) be MATH 127 and two courses (1.0 unit) be from the Faculty of Arts, of which, one course (0.5 unit) is an ENGL or ESL course.

### Year One (Fall)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 110, 120, 130, 130L</td>
<td>Introduction to Cell Biology/Laboratory, 150, 165</td>
</tr>
<tr>
<td>Two 100- or 200-level BIOL electives*</td>
<td>(1.0 unit)</td>
</tr>
<tr>
<td>CHEM 120/120L</td>
<td>Physical and Chemical Properties of Matter/Laboratory</td>
</tr>
<tr>
<td>CHEM 123/123L</td>
<td></td>
</tr>
<tr>
<td>PHYS 111/111L</td>
<td>Physics 1/Laboratory</td>
</tr>
<tr>
<td>or PHYS 121/121L</td>
<td>Mechanics/Laboratory</td>
</tr>
<tr>
<td>STAT 202</td>
<td></td>
</tr>
<tr>
<td>Two Electives (Science, Complementary or Free)</td>
<td>(1.0 unit)**</td>
</tr>
</tbody>
</table>

**Key:** * It is highly recommended that two courses (1.0 unit) out of eleven (5.5) of free electives be from the Faculty of Arts. It is recommended that one of these courses should be selected from those offered by the English Department; MATH 127 is highly recommended.

### Year One (Winter)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 139</td>
<td>Genetics</td>
</tr>
<tr>
<td>CHEM 123/123L</td>
<td>Chemical Reactions, Equilibria, and Kinetics/Laboratory</td>
</tr>
<tr>
<td>PHYS 112/112L</td>
<td>Physics 2/Laboratory</td>
</tr>
<tr>
<td>or PHYS 122/122L</td>
<td>Waves, Electricity and Magnetism/Laboratory</td>
</tr>
<tr>
<td>Two Electives (Science, Complementary or Free)</td>
<td>(1.0 units)</td>
</tr>
</tbody>
</table>

### Year Two (Fall)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 140/140L</td>
<td>Fundamentals of Microbiology/Laboratory</td>
</tr>
<tr>
<td>BIOL 239, 240, 240L, 241, 273, 273L</td>
<td></td>
</tr>
<tr>
<td>CHEM 237/237L</td>
<td></td>
</tr>
<tr>
<td>CHEM 266/266L</td>
<td>Basic Organic Chemistry 1/Laboratory</td>
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<tr>
<td>PHYS 111/111L</td>
<td></td>
</tr>
<tr>
<td>Three Electives (Science, Complementary or Free)</td>
<td>(1.5 units)*</td>
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</tbody>
</table>

### Year Two (Winter)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 273/273L</td>
<td>Principles of Human Physiology 1/Laboratory</td>
</tr>
<tr>
<td>CHEM 267/267L</td>
<td>Basic Organic Chemistry 2/Laboratory</td>
</tr>
<tr>
<td>Three Electives (Science, Complementary or Free)</td>
<td>(1.5 units)</td>
</tr>
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</table>

### Year Three (Fall)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
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</thead>
<tbody>
<tr>
<td>BIOL 301, 302, Functional Histology 308, 331, 359, 373, 373L</td>
<td></td>
</tr>
<tr>
<td>BIOL 303 Introductory Developmental Biology and Embryology</td>
<td></td>
</tr>
<tr>
<td>CHEM 237/237L Introductory Biochemistry/Laboratory</td>
<td></td>
</tr>
<tr>
<td>Two 300- or 400-level Biology courses</td>
<td>(1.0 unit)</td>
</tr>
<tr>
<td>Two Electives (Science, Complementary or Free)</td>
<td>(1.0 unit)*</td>
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</tbody>
</table>

### Year Three (Winter)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 301 Human Anatomy</td>
<td></td>
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<tr>
<td>BIOL 373/373L Principles of Human Physiology 2/Lab</td>
<td></td>
</tr>
<tr>
<td>BIOL 241 Introduction to Applied Microbiology</td>
<td></td>
</tr>
<tr>
<td>Two Electives (Science, Complementary or Free)</td>
<td>(1.0 unit)</td>
</tr>
</tbody>
</table>
Year Four (Fall)
BIOL 308 Principles of Molecular Biology
BIOL 303
Two Biology electives from the list below (1.0 unit)
Three 300- or 400-level Biology courses (1.5 units)
Four Electives (Science, Complementary or Free) (2.0 units)

Biology electives for the Biomedical Sciences program - Must take two (1.0 unit) from the following list:
BIOL 441, 442, 444, 473.

Note: Must have minimum of five courses (2.5 units) of Biology at the 400-level.
Please see admission requirement sections for School of Optometry and School of Pharmacy.

Year Four (Winter)
Five Electives (Science, Complementary or Free) (2.5 units)

Science Electives
A minimum of 3.0 additional Science units are required. At least 2.5 units must be at the 300- and 400-level.

Complementary Electives
The following is a listing of "complementary electives." (A minimum of 2.0 units are required from these courses):

Psychology
PSYCH 101 Introductory Psychology
PSYCH 261 Physiological Psychology

Sociology
SOC 101 Introduction to Sociology
SOC 248 Health, Illness and Society
SOC 249 Sociology of Mental Disorder

Ethics
PHIL 226 Ethics and the Life Sciences
or any other introductory ethics course

Mathematics
MATH 127 Calculus 1 for the Sciences
MATH 128 Calculus 2 for the Sciences

Computer Science
CS 200 Concepts for Advanced Computer Usage

Statistics
STAT 202 Introductory Statistics for Scientists

Health Studies
HLTH 101 Introduction to Health 1
HLTH 102 Introduction to Health 2
HLTH 220 Psychosocial Perspectives on Lifespan Development and Health
Rationale: Following the completion of the biomedical sciences undergraduate program review, the department brought forward changes to the program to better align with the honours biology program. These changes were approved in 2011 and additional changes were made in 2014. The department would now like to recall all of these changes and revert to the former biomedical sciences program degree requirements. The decision to undo these changes is based on a consideration of implications to available resources and budgetary challenges. The department feels that changes to curriculum and other courses made recently will efficiently meet the desired pedagogic goals for the biomedical sciences program. The revised plan reflects changes to course numbering and inactivations that have occurred in the meantime.

CHANGES TO FACULTY REGULATION

Faculty of Mathematics

First-Year English Writing Skills Requirement
All students in the Faculty of Mathematics must satisfy the following Writing Skills Requirement before enrolling in their 2A term:

- A grade of 60 or better on the Waterloo English Language Proficiency Exam (ELPE), or
- Successfully complete the study program offered by the University of Waterloo Writing Centre or
- Complete one of the following courses with a grade of at least 60%:
  - ENGL 109 Introduction to Academic Writing
  - ENGL/ESL 129R Written Academic English
  - ENGL 140R The Use of English I
  - ESL 101R Oral Communications for Academic Purposes
  - ESL 102R Error Correction in Academic Writing
  - SPCOM 100 Interpersonal Communication
  - SPCOM 111 Leadership, Communication, and Collaboration
  - SPCOM 223 Public Speaking

Free Electives
Free Electives may be taken in any area of the student's choosing. Students should be aware that health profession programs often require courses in one or more of the following subject areas: English, Mathematics, Computer Science, Sociology, Accounting, Economics, Languages, Psychology, Philosophy, Humanities.

Faculty Information and Regulations

Motion: To approve changes to regulations governing the the English language proficiency requirement as presented.

(strikethrough = deleted text; underline = new text)
Notes
1. Transfer credit for any of the above courses does not satisfy this requirement; the courses must be taken at the University of Waterloo.
2. Students will not be permitted to enrol in their 2A term until they have completed the Writing Skills Requirement. They will only be allowed to proceed after successful completion of the requirement.
3. A completed English Proficiency milestone on a student's academic record will indicate successful completion of this requirement.
4. Students in the Software Engineering program must satisfy this requirement as set down by the Faculty of Engineering.
5. Students in the Computing and Financial Management program must satisfy this requirement as set down by the Faculty of Arts.
6. Students who have written and failed ELPE should enrol in the Writing Centre or enrol in one of the above courses rather than attempt ELPE again.

Communication Skills Requirement
Since strong communication skills are essential to academic, professional, and personal success, the Faculty places a particular emphasis on their development. With the exception of students in Computing and Financial Management (CFM) and Software Engineering (SE), all students must successfully complete two communications courses:

- Students in Math/Chartered Professional Accountancy (CPA) must take SPCOM 111 (usually taken in term 1B) and AFM 211.
- Students in any Actuarial Science or Statistics plan must take one course chosen from List I (below), and MTHEL 300. Students are expected to enrol in one of the courses in List I in their first term of study in the Faculty of Mathematics. A grade of at least 60% is a prerequisite for enrolling in term 2A, and a grade of at least 70% is a prerequisite for MTHEL 300. MTHEL 300 is expected to be completed before enrolling in term 4A. BUS 362W is expected to be completed before enrolling in term 4A.
- Students in the Business Administration and Computer Science Double Degree plan or the Business Administration and Mathematics Double Degree plan must take one course chosen from List I (below), and BUS 362W. Students must complete a course from List I with a mark of at least 60% prior to enrolling in term 2A.
- Students in all other plans must take one course chosen from List I, and one course chosen from List II. Students are expected to enrol in one of the courses in List I in their first term of study in the Faculty of Mathematics, and must complete a course from List I with a mark of at least 60% prior to enrolling in term 2A. Students are encouraged to complete the second course by the end of term 2A.

List I: First Course
The first course must be chosen from one of the following:

- EMLS 101R Oral Communication for Academic Purposes
- EMLS 102R Error Correction in Academic Writing
- EMLS /ENGL 129R Written Academic English
- ENGL 109 Introduction to Academic Writing
- SPCOM 100 Interpersonal Communication
- SPCOM 223 Public Speaking

This course must be completed with a mark of at least 60% prior to enrolling in a 2A term. Except for some students in the Double Degree plans, students are expected to enrol in one of these courses in their first term of study in the Faculty of Mathematics.
### List II: Second Course

Any other course listed in the First Course list

- EMLS 103R Phonetics for Effective English Pronunciation
- EMLS 104R Reading and Listening for Academic Purposes
- EMLS 110R Critical Expression in Canadian Academic Contexts
- ENGL 101A Introduction to Literary Studies
- ENGL 101B Introduction to Rhetorical Studies
- ENGL 108D Digital Lives
- ENGL 119 Communications in Mathematics and Computer Science
- ENGL 251A Criticism 1
- SPCOM 225 Interviewing
- SPCOM 227 Leadership
- SPCOM 228 Public Communication

### Notes

1. MTHEL 300 may be used as the second communications course by students who are no longer enrolled in a Actuarial Science or Statistics plan.
2. Students enrolled in CFM must satisfy the English Language Proficiency Requirement (ELPR) as set down by the Faculty of Arts.
3. Students enrolled in SE must satisfy the English Language Proficiency Exam requirement (ELPE) as set down by the Faculty of Engineering.
4. Transfer credits may be used to satisfy the Communication Skills requirement.
5. Students who do not complete the first course prior to their 2A term will be restricted to enrolling in a course from the first list and two math courses until the first course requirement is met.

### Rationale:

These changes replace ELPE with two communication courses, providing a better pathway to the acquisition of communication skills. In moving from an emphasis on testing with implicit assumptions about skill acquisition to an emphasis on teaching with an explicit intent to build communication skills early and establish the expectation of continued attention to communication, students will have the opportunity to hone the communication skills essential to academic, professional and personal success.

### CALENDAR DATES

3. **Motion:** To approve the 2015-16 calendar dates as provided in Attachment #1.

### FOR INFORMATION

#### CURRICULAR MODIFICATIONS

Changes to amend faculty regulations for exceptions for students near graduation and academic enrollment blocks were approved on behalf of Senate for the Faculty of Mathematics effective 1 September 2014.

Changes consisting of new courses, course changes, course inactivations and minor revisions to academic requirements were approved on behalf of Senate for the Faculty of Applied Health Sciences (English language proficiency requirement), the Faculty of Arts (bachelor of arts breadth requirements; digital arts communication; East Asian studies; English language & literature; English language proficiency requirement; fine arts; global business and digital arts; history; peace and conflict studies; political science; psychology; social development studies; sociology and legal studies; sexuality, marriage and family studies; speech communication; women’s studies), the Faculty of Engineering (biomedical engineering; chemical engineering; civil, environmental and
geological engineering; complementary studies; electrical & computer engineering; English language proficiency requirement; management sciences; option in entrepreneurship; professional development; society, technology and values), the Faculty of Environment (English language proficiency requirement; environment and business; environment & resource studies; environmental studies; environmental sustainability and ethics; geography and aviation; geography and environmental management; international development; planning; regulations for minors; tourism option; transfer credit regulations), the Faculty of Mathematics (actuarial science; business administration double degree; business option; commerce; double degree plans; economics; electrical & computer engineering; English writing skills; information technology management; mathematical business; mathematical economics; mathematical finance; mathematics; mathematics electives; regulation for special major averages; software engineering option; statistics), the Faculty of Science (psychology), the Software Engineering plan and Renison University College (English for multilingual speakers; social work) effective 1 September 2015.

NEW UNDERGRADUATE AWARDS

Attachment #2 to this report contains a listing of newly-approved entrance scholarships/awards/bursaries, upper-year scholarships/awards/bursaries, international experience awards and athletic awards.

ACADEMIC PROGRAM REVIEW REPORTS

Augmented Final Assessment Report – School of Public Health and Health Systems – Please see Attachment #3.

Senate Graduate & Research Council met on 6 October 2014 and Senate Undergraduate Council met on 7 October 2014, and agreed to jointly forward this item to Senate for information.

Faculty of Applied Health Sciences - Augmented Review of Programs in the School of Public Health and Health Systems

On behalf of Senate, both councils approved an augmented academic review of the programs offered by the School of Public Health and Health Systems 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.

Two-Year Report – Recreation and Leisure Studies – Please see Attachment #4.

Two-Year Report – Liberal Studies – Please see Attachment #5.

Mario Coniglio
Associate Vice-President, Academic
Memo

To: Senate Undergraduate Council
From: Ray Darling, Registrar
CC: Joan Marshall, Editor, Undergraduate Calendar
     Charlene Schumm, Director, Scheduling, Examinations & Convocation
Date: October 30, 2014
Re: 2015-2016 Calendar Dates

Attached are the proposed dates for 2015-2016.

1. As Fall 2015 has the latest Labour Day possible, we need to seek relief from one of the guidelines in order to fit in a 13 day exam schedule and finish by December 22nd. We are seeking approval to count a weekend day as a pre-examination day. Current guidelines specify that Saturdays and Sundays are not to be counted. We are also proposing that we make up the Thanksgiving Monday on Saturday, November 7th in order to have 60 teaching days. Making up the class on this day will give us three total days before exams start. This will allow us to start exams on Tuesday, December 8th and finish by December 22nd while not using Sundays for exams.

2. The dates for the Winter and Spring terms meet the specifications in the guidelines.

3. In order to balance the number of Fridays in Winter term, I am recommending that a Friday schedule be used on Monday, April 4.

4. In order to balance the number of Mondays in the Spring term, I am recommending that a Monday schedule be used on Monday, July 25 and to balance the Fridays in Spring term, I am recommending that a Friday schedule be used on Tuesday, July 26.

5. I have made some amendments to the Guidelines that are highlighted.
**Academic Calendar Dates, 2015-2016**
The following symbols and abbreviations are used throughout this table:
- **Days of the week**: (M) Monday, (T) Tuesday, (W) Wednesday, (Th) Thursday, (F) Friday, (S) Saturday, (U) Sunday
- **N/A – Not Applicable**

<table>
<thead>
<tr>
<th></th>
<th>Fall 2015</th>
<th>Winter 2016</th>
<th>Spring 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-operative Work Term Begins *</td>
<td>Aug. 31 (M)</td>
<td>Jan. 4 (M)</td>
<td>May 2 (M)</td>
</tr>
<tr>
<td>Lectures Begin</td>
<td>Sept. 14 (M)</td>
<td>Jan. 4 (M)</td>
<td>May 2 (M)</td>
</tr>
<tr>
<td>Reading Week</td>
<td>N/A</td>
<td>Feb. 15-19 (M-F)</td>
<td>N/A</td>
</tr>
<tr>
<td>Convocation</td>
<td>Oct. 23, 24 (F,S)</td>
<td>N/A</td>
<td>June 7-11 (T-S)</td>
</tr>
<tr>
<td>Lectures End &amp; Make-up Day(s)</td>
<td>Dec. 4 (F) &amp; Nov. 28 (S)</td>
<td>Apr. 4 (M) Note: Friday schedule used</td>
<td>July 25, 26 (M, T) Note: Monday &amp; Friday schedules used</td>
</tr>
<tr>
<td>Pre-Examination Study Days</td>
<td>Dec. 5, 6, 7 (S-M)</td>
<td>Apr. 5, 6, 7 (T-Th)</td>
<td>July 27-Aug. 1 (W-M)</td>
</tr>
<tr>
<td>On-Campus Examinations Begin</td>
<td>Dec. 8 (T)</td>
<td>Apr. 8 (F)</td>
<td>Aug. 2 (T)</td>
</tr>
<tr>
<td>Online Class Examination Days</td>
<td>Dec. 11, 12 (F, S)</td>
<td>Apr. 8, 9 (F,S)</td>
<td>Aug. 5-6 (F,S)</td>
</tr>
<tr>
<td>On-Campus Examinations End</td>
<td>Dec. 22 (T)</td>
<td>Apr. 23 (S)</td>
<td>Aug. 13 (S)</td>
</tr>
<tr>
<td>Co-operative Work Term Ends *</td>
<td>Dec. 18 (F)</td>
<td>April 29 (F)</td>
<td>Aug. 26 (F)</td>
</tr>
<tr>
<td>Teaching days</td>
<td>60</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>Pre-examination study days</td>
<td>1**</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Examination days</td>
<td>13</td>
<td>14</td>
<td>11</td>
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</tbody>
</table>

* Co-op work terms are expected to be 16 week in duration. Actual start and end dates may vary depending on employer or student requirements in consultation with CECA.
** According to the guidelines, only the Monday will count as a pre-examination days. There will be a total of three days before the end of classes and the start of exams.
GUIDELINES FOR DETERMINING ACADEMIC CALENDAR DATES

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

1. That the practice of setting dates for each academic year continues to be an annual exercise.

2. That there be no fewer than 12 examination days in the Fall and Winter Terms, and 11 examination days in the Spring Term.

3. That there be no fewer than two pre-examination study days (excluding Saturday, Sunday and holidays) between the end of classes and the beginning of examinations and the university will attempt to schedule a maximum of 5 more study days when possible (including Saturday, Sunday and holidays). A clear rationale for using Saturday, Sunday and holidays as pre-examination study days must be communicated to Senate at the time calendar dates are approved.

4. That there be no fewer than 60 teaching days in a term. A clear rationale for fewer than 60 teaching days must be communicated to Senate at the time calendar dates are approved.

5. That attention be given to balancing the number of meets in courses. Where an imbalance may occur because of holidays (e.g., 11 Fridays and 13 Mondays), the last day of classes may use the class schedule for a different day in order to balance the number of meets across all courses.

6. That Fall Term classes in September begin on the Monday following the Labour Day Holiday.

7. That in the Fall Term no examinations be scheduled beyond December 22.

8. That the start date for Winter Term be January 3 when that date falls on a Monday, Tuesday or Wednesday. Otherwise the start date is the first Monday following January 3. In the event of Monday, January 3 being a declared holiday the term would begin January 4.

9. That the 5-day Winter Reading Week occurs in all Faculties and must begin on the third Monday in February in keeping with an informal agreement with Wilfrid Laurier University and University of Guelph.

10. The start date for Spring Term is normally May 1, 2 or 3 when these dates fall on a Monday, Tuesday, or Wednesday. Otherwise the start date is the first Monday following May 3.

11. In calculating teaching days in a term, Saturdays, Sundays and statutory or University holidays are excluded. An exception may be made to have a make-up class on Saturday in the Fall term when there is a late Labour Day.

12. In calculating examination days, Saturdays which fall within the period are included, whereas Sundays and statutory or university holidays are excluded. One exception to the above, approved by Undergraduate Operations Committee is that normally examinations will not be scheduled on the Saturday which follows Good Friday when that day falls within the examination schedule.

13. Grades due dates for on-campus courses are normally scheduled seven days from the date of the final examination. Grades for courses without a scheduled final examination are normally due 14 days after the start of examinations. Grades for Distance Education courses are due on the last date of the grades submission period.

14. That Fall Convocation be the Friday and Saturday that fall in the second last week of October.

15. That Spring Convocation be the Tuesday to Saturday in the second full week in June.

16. That Online Class Examination Days in each term be the first Friday and Saturday after the exam period starts.

Prepared by:
R.A. Darling, Registrar
September 9, 2014 (replaces October 20, 2009)
ENTRANCE SCHOLARSHIPS/AWARDS/BURSARIES:

Norm Ashton Memorial Scholarship
One scholarship, valued at $1,500, is awarded annually to an outstanding undergraduate student entering first-year studies in the Department of Kinesiology. Selection will be based on academic excellence, extracurricular involvement, participation in volunteer activities, and leadership potential as assessed through the Admission Information Form (AIF). This scholarship is made possible by donations from family, friends and colleagues to honour the memory of Norm Ashton, former Chair of the Department of Kinesiology.

Method of Financing: donations held by Department to support scholarship for approximately seven years

eJust Systems Inc. GBDA Scholarship
One scholarship, valued at $2,500, is provided annually to a student entering Year One of the Bachelor of Global Business and Digital Arts program. Selection will be based on academic achievement and significant demonstrated extracurricular involvement as assessed through the Admission Information Form. This fund is made possible by a donation from eJust Systems Inc. No application is necessary.

Method of Financing: one-time donation to provide the scholarship for four years

Goulet Engineering Undergraduate Bursary
A bursary, valued at $1,000, is awarded annually to a full-time undergraduate student enrolled in Year One in the Faculty of Engineering who is in good academic standing and who has a demonstrated financial need as determined by UWWaterloo. Canadian citizens, permanent residents and study permit/visa students are eligible for consideration. To be considered, students must complete a UW bursary application. This fund is made possible by a donation from Patrick Goulet, a 1990 master’s graduate from the Electrical Engineering program.

Method of Financing: endowment

Fred Groch Entrance Bursary
Two bursaries, valued at $3,000 each, are awarded annually to full-time undergraduate students enrolled in Year One of any program in the Faculty of Engineering on the basis of financial need and academic achievement. To be considered, students must apply for the Waterloo Entrance Bursary program. This fund is made possible by a donation from Fred Groch who passionately supports higher education.

Method of Financing: one-time donation to provide bursaries for five years

Ed Jernigan Knowledge Integration Entrance Scholarship
A scholarship, valued at $3,000, is awarded annually to an outstanding full-time undergraduate student entering Year One of the Bachelor of Knowledge Integration program. Selection is based on academic achievement and extracurricular involvement as assessed through the Admission Information form. Preference will be given to students who demonstrate a balance in strength across the arts and sciences. This fund is made possible by a donation from Dr. Ed Jernigan.

Method of Financing: annual donation (five-year pledge)

Robert J. Sproule DECA Scholarship
A scholarship, valued at $1,000, is provided annually to a full-time undergraduate student entering Year One in the Bachelor of Accounting and Financial Management program. Selection is based on academic achievement (minimum admission average of 85%) and participation in DECA in grade 12. This fund is made possible by a donation from School of Accounting and Finance faculty member Robert Sproule.

Method of Financing: annual donation (five-year pledge)
UPPER-YEAR SCHOLARSHIPS/ AWARDS/ BURSARIES:

Upkar Arora School of Accounting and Finance Leadership Scholarship
A scholarship, valued at $2,500, is provided annually to full-time undergraduate students enrolled in Year Three or Four in any program in the School of Accounting and Finance. Eligible candidates will be in excellent academic standing (minimum 80% cumulative average) and have a strong interest in entrepreneurship, volunteerism and civic or community leadership. Interested students should apply by October 1. This fund is made possible by a donation from alumnus Upkar Arora (MAcc ’85).

Method of Financing: one-time donation of $10,000 to award scholarship for four years

Baylis Medical Capstone Design Awards
Four awards, valued at $5,000 each, will be provided to student groups undertaking a Fourth-Year Capstone Design Project with a biomedical focus in any program in the Faculty of Engineering. Interested groups must submit a Capstone Proposal Summary to their departmental Capstone Coordinator and a faculty committee will invite the top groups to present their project. Winning student groups may have the opportunity to work with industry mentors from Baylis Medical Company Inc. At the conclusion of the Capstone Design Symposium, one additional group will be selected from the remaining eligible Capstone Design Projects to receive a $5,000 award. All award funds will be divided equally among the winning team members. This fund is made possible by a donation from Baylis Medical Company Inc.

Method of Financing: annual donation (three-year pledge)

Bhattacharyya Capstone Design Award
An award, valued at $2,000, is provided annually to an outstanding student group in Chemical Engineering completing a Fourth-Year Capstone Design Project. The award will go to the project that, in the opinion of the judges, demonstrates an innovative and practical design solution to a problem having large potential long-term benefit to society. Criteria used to select a winner may include: technical innovation and accomplishment, feasibility of implementation, and potential for long-term benefits. Interested groups must submit a Capstone Proposal Summary to the Chemical Engineering Capstone Coordinator. Final selection will be made by faculty members of the Department of Chemical Engineering and the Chemical Engineering Capstone Coordinator. All award funds will be divided equally among the winning team members. This fund is made possible by a donation from Dr. Dilip and Mrs. Bhattacharyya to foster innovative thinking and recognize the efforts of hard-working and talented students in Chemical Engineering.

Method of Financing: annual donation (five-year pledge)

John G. Flanagan Award for Academic and Clinical Excellence in Glaucoma
An award, valued at $1,000, is provided annually to a full-time undergraduate student enrolled in Year Four in the School of Optometry & Vision Science. Selection is made on the basis of academic achievement (minimum 75%) and clinical excellence in the area of glaucoma. This fund is made possible through the support of Drs. John G. Flanagan and Kathy Dumbleton, former faculty members at the School of Optometry & Vision Science.

Method of Financing: annual donation (ongoing)

A.B. McKie Memorial Scholarship
Two scholarships, valued at $1,000 each, are presented annually to full-time undergraduate students enrolled in Year Four in any program in the School of Accounting and Finance. The recipients will have achieved the highest cumulative marks in courses in the undergraduate tax sequences (either AFM 361 and 461; or AFM 362, 263, and 462). This fund is made possible by a donation from the Tax Executives Institute, Toronto Chapter in honour of A.B. (“Mac”) McKie.

Method of Financing: annual donation (three-year pledge)
Lisa McLean Professional Practice Award
An award, valued at $1,000, is provided annually to a full-time undergraduate student enrolled in Year Four in the School of Pharmacy. Selection is based on academic achievement (minimum 75% cumulative average) and demonstrated interest and growth in knowledge and skills acquired in the professional practice lab sequence. Interested students should submit an application that includes a two-page letter explaining how the knowledge, skills and judgment that they have gained in the Professional Practice Lab will impact their future practice. Due date is March 15. This fund is made possible by donations from friends and colleagues in memory of Lisa McLean, the Senior Lab Demonstrator from 2008-2013.

Method of Financing: Faculty Funds

Morneau Shepell Women in Actuarial Science Scholarship
A scholarship, valued at $2,500, is provided annually to a full-time female undergraduate student enrolled in Year Three or Four in the Department of Actuarial Science. Selection will be made on the basis of academic achievement (minimum 80% overall average), and demonstrated leadership abilities. Interested students should submit an application by June 30. This fund is made possible by a donation from Morneau Shepell.

Method of Financing: annual donation (four-year pledge)

School of Accounting and Finance Servant Leadership Scholarship
A scholarship, valued at $2,500, is provided annually to a full-time undergraduate student enrolled in Year Four in any program in the School of Accounting and Finance. Eligible candidates will be in excellent academic standing (minimum 80% overall average) and have demonstrated leadership in service to others, the community, or the world at large. Strong preference will be given to students who have also shown an interest in entrepreneurship. Interested students should apply by October 1. This fund is made possible by a donation from alumnus Howie Kroon and his family (MAcc ’88).

Method of Financing: annual donation (four-year pledge)

Lloyd Switzer Upper Year Scholarship in Applied Mathematics
A scholarship, valued at $2,500, is provided annually to a full-time undergraduate student enrolled in Year Four in the Department of Applied Mathematics who obtains the top academic achievement at the end of Year Three. This fund is made possible by a donation from Lloyd Switzer, BMath 1988, to encourage students to pursue an education in Applied Mathematics at the University of Waterloo.

Method of Financing: annual donation (five-year pledge)

Wish Scholarship
Ten scholarships, valued at $2,000 each, will be awarded annually to outstanding full-time undergraduate students enrolled in programs in the Faculties of Engineering and Mathematics. One scholarship will be awarded to a top student enrolled in Computer Science, Combinatorics and Optimization or Pure Mathematics and one scholarship will be awarded to a top student enrolled in Computer Engineering or Software Engineering on the basis of academic performance for each of the 1B, 2A, 2B, 3A and 3B terms. An application is not required. This fund is made possible by a donation from ContextLogic, a company created by two University of Waterloo Math grads, Peter Szulczewski (BMath ’05) and Danny Zhang (MMath ’05, BMath ’03).

Method of Financing: annual donation (four-year pledge)
INTERNATIONAL EXPERIENCE AWARDS:

**Arts International Experience Award**
An award valued at a minimum of $1000, will be provided annually to a full-time undergraduate student enrolled in the Faculty of Arts at the University of Waterloo who is planning to travel abroad to enhance her/his learning experience. Eligible international experiences include a minimally-paid or volunteer international co-op work term, a volunteer placement, an academic exchange or a study term related to academic requirements. Selection will be based on academic achievement (minimum 75% overall average), the nature of the experience, and a personal letter describing planned outcomes. Preference will be given to students who will be travelling to an unfamiliar country where they will experience a different culture in a new learning environment. Interested students should submit an application by November 15. This fund is made possible by donations from various donors.

*Method of Financing: annual donation (five-year pledge) plus additional anticipated donations*

**McLenaghan International Study Abroad Award**
An award, valued at up to $1,200, will be provided annually to a full-time undergraduate student who participates in an approved academic exchange or study-abroad term. Eligible candidates include: third-year students enrolled in a French Studies program travelling to France to study at the University of Nantes or other approved school; or third- and fourth-year students enrolled in a program in the Faculty of Mathematics, with preference to students in Applied Mathematics, studying at an approved school in the United Kingdom, Europe or the United States. Selection will be based on academic achievement (minimum 75% overall average) and a personal letter describing planned learning outcomes. Financial need may also be considered. Preference will be given to students who will be travelling to an unfamiliar country where they will experience a different culture in a new learning environment. Interested students should submit an application by July 15. This award is made possible by a donation from Dr. Helene McLenaghan (Language Instructor, French Studies) and Dr. Ray McLenaghan (Professor Emeritus, Applied Math), to encourage students to enhance their Waterloo studies with an international study experience.

*Method of Financing: endowment*

ATHLETIC AWARDS:

**Mary Ann Vaughan Athletics Excellence Award for Men's Hockey**
An award, valued at up to $2,400, is awarded annually to a full-time undergraduate student who is a qualified student-athlete on the Waterloo interuniversity men's hockey team and whom is in good academic standing. This fund is made possible by a donation from Mary Ann Vaughan, MA ‘92.

*Method of Financing: annual donation (five-year pledge)*
Review Process

The School of Public Health and Health Systems came into existence in 2011, from the previously-named Department of Health Studies and Gerontology. The change occurred in part due to ongoing changes in programming, and in the vision for where the unit was going. The School aims to be Canada’s most innovative and impactful academic unit in the area of population and public health. The academic unit has a history of innovation, having been the first in Canada to offer a non-medical perspective on health promotion and disease prevention (in 1978) and having offered the first free-standing graduate program in Gerontology in Canada (in 1987), and it continues to offer an integrated biological and behavioral approach.

The School has a variety of new programs; those retained from the previous Department have not as yet changed their names. This review covers the undergraduate BSc in Health Studies (both regular and co-op), the MSc and the PhD in Health Studies and Gerontology, as well as the Master of Public Health (which began in 2006). A new undergraduate degree (the Bachelor of Health Promotion), and a new field in the Master of Health Informatics both began in 2013, but are too new to review; and another new program (the Master of Health Evaluation) is expected to take its first students in 2015. The review also does not cover the Collaborative PhD programs in Aging, Health and Well-Being, or in Work and Health, which received a separate review in 2012/13. Both programs are jointly offered by all three Departments/Schools in the Faculty of Applied Health Sciences.

The Self Study was led initially by the inaugural School Director, who left mid-year for another opportunity, and the process was seen through by the two Interim Directors. The three Associate Directors (for undergraduate, graduate research, and graduate professional programs) also provided support, and a Special Projects Coordinator was hired to assist. Faculty members in the School were involved in curriculum mapping, defining learning outcomes for all programs and competencies particularly for the professional MPH. Student input was sought through a survey of first year undergraduates, a survey of graduates from the Bachelor’s program within their first year following graduation, a survey of current MSc and PhD students, and a survey of alumni from these same graduate programs.

The external review was undertaken by Dr. Robert Buckingham, Executive Director, School of Public Health, University of Saskatchewan, and Dr. John O’Neill, Dean, Faculty of Health Sciences, Simon Frasier University. The site visit occurred on March 6-7 2014. The internal reviewer was Dr. Siva Sivaththaman from the Department of Electrical and Computer Engineering.
The previous review of the MSc and PhD occurred in 2005/06 (the MPH has not been previously reviewed as it began only in 2006), and the previous review of the undergraduate program occurred in 2006. The original intention was to conduct the present review in 2012/13, but due both to the number of new programs introduced, and the change of Director, the process was delayed a year. However, the review occurred within the eight year maximum permitted by the Quality Council.

The previous undergraduate review from 2005/06 made 9 recommendations, briefly summarized as follows, along with the status of the response:

- Make the program goals more explicit (done)
- Undertake a comprehensive curriculum review (still in process)
- Provide increased emphasis on health promotion, the Canadian health care systems and global health (all three feature in the new Bachelor of Health Studies, and the new Bachelor of Health Promotion)
- Increase tenure track faculty numbers (rose from 15 in 2006 to 20 by 2013, with additional hires ongoing in 2013/14 although student numbers also rose)
- Increase the engagement of faculty in the undergraduate program (research buyouts by tenure stream faculty are replaced by faculty on limited-term appointments)
- Resolve issues of animal care on campus (done)
- Make the Department’s position on biological science clear (new hires made in biological area)
- Encourage more interaction among first year students (initiatives such as the Living-Learning Community, tutorials in the core first-year courses, plus a new advising system)
- Re-constitute the Undergraduate Committee and improve the clarity of its role in governance (done)

The previous graduate review from 2005/06 made 3 main recommendations, also summarized below, along with status of the response:

- Engage a consultant to assist the Department in developing a vision and a plan for renewal of the biological stream (five new faculty were hired in biohealth and epidemiology)
- Hold a Departmental retreat to develop a strategic plan (led to the renaming of unit as a School, and associated with substantial new program development)
- Improve quality/quantity of student work space (still in progress: some new space may be available short-term as some research centres move to the north campus; in the longer run a new building is planned).

**Characteristics of the Programs**

**Academic Programs Offered (covered in this review)**

The BSc is offered in both regular and co-op format. There are 2 options, Health Informatics and Aging (an option has 6-8 courses). There are also 2 specializations (also 6-8 courses, open only to students with at least a 75% average), in Pre-Health Professions and in Health Research. Students can also choose Joint Honours in Health Studies and Psychology.

The BHP accepted its first students in fall 2013 and is not included in this review (but will be included in the next cycle).

**Program Objectives**
The School’s goal, as described in the 2011 Strategic Plan is “to advance learning, knowledge, practice and capacity in the fields of public health and health systems through strategic partnerships and excellence in teaching, research, and service”.

The objectives of the BSc program are as follows:

- To provide a strong interdisciplinary approach to the study of the major determinants of health, and draws upon the behavioural, biological, social, and health sciences to build each student’s understanding of contemporary problems in health promotion and disease prevention.
- To allow the student to acquire both the theoretical knowledge and analytic skills necessary to pursue challenging careers in health promotion or in many other health-related careers.
- To prepare students for post-graduate studies in population-based health promotion, clinical medicine and other allied health professions, biomedical research, and various health-related aspects of gerontology and care of the elderly.

The objective of the MSc program is as follows:

- To produce graduates with a sound interdisciplinary focus on health promotion and disease prevention, having fundamental knowledge and research capabilities on some important aspect of population health as defined by one or more of the five sub-fields offered in the MSc program.

The objective of the MPH program (from Program Handbook) is as follows:

- To prepare a new generation of public health professionals, skilled in protecting health, preventing illness, and helping people to achieve a healthier life for themselves and their communities in Canada and around the world.

The objectives of the PhD program are as follows:

- To provide students with an advanced interdisciplinary focus, specialized training, and specialized research skills in population health promotion and disease prevention as defined by one or more of the five sub-fields offered in the PhD program.
- To enable students to acquire depth of understanding and topical specialization to their graduate work through a research apprenticeship model and its application in institutional and community settings.

Specific Learning Outcomes

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

Significant strengths of program

Faculty

At the time of completing the self-study, the School had 23 core faculty members, five members who held partial appointments with other departments (but their main appointment in the School), and five members with partial appointments in the School (but their main appointment elsewhere). Additional hires were in progress, including a senior appointment for the new Director (the search resulted in the appointment of Professor Craig Janes who took up the Directorship July 1 2014). There is also one continuing lecturer, and two long term lecturers. This does not include three associate research professors.
associated with one of the research centres, and a research scientist. This represents significant growth from the 22 faculty at the time of the previous review.

Faculty members have won a significant number of internal university awards, and new investigator awards from a variety of agencies. More established faculty have been appointed as Fellows of the Canadian Academy of Health Sciences, the Canadian Evaluation Society, the Gerontological Society of America, the Royal Institute of Public Health (UK), the Royal Society of Public Health (UK), the Society of Biology (UK), the American College of Epidemiology, a 3-M national teaching award, and a variety of other awards from professional societies. Faculty members serve on a long list of Expert Panels, Advisory Boards, Working Committees, Committees and the like. Faculty members serve on the Editorial Boards or as Editors and Assistant/Associate Editors of 30 journals. The list of journals, agencies and funding bodies for which faculty members undertake reviews extends for five-and-a-half pages (single spaced, two columns per page).

Staff/Administration

There are six staff who serve as the administrative support for the undergraduate programs (two individuals), the research graduate programs (one individual), the professional Master’s program (two individuals) and to the Director (one individual). Other support is provided at the Faculty level for all three Departments/Schools, such as for recruitment, student services, finance, etc.

Students

Undergraduate

As of 2013, the School had around 500 undergraduate students enrolled across all years of the program. These are split fairly evenly between co-op and regular students. There is greater demand for the co-op stream (possibly because there are health studies programs at most other Ontario universities, but few which offer co-op). 95% of those in the co-op stream (as compared to 69% in the regular stream) had an entrance average of 80% or more; and 71% of those in co-op had 85% or more (as compared to 26% in the regular stream). These data are from the past 8 years, 2006-2013. Entering grades have been increasing over the period. The proportion of undergraduates on student visas is around 10%, and between 70 and 75% of undergraduates are women.

Attrition rates are relatively low. Close to 95% of first year co-op students continue on to second year, and close to 90% of regular students. 82% of those who start in first year in co-op continue on to graduate with the degree in Health Studies, as compared to 75% of regular students. 95% of co-op students are ranked as “very good”, “excellent” or “outstanding” by their co-op employers. 94% of co-op students ranked their co-op employers between 7 and 10 (10 being the highest score). However, a significant number of co-op students choose to graduate from the regular program – one frequent reason being that they feel they have acquired sufficient work experience and do not choose to complete all the co-op terms required.

Post-graduation surveys since 2004 suggest that more than half of the graduates continue on to postgraduate education, and about a third gain professional employment. The proportion going on to additional education over the period has risen.
At the undergraduate level, the Department runs various initiatives designed to increase student support and the sense of community. These include a mentorship program (by upper year students, for first years); a living-learning community on campus; and an online mentorship program offered by AHS alumni.

Graduate

The MPH program has experienced growing numbers of applications since it began in 2006. In 2012 the program had 368 applications, of which 92 were accepted. Over the lifetime of the program, about half of the students have been full-time (the program can be completed over two years), and the rest part-time (completing in four years). The MSc program accepts about 20 students per year, and the PhD about 10. About 7% of MSc students and about 13% of Doctoral students have been international, in the period since the last review, and about 10% of the MPH students. Women form a little over 80% of the Master’s students on average, and a little less than 80% of the PhD students.

Median completion times for MPH students are around 3 years (reflecting the even split between full and part-time students who complete in 2 and 4 years respectively). The median time for completion for MSc students has been either 6 or 7 terms. For PhD students, the median and average has been around 5 years, with some tendency for completion times to lengthen more recently. Graduates from the research programs (MSc and PhD) averaged almost 2 journal publications, 1 refereed conference publication and one “other” publication each. They also presented their work at 1.6 conferences on average. Master’s graduates go on to professional employment within the health sector (and a proportion proceeds on to doctoral studies). Doctoral graduates go on to faculty positions, as well as Director of Research-type positions in the health and social sectors.

In the graduate program initiatives to enrich the experience include participation in the end-of-year Research Presentation day held by the Faculty.

The large majority of full-time students in the research graduate programs receive support (those who are beyond time limits may not, or may only receive reduced funding). At the time of writing of the self study, funding was $22,000 annually for the Master’s students, and almost $32,000 annually for the Doctoral students, for those funded. A small proportion of the MPH full-time students receive funding, typically from outside the university, although a larger proportion receive awards to defray expenses of the required practicum.

Reviewers’ Recommendations/Departmental response regarding program enhancements

The strengths and challenges as they relate to both the graduate and undergraduate offerings in the SPHHS were clearly articulated in the reviewers’ report. In summary, the review team agreed that the SPHHS is a successful academic unit that has grown rapidly over the past through years through attracting high quality students to new undergraduate and graduate opportunities that are well-positioned to respond to important public concerns in the broad area of public health and health systems. The School has also attracted a strong faculty complement with high research success. However, this rapid growth has created some challenges and tensions, as noted in the reviewers’ report. The reviewers also briefly outlined recommendations to address the following concerns, quoted almost verbatim below:
1. Space has become a significant issue for the School and new facilities are urgently needed to accommodate new faculty, an expanding graduate student body and research collaborations.

2. The reviewers recommend that the School work with the Dean and Provost’s office to re-balance new hires to achieve a better complement of teaching faculty and faculty with practice experience in public health.

3. The apparent proliferation of new undergraduate and graduate degrees may exacerbate existing challenges of class size and range of courses offered without sufficient faculty support. The reviewers recommend the School consider offering streams, concentrations, certificates, etc. rather than distinctive degree designations.

4. Changes in the external supply and demand for training in public health in Canada may require substantial changes to the MPH program if it is to continue to meet enrollment targets with high quality students. The reviewers recommend the SPHHS monitor the external environment carefully and consider options such as accreditation if competition for students leads to a drop in student enrollment.

5. The rapid expansion of degrees and program requirements has resulted in a faculty complement spread too thin. The reviewers recommend that new hires be able to teach in the core areas of current degree programs rather than introducing new areas of teaching expertise.

6. The reviewers recommend that the MSc/PhD nomenclature be re-considered in order to attract high quality MSc/PhD students to the areas of faculty research expertise.

7. The reviewers recommend the School and Faculty Dean indicate a clear commitment to valuing undergrad education and populating lower division classes with senior faculty.

8. The reviewers recommend that the School and Faculty of Applied Science continue to work together to profile and strengthen the area of Aging and Health as an area of excellence across the Faculty, with core critical mass in the SPHHS.

9. The reviewers recommend that new leadership in the School focus on the challenges faced by new faculty and ensure that workload and governance reflect equity and collegiality. This will require a period of consolidation rather than continued rapid growth.

10. The reviewers recommend that the School and Dean encourage the formation of new “Research Centres” to provide infrastructure and administrative support to new faculty.

11. The reviewers recommend that staff workload be reviewed and new hires be made as necessary to ensure appropriate support across all programs.

The School provided a detailed response to the recommendations, which were found to be very constructive, which included three two-year plans for each of the groups of programs (BSc; graduate
research programs, and graduate professional programs). The response was held, awaiting the arrival of the new School Director as of July 1.

Unexpectedly, the AHS dean also resigned effective July 1. The incoming Interim Dean then discussed how to proceed with the new Director. Given the extent of leadership turnover, it was decided to focus initially on three key issues (relating to five of the eleven recommendations from the review), and to undertake to respond to these issues in the two year 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>Hold faculty retreat and review School plan; report to SGRC September 2016; at that time report as to response to other recommendations</td>
<td>School Director</td>
<td>School Director</td>
<td>Retreat in 2014-15</td>
</tr>
<tr>
<td>Consolidate School offices into one location within AHS building (recommendation 1 – space) and consider longer term plan for more space</td>
<td>School Director with Dean</td>
<td>Dean</td>
<td>8-12 months</td>
</tr>
<tr>
<td>Examine workload such that senior faculty have more opportunity to teach undergraduates (Recommendation 7)</td>
<td>School Director</td>
<td>Not clear resources required</td>
<td>12 months</td>
</tr>
<tr>
<td>Revise faculty hiring plan: will also aid in consolidation of strengths rather than being spread thin; and provision of appropriate supervision for graduate students. (Recommendations 2, 5, 9)</td>
<td>School Director</td>
<td>Dean/Provost</td>
<td>12-24 months</td>
</tr>
</tbody>
</table>
Recreation and Leisure Studies (RLS) Two Year Progress Report

RLS Department student, faculty and staff overview for 2014-15: Undergraduate enrolment will approximate 540 students in fall 2014, an RLS record high. Graduate enrolment will approximate 65 to 70, also a historic high, but graduate intake levels have remained steady at target over the past two years. RLS enters fall 2014 with 18 faculty (an increase of 3 from the review period): 6 full professors (1 who will retire in October, 1 on 12-month sabbatical leave, 1 starting 6-month sabbatical leave in January), 3 associate professors (1 on unpaid leave for the duration of the academic year), 6 assistant professors, and 3 lecturers (1 continuing probationary and 2 definite term). Replacement of the retiring professor will be delayed at least until July 2015 given UW’s recent hiring moratorium. RLS has 2 permanent staff (an administrative assistant and an undergraduate advisor) and a 1-year contract academic assistant hired to assist with ever increasing numbers of undergraduate students and the complexities of undergraduate advising.

On-going Strategic Planning efforts: In response to ongoing retirement-driven faculty turnover (8 new faculty hires over the past 7 years), RLS initiated an Appreciative Inquiry (AI) planning process in fall 2012 with a goal of maintaining Departmental markers of excellence (e.g., top-ranked North American leisure studies research program from 2000 through 2010; unparalleled experiential education opportunities via Co-op, practicums and internships relative to other Ontarian recreation and leisure undergraduate programs), while upgrading our undergraduate and graduate programs to take advantage of emerging faculty strengths. The AI process concluded in summer 2013 and was followed by an extensive overhaul of the RLS undergraduate curriculum. Those changes are currently working their way through appropriate UW channels. Beginning fall 2014, again building upon the AI results, a similar process will be undertaken with respect to the graduate curriculum.

Undergraduate program response to review to date

Our Augmented Program Review requested that RLS consider course reductions in order to improve curriculum efficiency and effectiveness. Our ongoing strategic curriculum re-design process will ensure the RLS core and the core courses required of each of our four majors contribute to successful student learning experiences and efficient course delivery. Goals include:

a) Reduction of the number of undergraduate courses in the RLS calendar from 53 to between 35 and 40;  
b) A policy whereby every course in the revised calendar will normally be taught every year;  
c) An increase in the size of the RLS common core from 8 to 12 courses, 6 of which will be taught in students’ first 3 terms ensuring a stronger cohort experience for all RLS students;  
d) A minimum of 4 major-specific courses in all four RLS majors, open only to those students for the purpose of creating major-specific cohort experiences;  
e) Experiential-oriented field course in all four RLS majors (e.g., REC 253, 312, 356, 380), to be taken in 2nd or 3rd year, and a capstone course taken during students’ 4B term;  
f) Re-focussing/re-naming two majors – from Tourism & Parks Management to Tourism Wellbeing & Community and from the catch-all Recreation & Leisure Studies to a moniker reflective of understanding leisure in contemporary society. The latter change will affect that major only. The Recreation and Leisure Studies Department name will remain intact. As well, our Recreation & Sport Business (RSB) and Therapeutic Recreation (TR) major names will remain intact.
Some of these changes have been approved at the Department level. The remainder will be approved during scheduled September and October meetings in order to work through the required votes needed to appear in the 2016 UW Calendar.

Other ongoing RLS undergraduate initiatives include:

a) Reaffirming our commitment to teaching quality and the student experience by putting our strongest instructors in 1st-year and 4th-year courses;

b) Creation of writing intensive initiatives in REC 101 with UW’s phasing out of the English Language Proficiency Exam to strengthen the English literacy skills of 1st-year students;

c) Exploring the process of converting students to their desired major upon arrival to the University to assist with decision making around course offers and sequencing. This would also help to facilitate the development of a 3-year teaching plan for faculty, staff, and students; RLS continues work in strengthening college articulation agreements with institutions that produce several dozen transfer students annually;

d) The Department is also in the process of creating two new articulation agreements with Mohawk College’s Recreation Therapy diploma program and Niagara College’s Recreation Therapy program. RLS will target colleges with tourism diploma programs once the new Tourism, Well-being and Community degree has been approved. All current articulation agreements are in the process of being reviewed to determine renewal date, whether or not there have been any changes to the programs, and if so, requesting course outlines to expedite the transfer credit assessment process;

e) Stronger communication between RLS and the Centre for Cooperative Education and Career Action has been established through monthly meetings. During the monthly meetings with the Associate Chairs of Undergraduate Studies, Assistant Registrar, and Associate Dean, the Faculty Relations Manager provides details on overall employment statistics for the Faculty and the RLS Department. Term data includes the total number of students scheduled for work, total number of students participating in the process, number of employed students, and number of unemployed students seeking employment. As a result, the undergraduate team can reach out to unemployed students and provide information on resources to increase their likelihood of securing employment. The Undergraduate Associate Chair has met with the Faculty Relations Manager to discuss skills and competencies of RLS students to ensure future job opportunities are relevant and valuable to the students’ academic career (see point c above). Additional ways to link co-op and academic content have also been explored, so students can further integrate co-op experiences with their academic major. The Faculty Relations Manager facilitates an information session for second-year RLS students at the beginning of the fall term. This session provides an overview of co-op processes and what students can expect with the upcoming job search, interview process, and securing employment. This session is tailored to the RLS students and provides opportunities to ask program-specific questions.

f) AHS has developed a Foundation Term to assist students who are academically at-risk in their first year or are required to withdraw from the program after their first year of study. A questionnaire has been designed by RLS to rule-out other potential reasons for the student’s lack of academic success, for example, mental health issues or lack of interest in the program. If the student lacks skills for academic success, a Foundation Term is offered consisting of UNIV 101 and two REC courses with clear requirements for this term. The Student Success Office officially opened October, 2011 to assist students with academic issues and to assist with the transition to university. This summer, AHS hired a Faculty
Relations and Academic Support Specialist, who is shared with the Faculty of Arts. Through this new position, AHS will complement first-year orientation to ensure seamless transitions and development of a learning community. AHS is currently developing a common first-year course to target writing with feedback, building engagement, and developing English literacy and communication skills. This past academic year, RLS saw their first Bridge to Academic Success in English (BASE) students. This program is for students who have met the academic requirements for RLS, but their English language test scores have not been achieved. RLS is moving to a two-term BASE program, which allows students who have met English language requirements and course averages to move into degree studies. There is great potential to grow the RLS international student complement.

g) 2+2 programs have been explored but, as all options were specific to tourism partnerships, no further action will be undertaken until RLS tourism faculty numbers are at full complement and changes to the undergraduate degree implemented,

h) The RLS TR group has created a survey to be sent to key stakeholders (practicum and internship supervisors) for feedback on the existing TR curriculum to identify possible gaps in the curriculum and/or reinforce curriculum content to ensure graduates are competent and confident practitioners;

i) The Recreation Student Association (RSA) was regenerated as a part of AHSUM (Applied Health Sciences Undergraduate Members) and has had a healthy influence on students the past two years and going forward.

Graduate program response to review to date

During the 2013-14 year RLS fully implemented a process of assigning interim supervisors to incoming MA and PhD students to help address issues of supervisory load and to better facilitate student/supervisor connections.

Both AHS-wide collaborative Ph.D. programs (Aging Health and Well-being and Work and Health) underwent stringent review in 2013-14. AH&WB developed resource plans going forward that do not require teaching resources in the next five years from RLS, but will entail continued support through student supervision, committee members, and a small (proportionate) budget contribution. Admissions to the W&H program have been suspended given lack of faculty-wide resources to sustain it.

At request of the AHS Dean’s office, we took a lead role during the 2013-14 year developing an AHS-wide graduate course in qualitative research methodologies (AHS 600). This course has long-term potential to reduce enrolment pressure in REC 673 which was, to date, the only qualitative analysis course in the Faculty. It is anticipated that AHS 600, when fully on-board, may serve all 3 AHS academic units and enhance the learning experience by providing the necessary number of sections to effectively do that as well as serve graduate students from other faculties. If AHS 600 performs as envisioned, RLS will explore changing REC 673 to serve as an advanced-level qualitative methodologies course which would better serve student needs and create efficiencies by reducing the number of one-on-one REC 792 Advanced Research Methods courses that we currently mandate for doctoral students.

As part of the already described strategic planning process, RLS is progressing toward re-working all graduate courses with a long-term view to including no more than 12 in the UW Calendar and normally offering all graduate courses every year. This proposal will be fully discussed during the 2014-15 academic year. Our goals include better aligning elective graduate courses with our major areas of research: Leisure and a) community, b) environment, c) health and well-being, d) identity and diversity, and e) service and policy. It will also address student concerns regarding course availability and comply
with the recommendation that we thin out and streamline our graduate course offerings and further limit the number of independent studies courses offered (i.e., REC 696/697/698, REC 792).

RLS has made progress toward developing more stringent guidelines and requirements for doctoral students who teach undergraduate courses in our Department. These guidelines, which will include the completion of a minimum number of CTE instructor training courses, will likely reduce the number of students who teach courses and enhance the experience of those who do by ensuring they are better prepared. We will also be putting in place a more formal mentoring process for new instructors to give them better support as they develop their teaching skills. Last, it is now policy that doctoral students cannot normally teach RLS courses prior to completion of comprehensive exams. Two definite term lecturers have been hired (a 2-year term and a 1-year term) to reduce Departmental dependency on graduate students to teach courses. The 1-year DTL covers an aforementioned leave of absence whereas the 2-year DTL covers chronic shortages related to undergraduate growth and administrative course buyouts.¹

RLS has given serious consideration to course-based MA programs over the past two years. The Masters in Therapeutic Recreation (MTR) proposal was approved through Department and Faculty channels as well as by UW Senate and the Ontario Ministry but was shelved by Provost McBoyle in 2013 on the basis of inadequate revenue projections. That proposal will remain dormant for the foreseeable future, at least until the current RLS therapeutic recreation faculty complement is fully replenished; RLS is currently down two lines in that area pending replacement of a retiring faculty member and permanent resolution an unpaid leave situation. Preliminary discussion of a course-based tourism MA was also introduced by the RLS Graduate Studies committee but that discussion is on indefinite hold until newly hired tourism faculty are fully on board. As a decision has been made to move one of our tourism faculty lines, via retirement and replacement, to the TR group, the Department will not likely move in this direction until if or when a new faculty tourism hire can be justified.

¹ This process includes reviewing courses that need to be deactivated or amalgamated as a result of the Department’s visioning process. Most of these changes involve only REC courses, however AHS is also exploring possibilities of amalgamating REC 203/SOC 210 – Sociology of Sport with HLTH 260 – Social Determinants of Health and KIN 250 – Sociology of Physical Activity to provide an inter-professional education opportunity for all AHS students. This course could provide all students an opportunity to share and integrate knowledge from their respective degree programs. The Department is also exploring viability of the Parks Option given the upcoming retirement of our park management specialist and a decision to re-assign that line in support of the burgeoning Therapeutic Recreation major.
² Current RLS faculty teaching buyouts include: Director, Canadian Index of Well Being (2 courses, ongoing); Director, P³ULSAR (1) and RBC Retirement Research Centre (1); Special Advisor to the President on Women’s and Gender Issues (1); PI, CURA project (1); and requisite reductions for Department Chair (2), Associate Dean (1.5), and 2 Associate Chairs (1 each).
In the 2012 review of the Liberal Studies academic plans, the reviewers stated that there is “a strong need for a flexible program for students who seek a university experience without having to choose any particular major” as well as “for those students who for a variety of reasons cannot pursue a traditional disciplinary degree program.” The Liberal Studies academic plans fulfill this role in the Faculty of Arts: more than 1000 students are enrolled in Liberal Studies, and they can be divided into three groups:

1) mature students and adult learners;
2) motivated students coming into the program directly from high school;
3) students who use Liberal Studies as a transitional space (e.g. after transferring from another faculty or who are unable to continue in their chosen Arts major, but still wish to complete a university degree) – this group comprises the vast majority of Liberal Studies majors.

In essence, there are two types of students in the program: intentional students (students who want to be in Liberal Studies) and transitional students (students who end up by default in Liberal Studies and either remain there to finish their degrees or transition back to another program). Unlike any other Waterloo academic plan, Liberal Studies has neither dedicated faculty nor program-specific courses. Students pursuing a degree in Liberal Studies need only meet the general Arts requirements (i.e. minimum average, minimum number of course credits, and the faculty’s breadth requirements). As such Liberal Studies performs a major role in student retention at the University of Waterloo.

Enrolment in Liberal Studies is quite strong, as is evidenced by these tables displaying current enrolment and recent graduation rates:

**Current enrolment:**

<table>
<thead>
<tr>
<th></th>
<th>Enrolled in 3-year Liberal Studies degree</th>
<th>Of those enrolled, number in at least one minor or option</th>
<th>Enrolled in 4-year Liberal Studies degree</th>
<th>Of those enrolled, number in at least one minor or option</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winter 2015</td>
<td>342</td>
<td>39 (11.4%)</td>
<td>767</td>
<td>90 (11.7%)</td>
</tr>
<tr>
<td>active students</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Recent graduation data:**

<table>
<thead>
<tr>
<th></th>
<th>3-year Liberal Studies degree</th>
<th>Of those graduating, number with at least one minor or option</th>
<th>4-year Liberal Studies degree</th>
<th>Of those graduating, number with at least one minor or option</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring 2014</td>
<td>53</td>
<td>12 (22.6%)</td>
<td>25</td>
<td>19 (76%)</td>
</tr>
<tr>
<td>2013 [all year]</td>
<td>68</td>
<td>26 (38.2%)</td>
<td>47</td>
<td>28 (59.6%)</td>
</tr>
</tbody>
</table>

These statistics bring two important facts to light: (1) the recent change that allows students in general programs to register a minor has seen some uptake with Liberal Studies students, though it is too early to say whether or not this trend will continue to grow; (2) while there may be a great number of students enrolled in Liberal Studies, not all of those students end up graduating with a BA in Liberal Studies.

Unlike traditional disciplinary programs, Liberal Studies does not have a core or canon. A good Liberal Studies program will not prepare students to master a discipline, but rather assist them in developing an integrated understanding of human society. At the University of Waterloo, Liberal Studies has not performed this role; instead, it has really been a fallback general Arts
degree. The reviewers understood and accepted the necessity for Liberal Studies as a retention tool for the university, and they acknowledged the program’s flexibility as one of its major strengths. At the same time, the report identified four areas needing further discussion and review. These are listed below, and the italicized remarks indicate what action the Faculty of Arts has taken or is taking.

1. Curriculum
   a. Revise curriculum to include depth as feature (i.e. add some rigour to the program)
      i. *The introduction of the minor for any three- or four-year general BA degrees gives Liberal Students the opportunity to achieve more disciplinary depth.*
      ii. *Liberal Studies will be looking to introduce required courses specific to its program.*
      iii. *Continued review of departmental course offerings, particularly at the upper-year level, that have a truly inter- or trans-disciplinary focus that would make them appropriate to the aims of the program;* 
      iv. *Timeline: the minor in point (i) is already available; point (ii) will be initiated in the 2014-2015 academic year; point (iii) is an ongoing item.*
   b. Create Liberal Studies specific courses, e.g. foundation course; capstone course
      i. *The new director of the program (see 4.a. below) is working with the Associate Dean of Arts to create a suite of up to four courses that will do the following:* 
         1. *Define liberal studies and their role in understanding human society and endeavour;*
         2. *Integrate learning from diverse fields of study;*
         3. *Develop intellectual skills (e.g. information literacy, communication skills, etc.) that can benefit students over the long term and in both academic and non-academic contexts;* 
      ii. *Timeline: to be settled during the 2014-2015 academic year.*
   c. Absence of science requirements a concern
      i. *This is an issue that is being addressed as part of a broader review of the curriculum in the Faculty of Arts*
   d. Postpone development of an Honours plan idea to the mid-term (two-to-four years down the road)
      i. *Under consideration as part of a review of the overall honours/general distinction within the faculty. It is understood that a priority is making the Honours Liberal Studies degree available entirely online; therefore the development of online course offerings at the third- and fourth-year level is key.*

2. Identity and presence
   a. Lack of articulated identity for Liberal Studies
      i. *The development of specific Liberal Studies courses is an essential first step to remedying this situation.*
b. Change of attitude and discourse necessary (e.g. the webpage for the program discusses it in the negative: “you also have the option of **not** declaring a major”)
   i. **Agreed.** Again, the development of specific Liberal Studies courses is an essential first step to changing the discourse.

c. Establish a student society
   i. **To be successful, this would have to be a student-led initiative. This will likely only be possible when the program begins to develop a more positive and articulated identity. The introduction of required program-specific courses will allow students to develop the contacts necessary for a student society. The Arts Student Union will be consulted on this matter.**

d. Need for actual or virtual space as focal point of students’ university experience
   i. **This is an issue for the entire Faculty of Arts. It is hoped that the conversion of the Hagey courtyard into an indoor atrium will go a long way to providing social space for all Arts students.**
   
   ii. **Establishing specific Liberal Studies space will only be possible if the program acquires teaching staff.**

3. Advising/bureaucracy
   a. Course access be improved
      i. **The implementation of the new scheduling system will have an impact on course access. The effects of the implementation on Liberal Studies students will be monitored.**

   b. Limit students to maximum number of courses in Minor to avoid shadow degrees
      i. **As noted in the Faculty of Arts response to the reviewers’ report, this has been considered, and it has been concluded that instituting this restriction would reduce the flexibility of the program, increase the advising load, and likely result in an increased number of petitions. The program will actively encourage students to take advantage of the diversity offered by Liberal Studies.**

   c. Timely notification in 1B about status (i.e. accepted or not into desired major)
      i. **The Associate Dean of Arts is aware of this issue and is encouraging departments to act with dispatch when it comes to admission decisions. In addition, Honours Arts admission categories above 1B have been instituted.**

4. Role/function of the program within the Faculty of Arts
   a. Appoint a director
      i. **James M. Skidmore was appointed Director of Liberal Studies for 2013-2016. His mandate is to devise and implement a revised Liberal Studies program. The actions mentioned in this report will be undertaken by him with the support of the Associate Dean, Undergraduate Studies. There are plans to create a Liberal Studies committee, and some of the work may then be taken over by that committee, but for the time being the director will champion the major program changes.**
b. Recommend Minors requirement for four-year Liberal Studies students
   
i. All general three- and four-year BA students, including Liberal Studies students, can now pursue a minor, an option previously available only to honours students. There is reluctance to require a minor – it reduces the cherished flexibility of Liberal Studies – but all Liberal Studies students are strongly encouraged to pursue a minor in order to acquire greater proficiency in a specific discipline. Further discussions on requiring a minor will take place as the Liberal Studies program establishes its new regulations.
Recognition and Commendation

On 18 September, Professor John Hirdes of the School of Public Health and Health Systems was inducted as a fellow of the Canadian Academy of Health Sciences (CAHS). CAHS recognizes the full breadth of academic health science ranging from fundamental science to social science and population health. “Fellows elected to the Academy will be well recognized by their peers nationally and internationally for their contributions to the promotion of health science,” says a background statement. “They will have demonstrated leadership, creativity, distinctive competencies and a commitment to advance academic health science.” Hirdes was one of 50 fellows inducted to CAHS. [8 October 2014 Daily Bulletin]

At a ceremony in Yellowknife, Northwest Territories on 29 September, Professor Whitney Lackenbauer, chair of the Department of History at St. Jerome’s University, was appointed the Honorary Lieutenant Colonel of 1 Canadian Ranger Patrol Group. This is the largest military unit in Canada, comprising 1850 Canadian Rangers and 1600 Junior Canadian Rangers in Yukon, Northwest Territories, and Nunavut, as well as Atlin, British Columbia. “It is an absolute privilege to become the Honorary Lieutenant Colonel of the Rangers who act as our country’s eyes, ears and voice in the North,” Lackenbauer said. “The Rangers are one of our country’s great success stories in demonstrating sovereignty, security, and stewardship in a practical way that serves communities and our country as a whole. I have been honoured to travel with and learn from Rangers across the three territories, and the opportunity to serve this group of dedicated and patriotic Canadians is truly amazing.” For the last fifteen years, Lackenbauer has been researching the Canadian Rangers – members of isolated northern and coastal communities who serve the Canadian Armed Forces in a unique organization that has existed since 1947. He has written numerous books, chapters, and articles on the Rangers, including Vigilans: A History of 1 Canadian Ranger Patrol Group (forthcoming 2014), The Canadian Rangers: A Living History (2013), which was shortlisted for the Dafoe Book Prize earlier this year, and Canada’s Rangers: Selected Stories, 1942-2012 (2013). “I look forward to continuing to promote the Rangers’ proud history and their ongoing contributions to protecting and building our country,” says Lackenbauer. [3 October 2014 Daily Bulletin]
FOR INFORMATION

APPOINTMENTS/REAPPOINTMENTS

Adjunct Appointments

Graduate Supervision

COSTELLO, Mary Jean, Assistant Professor, School of Public Health and Health Systems, November 1, 2014 – December 31, 2015.

FAULKNER, Guy, Professor, School of Public Health and Health Systems, August 1, 2014 – July 31, 2015.

FRIES, Brant, Professor, School of Public Health and Health Systems, January 1, 2015 – June 30, 2016.

MCKAY, Bruce, Associate Professor, School of Public Health and Health Systems, October 1, 2014 – May 31, 2016.

Adjunct Reappointments

Graduate Supervision

TJAM, Erin, Associate Professor, School of Public Health and Health Systems, December 16, 2014 – May 31, 2016.

Graduate Supervision and Research

SELISKE, Patrick, Associate Professor, School of Public Health and Health Systems, November 1, 2014 – December 31, 2015.

Cross Appointments

NEPAL, Sanjay, Associate Professor, Department of Geography and Environmental Management to School of Public Health and Health Systems, July 1, 2014 – June 30, 2015.

LIU, Jennifer, Assistant Professor, Department of Anthropology to School of Public Health and Health Systems, October 1, 2014 – June 30, 2017.

James W.E. Rush
Dean, Faculty of Applied Health Sciences
FOR INFORMATION

A. APPOINTMENTS/REAPPOINTMENTS

Probationary-term Appointment

WHITSON, Jennifer (BA 2004 MA 2006 University of Alberta, PhD 2012 Carleton University), Assistant Professor, Department of Sociology and Legal Studies, December 1, 2014 to June 30, 2018. Dr. Whitson has recently held a SSHRC Postdoctoral Fellowship, allowing her to work as an embedded ethnographer with the Execution Labs Incubator at the Technoculture, Arts and Games Research Centre at Concordia University. Her main areas of research are surveillance and new media, the socio-economics of the games industry, and gamification and the governance of public health. She has published five refereed articles and five book chapters, had three papers in refereed conference proceedings, and helped to prepare a report on camera surveillance for the Privacy Commissioner of Canada.

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 Appointments

DEMAN, J. Andrew (BA 2001 MA 2003 Lakehead University, PhD 2010 University of Waterloo), Lecturer, Department of English Language and Literature, September 1, 2014 to August 31, 2015. Dr. Deman is an expert in visual semiotics, discourse and text analysis, and multimodality in digital and other media. He is an award-winning and highly effective teacher, and he has published scholarly articles on topics in graphic fiction. Dr. Deman will bring a depth of experience and accomplishment as a teacher to the department.

DEVEAU, Danielle (BA 2004 University of Alberta, MA 2006 Ryerson University, PhD 2012 Simon Fraser University), Lecturer, Department of English Language and Literature, September 1, 2014 to August 31, 2015. Dr. Deveau is an expert in communication, cultural studies, and the study of humour in various contemporary media forms such as TV and stand-up. She will bring a depth of experience and accomplishment as a teacher of composition and communication to the department.

DOYLE, Jennifer (BA 2001 BFA 2002 Mount Allison University, BEd 2003 Memorial University, MA 2008 Wilfrid Laurier University, PhD candidate University of Waterloo), Lecturer, Department of Drama and Speech Communication, September 1, 2014 to August 31, 2015. Ms Doyle explores the way that imagination is informed through various aspects of place and the significance of environment within the structure of events. Her dissertation focuses on the representation of environment and events in contemporary texts. She has a keen interest in the way in which public spaces, architecture, and cultural texts function as sites of negotiation and collective imaginings in discourse and in everyday life.

MOLL, Sorouja (BA 2007 MA 2008 University of Guelph, PhD 2013 Concordia University), Lecturer, Drama and Speech Communication, August 1, 2014 to July 31, 2017. Dr. Moll is a published creative and academic writer. She is interested in the critical discourse analysis of all forms of media. Her work includes essays for the Canadian Adaptations of Shakespeare Project (CASP), Canadian Theatre Review, Canadian Journal of Native Studies, and her recent contribution, “Circle of Stones – The Death of a Chief: Translating Shakespeare in Native Theatre,” appears in Translation Effects: The Shaping of Modern Canadian Culture. UBC Press will be publishing her work on the nineteenth-century Canadian news coverage of Louis Riel’s trial. Dr. Moll is thrilled to be joining the Department of Drama and Speech Communication.
WHITE, Stephanie (BA 2006 Calvin College, MFA 2009 University of Notre Dame, PhD expected 2014 University of Wisconsin), Lecturer, Department of English Language and Literature, July 15, 2014 to July 14, 2017. Ms White is an expert in composition studies, technical writing, and composition pedagogy, and the author of several articles on writing pedagogy. She will add teaching and research depth to composition and communication courses.

**Adjunct Reappointments**

*Instruction*

CHAKRABORTY, Liton, Lecturer, Department of Economics, January 1, 2015 to April 30, 2015.

ROSS, Martha, Lecturer, Department of Drama and Speech Communication, January 1, 2015 to April 30, 2015.

*Miscellaneous (research, consultations, etc.)*

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

STEvens, Elizabeth, Assistant Professor, Department of Psychology, September 1, 2014 to August 31, 2015.

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

*Graduate Student to Part-time Lecturer Appointments*

CHEKETE, Godrick, Department of French Studies, October 6, 2014 to December 31, 2014.

GADZALA, Krysteeana, Department of French Studies, October 2, 2014 to October 17, 2014.

**B. ADMINISTRATIVE APPOINTMENTS**

ANDISON, Lois, Associate Chair, Undergraduate Studies, Department of Fine Arts, October 1, 2014 to December 31, 2014.

DAWSON, Lorne, Associate Chair, Undergraduate Studies (Legal Studies), Department of Sociology and Legal Studies, October 1, 2014 to June 30, 2015.

MALONE, Paul, Associate Chair, Undergraduate Studies, Department of Germanic and Slavic Studies, January 1, 2015 to June 30, 2015.

NILSEN, Elizabeth, Associate Chair, Graduate Studies, Department of Psychology, January 1, 2015 to December 31, 2015.

**C. SABBATICAL LEAVE**

*Approved by the Board of Governors*

JHA, Ranjini, Associate Professor, School of Accounting and Finance, March 1, 2014 to August 31, 2014, full salary.

Douglas M. Peers
Dean, Faculty of Arts
FOR INFORMATION

A. APPOINTMENTS/REAPPOINTMENTS

Probationary-term Appointments

BACHMANN, Chris, Assistant Professor, Department of Civil & Environmental Engineering, March 1, 2015 – June 30, 2018. PhD Candidate University of Toronto; MASc University of Toronto 2011; BASc University of Toronto 2009. Mr. Bachmann will join the Transportation Engineering Research Group in the Department of Civil & Environmental Engineering. His current research involves the development of a multi-scale random utility based multi-region model to examine the effects of global shocks on local supply chains and logistics. Mr. Bachmann’s long-term vision is to formally link transportation and economics, and this initiative will cross numerous boundaries within the University.

REIMER, Michael, Assistant Professor, Department of Electrical & Computer Engineering, February 1, 2015 – June 30, 2018. PhD University of Ottawa 2010; MSc Technical University of Munich, Germany 2004; BSc University of Waterloo 2000. Dr. Reimer’s research interests are in materials and its application for quantum devices. In particular he is researching to develop solid-state quantum (single) photon sources, detectors and actuators.

Definite-term Appointment

IVKOVIC, Igor, Lecturer, Department of Systems Design Engineering, January 1, 2015 – December 31, 2017. PhD University of Waterloo 2011; MA University of Waterloo 2003; BA University of Waterloo 2001. Dr. Ivkovic has been an adjunct lecturer at the University of Waterloo since April 2010 and an adjunct lecturer at Wilfrid Laurier University since January 2014. He has taught numerous courses on interdisciplinary topics in Software Engineering at both the undergraduate and graduate levels.

Adjunct Appointments

Graduate Instruction


Graduate Supervision

GILLET, Marie Claire, Professor, Department of Chemical Engineering, October 6, 2014 – December 31, 2014.

PASERIN, Vladimir, Assistant Professor, Department of Mechanical & Mechatronics Engineering, October 1, 2014 – September 30, 2017.

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

SHU, Jun, Assistant Professor, Department of Mechanical & Mechatronics Engineering, October 1, 2014 – September 30, 2017.
WANTZ, Guillaume, Associate Professor, Department of Electrical & Computer Engineering, October 1, 2014 – September 30, 2017.

Graduate Instruction, Graduate Supervision and Research
MARTI, Luis, Associate Professor, Department of Electrical & Computer Engineering, October 1, 2014 – September 30, 2017.

Undergraduate Instruction, Graduate Instruction, Graduate Supervision and Research
MOH’D, Rezeq, Assistant Professor, Department of Electrical & Computer Engineering, October 1, 2014 - September 30, 2017.

Adjunct Reappointments
Graduate Supervision and Research
EL-HAKIM, Mohab, Assistant Professor, Department of Civil & Environmental Engineering, October 1, 2014 – September 30, 2017.

HAJIAN, Arsen, Associate Professor, Department of Systems Design Engineering, January 1, 2015 – December 31, 2017.

YOVANOVICH, MICHAEL, Professor, Department of Mechanical & Mechatronics Engineering, September 1, 2014 – August 31, 2017.

Research
CHOW, Len, Professor, Department of Electrical & Computer Engineering, October 1, 2014 – September 30, 2017.

Special Appointments
Undergraduate Instruction
DOWLING, Paul, Lecturer, School of Architecture, September 1, 2014 – December 31, 2014.

GASTMEIER, William, Lecturer, School of Architecture, September 1, 2014 – December 31, 2014

IBELINGS, Johannes, Lecturer, School of Architecture, September 1, 2014 – December 31, 2014.

NEILL, Shane, Lecturer, School of Architecture, September 1, 2014 – December 31, 2014.

SINCLAIR, Drew, Lecturer, School of Architecture, September 1, 2014 – December 31, 2014.

Special Reappointment
Undergraduate Instruction and Graduate Instruction
MATHER, David, Lecturer, Department of Mechanical & Mechatronics Engineering, September 1, 2014 – December 31, 2014.

Visiting Appointments

BAOZHEN, Zhang, Scholar, Department of Mechanical & Mechatronics Engineering, September 1, 2014 – August 31, 2015.
BUYANG, Zhang, Scholar, Department of Mechanical & Mechatronics Engineering, September 1, 2014 – August 31, 2016.

CAI, Xiaonan, Scholar, Department of Chemical Engineering, September 1, 2014 – December 31, 2014.

GAN, Nianfei, Scholar, Department of Mechanical & Mechatronics Engineering, September 22, 2014 – September 21, 2015.

HAN, Qi, Scholar, Department of Electrical & Computer Engineering, September 26, 2014 – September 15, 2016.

HAN, Zuoyue, Scholar, Department of Mechanical & Mechatronics Engineering, September 1, 2014 – August 31, 2015.

HE, Rong, Scholar, Department of Electrical & Computer Engineering, September 15, 2014 – August 31, 2015.

LEI, Fei, Scholar, Department of Mechanical & Mechatronics Engineering, January 1, 2015 – December 31, 2015.


MARCIA GOMES, Claudia, Scholar, Department of Chemical Engineering, September 8, 2014 – February 28, 2015.

PENG, Haixia, Scholar, Department of Electrical & Computer Engineering, September 26, 2014 – August 31, 2016.

SAMI, Abdul, Scholar, Department of Chemical Engineering, January 1, 2015 – June 30, 2015.

SHI, Yu, Researcher, Department of Civil & Environmental Engineering, October 3, 2014 – October 2, 2015.


TIAN, Lijiang, Scholar, Department of Mechanical & Mechatronics Engineering, October 1, 2014 – September 30, 2015.

WANG, Ying, Scholar, Department of Electrical & Computer Engineering, September 1, 2014 – August 31, 2015.

WU, Qingbo, Scholar, Department of Electrical & Computer Engineering, October 1, 2014 – September 30, 2015.

WU, Shaohua, Associate Professor, Department of Electrical & Computer Engineering, September 18, 2014 – September 17, 2015.

XAVIER, Nixson, Scholar, Department of Chemical Engineering, September 15, 2014 – September 14, 2016.

YANG, Jun (Jennifer), Professor, Department of Civil & Environmental Engineering, September 17, 2014 – February 28, 2015.

WANG, Yi, Scholar, Department of Mechanical & Mechatronics Engineering, September 30, 2014 – September 29, 2015.

ZHANG, Deyu, Scholar, Department of Electrical & Computer Engineering, September 1, 2014 – February 29, 2016.

ZHANG, Jingjing, Scholar, Department of Chemical Engineering, September 8, 2014 – September 7, 2015.

ZHANG, Shan, Scholar, Department of Electrical & Computer Engineering, October 15, 2014 – August 30, 2015.

ZHOU, Yikang, Scholar, Department of Chemical Engineering, September 15, 2014 – February 29, 2016.

Visiting Reappointment

B. ADMINISTRATIVE APPOINTMENTS
BLACKWELL, Adrian, Associate Director, Graduate Studies and Research, School of Architecture, September 1, 2014 – August 31, 2015.

CANIZARES, Claudio, Acting Executive Director, Waterloo Institute for Sustainable Energy (WISE), Department of Electrical & Computer Engineering, January 1, 2015 – August 31, 2015.

GORBET, Maud, Director, Biomedical Engineering, Department of Systems Design Engineering, September 1, 2014 – August 31, 2017.

ROSE, David, Associate Director, Graduate Programs, Conrad Business, Entrepreneurship & Technology Centre, Dean of Engineering Office, September 1, 2014 – August 31, 2015.
RYNNIMERI, Val, Associate Director, Graduate Studies and Research, School of Architecture, September 1, 2014 – August 31, 2015.

SPARKES, Doug, Associate Director, Undergraduate Programs, Conrad Business, Entrepreneurship & Technology Centre, Dean of Engineering Office, September 1, 2014 – August 31, 2015.

C. ADMINISTRATIVE REAPPOINTMENT
PARKER, Wayne, Associate Dean, Co-operative Education and Professional Affairs, February 1, 2015 – August 31, 2015.

D. SABBATICAL LEAVE
For Approval by the Board of Governors
HALDENBY, Eric, Professor, School of Architecture, January 1, 2015 – June 30, 2015 and January 1, 2016 – June 30, 2016, 100% salary.

Pearl Sullivan
Dean, Faculty of Engineering
FOR INFORMATION

A. APPOINTMENTS/REAPPOINTMENTS

Definite-term Reappointment

YATES, Colin, Lecturer, Faculty of Environment, October 1, 2014 to September 29, 2016. PhD (Planning), Waterloo, 2012; MES, Waterloo, 2008; BSc (Hons), Brock University, 2006. The primary duties associated with this position include teaching and educational outreach at the Waterloo Summit Centre for the Environment (Huntsville).

Adjunct Appointments

Graduate Supervision

HOOYKAAS, Amanda, ENV Field Course Developer, Department of Environment and Resource Studies, October 1, 2014 to December 31, 2015.

SMITH, Sandy, Professor, Department of Environment and Resource Studies, September 1, 2014 to August 31, 2017.

Instruction

LEEMING, Dan, Planner-in-Residence, School of Planning, September 1, 2014 to April 30, 2015.

Special Appointment

Instruction

KHEYROLLAH POUR, Homa, Lecturer, Faculty of Environment, September 1, 2014 to December 31, 2014.

Cross Appointments

SCHWEIZER, Vanessa, Assistant Professor, Department of Knowledge Integration to the Department of Geography and Environmental Management, September 1, 2014 to November 30, 2019.

WARRINER, Keith, Associate Professor, Department of Sociology, Faculty of Arts to the School of Planning, September 1, 2014 to August 31, 2017.

Change in Appointment

HOMER-DIXON, Thomas, Professor (tenured), transfer from the Department of Political Science, Faculty of Arts to the Faculty of Environment, effective September 1, 2014.

B. ADMINISTRATIVE APPOINTMENT

ROWLANDS, Ian, Acting Chair, Department of Environment and Resource Studies, January 1, 2015 to June 30, 2015.

C. ADMINISTRATIVE REAPPOINTMENT

VINODRAI, Tara, Director, Local Economic Development Program, School of Environment, Enterprise and Development, January 1, 2015 to December 31, 2017.
D. SABBATICAL LEAVES

For Approval by the Board of Governors (at its meeting on October 28, 2014)

LEWIS, Geoffrey, Associate Professor, School of Planning (60%) and School of Environment, Enterprise and Development (40%), November 1, 2014 to April 30, 2015, 100% salary.

PETRONE, Richard, Associate Professor, Department of Geography and Environmental Management, January 1, 2015 to June 30, 2015, 85% salary.

Jean Andrey
Interim Dean
FOR INFORMATION

A. APPOINTMENTS/REAPPOINTMENTS

Visiting Appointments

BAIA, Davy de Medeiros, Visiting Researcher, David R. Cheriton School of Computer Science, September 1, 2014 – March 31, 2015.


SALAH, Maziar, Researcher, Dept. of Combinatorics and Optimization, July 1, 2015 – July 30, 2016.


Adjunct Appointment

LIZOTTE, Daniel, Assistant Professor, David R. Cheriton School of Computer Science, August 1, 2014 – July 31, 2017.

Adjunct Reappointment

MULLIN, Ron, Professor, Dept. of Combinatorics and Optimization, October 1, 2014 – June 30, 2017.

Cross Appointment

RAYSIDE, Derek, Assistant Professor, Dept. of Electrical and Computer Engineering to the David R. Cheriton School of Computer Science, July 1, 2014 – June 30, 2016.

B. RESIGNATION

LIZOTTE, Daniel, Assistant Professor, David R. Cheriton School of Computer Science, effective December 31, 2014.

Ian P. Goulden
Dean, Faculty of Mathematics
FOR INFORMATION

APPOINTMENTS/REAPPOINTMENTS

Probationary-term Appointment Change
ALSABBAUGH, Wasem. Assistant Professor, School of Pharmacy, appointment changed to Lecturer until requirements for PhD fulfilled, October 1, 2014 to June 30, 2018.

Definite-term Reappointment
SMITH, Marilyn S., Lecturer, School of Optometry and Vision Science, May 1, 2016 to June 30, 2016.

Adjunct Appointments

Graduate Supervision
MADE, Benoit, Professor, Department of Earth and Environmental Sciences, April 1, 2013 to March 31, 2016.

McGRATH, Paul L., Assistant Professor, Department of Physics and Astronomy, September 1, 2014 to August 31, 2017.

Graduate Supervision and Research
ANDREWS, Susan A., Professor, Department of Biology, September 1, 2014 to August 31, 2017.

CAMPBELL, J. Larry, Associate Professor, Department of Chemistry, October 1, 2014 to August 31, 2017.

HANSON, Mark L., Associate Professor, Department of Biology, September 1, 2014 to August 31, 2017.

Adjunct Reappointments

Undergraduate Instruction, Graduate Instruction and Graduate Supervision
CALLENDAR, Murchison, (Professor Emeritus), Professor, School of Optometry and Vision Science, November 1, 2014 to October 31, 2017.

Graduate Supervision
ATKINSON, Gail M., Professor, Department of Earth and Environmental Sciences, October 1, 2014 to September 30, 2017.

BERG, Steven J., Assistant Professor, Department of Earth and Environmental Sciences, October 1, 2014 to September 30, 2017.

HUANG, Lin, Professor, Department of Earth and Environmental Sciences, October 1, 2014 to September 30, 2017.

MOLSON, John W.H., Professor, Department of Earth and Environmental Sciences, April 1, 2014 to March 31, 2017.

WHITE, Owen L., Professor, Department of Earth and Environmental Sciences, July 1, 2014 to June 30, 2017.
Graduate Supervision and Research

GODDARD, John, Professor, Department of Chemistry, September 1, 2014 to August 31, 2017.

HAMILTON, Ian, Professor, Department of Chemistry, September 1, 2014 to August 31, 2017.

MERRILL, A. Rod, Professor, Department of Chemistry, September 1, 2014 to August 31, 2017.

NORWOOD, Warren P., Assistant Professor, Department of Biology, November 1, 2014 to October 31, 2017.

PATerson, Andrew M., Assistant Professor, Department of Biology, October 1, 2014 to September 30, 2017.

SIVAK, Jacob G. (Distinguished Professor Emeritus), Professor, Department of Biology, November 1, 2014 to October 31, 2017.

SIVAK, Jacob G. (Distinguished Professor Emeritus), Professor, School of Optometry and Vision Science, September 1, 2014 to August 31, 2020.

TREVORS, Jack T., Professor, Department of Biology, October 1, 2014 to September 30, 2017.

WASOWICZ, Marcin, Professor, Department of Chemistry, September 1, 2014 to August 31, 2017.

WOLFE, Brent B., Professor, Department of Biology, December 1, 2014 to November 30, 2017.

Research

BERNATH, Peter F., Professor, Department of Chemistry, September 1, 2014 to August 31, 2017.

Special Appointments

Undergraduate Instruction

JOHNSON, Ron, Lecturer, School of Optometry and Vision Science, September 1, 2014 to December 31, 2014.

WALJI, Rishma, Lecturer, School of Pharmacy, September 1, 2014 to December 31, 2014.

Special Reappointments

Undergraduate Instruction

DYMOCK, Kenneth R., Lecturer, Earth and Environmental Sciences, September 1, 2014 to December 31, 2014.

NAGGE, Jeffrey J., Lecturer, School of Pharmacy, September 1, 2014 to December 31, 2014.

Cross Appointments

CAMPBELL, Sue Ann, Professor, Department of Applied Mathematics to Department of Biology, September 1, 2014 to August 31, 2016.

PETRONE, Richard, Associate Professor, Department of Geography and Environmental Management to Department of Earth and Environmental Sciences, September 1, 2014 to August 31, 2016.
Cross Reappointments

**BROWN, Daniel G.**, Associate Professor, School of Computer Science to Department of Biology, October 1, 2014 to September 30, 2017.

**NEKKAR, Praveen**, Assistant Professor, School of Pharmacy to Department of Biology, November 1, 2014 to October 31, 2017.

**SLAVCEV, Roderick A.**, Assistant Professor, School of Pharmacy to Department of Biology, October 1, 2014 to September 30, 2017.

**SLAVCEV, Roderick A.**, Assistant Professor, School of Pharmacy to Department of Chemistry, September 1, 2014 to August 31, 2017.

**SPAFFORD, David**, Associate Professor, Department of Biology to Department of Chemistry, September 1, 2014 to August 31, 2017.

Graduate Student to Part-time Lecturer Appointment

**NAZARI NEJAD, Saman**, Lecturer, School of Pharmacy, September 1, 2014 to December 31, 2014.

Staff to Part-time Lecturer Reappointment

**DINH, Tan N.**, Lecturer, Faculty of Science, September 1, 2014 to December 31, 2014.

T.B. McMahon
Dean, Faculty of Science
Council of Ontario Universities
Report of the Academic Colleague

The academic colleagues met on October 9 in Toronto. In addition to the COU update and the reports received from colleagues on committees, the colleagues reflected on the implications of the Strategic Mandate Agreements (SMA) for institutional autonomy and on ways to increase the effectiveness of council meetings and engagement of council members. An itemized account is given below. The next academic colleagues meeting is scheduled for December 11 and 12, 2014. The dinner meeting discussion will focus on recruitment and retention of Aboriginal students and faculty.

COU Update
Funding Review: The Executive Committee met with MTCU Deputy Minister Newman in September, and she indicated that the ministry is interested in proceeding with a funding review. This could be a very significant initiative; MTCU will bring in a lead for the project. Though there have been some changes to the funding model, the basic structure has not changed in approximately 50 years.

The objectives for the review include:
1. To align funding with MTCU’s differentiation agenda;
2. To provide incentives other than growth;
3. To tie a small (but meaningful) proportion of funding to performance (at this time, about 1% of funding is tied to KPI, and a small percentage (~4%) is tied to MYAAs);
4. To fix what the ministry calls anomalies, and to make the formula more transparent and easier to explain.

COU does not expect more funding to be available from MTCU. A task force of five executive heads, supported by senior CUPA members, will meet in early November to talk about objectives, parameters, and process.

Pensions: A group of universities and faculty association representatives are meeting to discuss a Jointly Sponsored Pension Plan (JSPP). The group will develop a working model for consideration, and will conclude their work in the summer with a set of recommendations.

Net Tuition: This topic will be a major focus for the Policy & Analysis unit at COU over the next year. We will be initiating a conversation with members about the tuition framework; OSAP data which has been provided to COU will be helpful as we work to understand this important topic.

Program Approvals: The ministry has agreed to an expedited review process for some proposed programs that are aligned with program strengths and areas of growth in the SMAs. The ministry has indicated five dates for program submissions; within 30 days, universities should be informed if the program is eligible for expedited review. Decisions should be available in approximately four months for programs in the expedited review process. The new guidelines also require submission for undergraduate certificates.

Online: The 2014-2015 MTCU and university guidelines have been distributed. In this second round of funding, proposals may be submitted for online courses or modules. Collaboration is highlighted in the
guidelines; the guidelines define collaboration broadly, to include partnerships between universities (or universities and colleges), or within universities through inter-academic projects. In order to facilitate collaborative partnerships, a Preliminary Statement of Intent (due October 20) has been added to the proposal process. Preliminary statements will be posted to a website (www.ontarioonlinecoursecall20142015.wordpress.com) so that universities can identify potential partners and university contacts.

The Ontario Online consortium is currently in the process of being incorporated. Invitations will be sent to executive heads, and members will be named. At the first members’ meeting, a board of directors will be nominated.

Credential Review: MTCU has contracted with the Social Research and Development Corporation (SRDC) to conduct a review of Ontario’s credential framework. One of the issues to be considered is the colleges’ interest in offering three-year bachelor’s degrees. Colleges currently offer some four-year degrees.

OCAV members have met with SRDC twice. One of the issues discussed at the meetings was university efforts to help students explain their experiences to prospective employers, and to help prepare students for the job market. For example, many universities utilize e-portfolios and co-curricular transcripts. These efforts should not be part of a credential framework. Universities believe that the current framework is flexible and allows for changing labor market needs. In addition, there are many collaborative programs in place between colleges and universities and many credit transfer pathways; allowing colleges to award three-year degrees may threaten the viability of these programs and pathways.

Graduate Allocations: The graduate allocations included in the SMAs indicate that 11% of spaces are tied to specific programs. This is something new in the graduate allocation process.

The ministry has indicated that it faces challenges related to unspent allocations in the ministry’s budget when graduate targets are not met. The Ontario Council on Graduate Studies (OCGS) and COU are working on a background paper to help explain the complexities of graduate recruitment and admissions to the ministry. This issue is particularly important because of an expected decrease in enrolment over the next few years. In particular, declining enrolments in arts and humanities at the undergraduate level may have an impact on graduate program enrolments in these areas. Declining enrolment is expected until approximately 2021.

Colleagues’ Presentation to Council
Two topics were discussed in preparation for colleagues’ presentation to council:

- Strategic Mandate Agreements: Implications for institutional autonomy.
  
  *What concerns have emerged following the SMA process? How might SMAs constrain university autonomy?*

- Increasing the effectiveness of council meetings and engagement of council members.
  
  *What suggestions do we have for enhancing colleagues’ engagement in council meetings and the COU enterprise?*

A summary of colleagues’ discussions are included below:

Colleagues’ Engagement with Council: Colleagues appreciate the structure of council meetings and the opportunities to bring their perspectives to executive heads. Using the morning meeting time to
brainstorm and prepare the short presentations worked well. Some additional ideas for engaging with council were also discussed, including:

- Colleagues could respond to specific topics offered by executive heads. The discussion following colleagues’ presentation might be lengthened so that there is time for an exchange of ideas.
- Short presentations helped keep discussions focused and timely. In the past, colleagues’ papers were sometimes delivered after a topic had lost some of its immediacy. Presentations help address some of the timing issues with papers.
- COU is interested in bringing academic colleagues into conversations on some policy issues (beyond colleagues’ participation on committees). For example, colleagues are interested in Aboriginal students (recruitment, admissions, and support), Aboriginal faculty issues, and Aboriginal students in STEM disciplines; pedagogy related to online and traditional teaching; and International students.
- Colleagues are interested in more dialogue with executive heads. Some of this dialogue could focus on the issue presented, and some of the time could be spent discussing the central issues exec heads and colleagues will bring forward at their Senate meetings.
- At the Council meeting, it would be helpful to sit in diverse groups, so that colleagues are seated at tables with presidents. This would help lead to good conversations during lunch.

SMAs – Implications and Concerns: Colleagues shared their reflections on the SMA process, including:

- The SMAs are being used to help articulate an Ontario university “system,” but universities are also autonomous entities. For some colleagues, it is concerning to have program decisions made through government negotiations.
- There seems to be a great deal of overlap in the SMAs; differentiation is challenging in this context.
- Universities have different processes and cultures; not all universities were able to approve their SMAs through their Senates. SMAs may ultimately differ based on who was involved in preparing them.
- The funding formula review will happen before the SMA process can be reviewed (and new SMAs negotiated). This mismatch could be concerning, especially if the funding review results in programming decisions.
- SMAs may threaten collegiality within an institution. Internal faculty relationships are important; how will future SMAs engage university communities to help create a sense of common purpose?
- Is it possible that SMAs could lead to program changes universities do not want to make? And how does program prioritization intersect with the SMA process?
- Concerns about differentiation are complex given the notion of the comprehensive university (this may be one reason that there is similarity across the SMAs).
- Despite some concerns, the effort towards transparency on the part of the ministry is welcomed. The ministry has made funding decisions for programs in the past; this process may be clearer.
- One issue that is concerning is access. SMAs could lead to differentiation that ultimately disenfranchises some; this could be an access problem.
- The SMA process is complex and tension-filled. Can academic colleagues be engaged on their campuses to assist in the next iteration, and, perhaps, to help ease tensions?

Reports from Colleagues on Committees

a. Executive Committee: The committee discussed plans for the council meeting, confirming that one of the agenda items would be ways of ensuring the engagement of academic colleagues. The committee also discussed implications of Minister Moridi’s dual appointment in MTCU and MRI. The committee agreed that Alastair Summerlee’s proposal to AUCC regarding “Vote Campus” — an initiative to make voting accessible on Ontario’s university campuses — is a good idea. The president’s report included a summary of the MTCU credential review process to date. Deputy
Minister Newman provided a report on the following items: SMAs, the status of briefings with Minister Moridi, an update on the Major Capacity Expansion initiative, Bill 8 (the Public Sector and MPP Accountability and Transparency Act), and the upcoming funding formula review.

b. Standing Committee on Relationships with Other Postsecondary Institutions: The committee met in late August and focused on the ongoing credential review; MTCU has contracted with a consulting firm to examine the credential framework and whether or not there is an appropriate mix of credentials available in Ontario. Outcomes from this review may inform the ministry’s decisions about college degree-granting, particularly the question of colleges offering three-year degrees. The college SMAs indicate that most colleges have aspirations for offering degrees. ONCAT also provided an update.

c. Committee on Nominations: Appointments to COU’s standing committees were approved by executive heads. The list of appointments was sent to colleagues in early September.

d. Budget and Audit Committee: OUAC is updating its computing system, which is a significant investment; they will be contracting with PeopleSoft. OUAC needs flexibility in the system to meet the needs of all universities and to meet electronic information compliance requirements.

e. OUAC Advisory Board: OUAC has developed a new mission statement, and has increased their fees by $10. They are working very closely with ONCAT on block transfer agreements. Recently, OUAC was named in a gender discrimination lawsuit. Though gender is included in the application process, it is not used except for in the aggregate to report statistics on applicants, and in cases of scholarships with particular requirements. There is some ongoing concern about collecting gender information with applications.

f. Quality Council: The Learning Outcomes Conference is scheduled for October 16 and 17. The council also discussed the terms for cyclical program reviews, which is currently set for eight years.

Marios Ioannidis
Academic Colleague
Council of Ontario Universities
FOR APPROVAL

Undergraduate Council Appointment

Motion: To approve the appointment of Doug Cowan (Renison University College) as the affiliated institutions faculty representative (replacing Tom Brenner), term to 30 April 2015.
To: Senate

From: Logan Atkinson, University Secretary & General Counsel

Date: 25 October 2014

Subject: Policy 44 – Research Centres and Institutes

Motion: To recommend the revised Policy 44 – Research Centres and Institutes to the president for approval. [See Attachment #1]

Background: On 20 October 2014, Senate recommended that the president approve a new policy, Policy 44 – Research Centres and Institutes. When finalizing the policy, the staff in the Secretariat & Office of General Counsel noticed that some of the changes requested by Deans’ Council in May, which were reflected in the version of the policy reviewed by Graduate & Research Council in June, were not included in the version of the policy reviewed by Senate in October. We apologize for the oversight and have agreed on a protocol to prevent such incidents from occurring in the future.

The substantive changes requested by Deans’ Council are as follows:
- In section 2, Scope, the words “or teaching” have been added after the words “primarily administrative” in the second line.
- In Section 7.6, the words “or to apply to Senate through the vice-president, university research for a special dispensation” have been deleted.
- In Section 8.3, the last sentence has been deleted and replaced with the following: Questions from University Research Centres/Institutes should be addressed to the Office of Advancement. Questions from Research Centres/Institutes that are housed within a Faculty should be addressed to the respective Faculty’s advancement office.
- In Section 10.4.3, “and is seconded to the role on a part-time basis” has been deleted.

In addition to the above, we have made a couple of corrections and updated the formatting and style to reflect the most recent policy template and the Waterloo Writing Style Guide published by Marketing and Strategic Communications.
Policy 44 – Research Centres and Institutes

Attachment #1

The true copies of policies found on the website of the University of Waterloo are compulsory rules for the University community. The authoritative copies of the policies are held by the Secretariat & Office of General Counsel (SOGC) and bear the seal of the University of Waterloo. The online version is accessible through the website of the SOGC is available for information purposes solely. In case of discrepancy between the online version and the authoritative copy held by the Secretariat, only the latter has official value. SOGC, the authoritative copy shall prevail. Please contact the SOGC for assistance if necessary.

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 82
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 of Waterloo 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 or teaching (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:

- *Human Rights Code, R.S.O. 1990, c. H.19*
- *Statute Labour Act, R.S.O. 1990, c. S.20*
- *Employment Standards Act, 2000, S.O. 2000, c. 41*

If any of these legal provisions are modified, abrogated, superseded, or added to, the policy will be interpreted in accordance with this new legal framework.

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

In this policy and its appendices, if any, the following terms shall have the following meanings:

- **Governing Body** has the meaning given to such term in Section 10.3.

- **Member** means a member of a Research Centre/Institute as set out in Section 11. The term Member includes Regular Members.

- **Regular Members** are a class of Members defined in Section 11.2.

- **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. Questions from University Research Centres/Institutes should be addressed to the Office of Advancement. Questions from Research Centres/Institutes that are housed within a Faculty should be addressed to the respective Faculty’s advancement office.

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
Policy [Number to be assigned], Research Centres and Institutes Page 5

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 ex officio 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 guidelines including, but not limited to policies 14, 18, 76 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 7 October 2014 and 4 November 2014 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 2014]

NEW ACADEMIC PLANS

- Faculty of Arts
  Language Certificate Plans

1. **Motion**: To approve the certificate in Arabic language as presented.

   For students registered in degree programs at the University of Waterloo, two certificate-programs are offered: Arabic Language I and Arabic Language II. Students must successfully complete two academic course units (four courses) with a cumulative average of 70% as follows:

   Arabic Language I  
   SI 101R, 102R, 201R, 202R

   Arabic Language II  
   SI 201R, 202R, 301R, 302R

   Notes:
   1. Certificates I and II are mutually exclusive. Only one certificate will be granted.
   2. Faculty of Arts double-counting rules apply.

   **Rationale**: The certificate plans in motions 1-8 were approved by Arts but were brought forward as regulation changes to Senate Undergraduate Council (SUC) at its June 2013 meeting; it has subsequently been determined that the plans should have been brought to SUC as new plans for recommendation to Senate, since they were being changed from certificates of participation/completion (curricular content controlled solely by the department offering them) to certificate programs (curricular content controlled by the university, and subject to all of its rules and regulations). These certificates appear in the current 2014-15 calendar and these recommendations seek to retroactively obtain the appropriate Senate approvals.

2. **Motion**: To approve the certificate in Chinese language as presented.

   For students registered in degree programs at the University of Waterloo, two certificate-programs are offered: Chinese Language I and Chinese Language II. Students must successfully complete two academic course units (four courses) with a cumulative average of 70% as follows:

   Chinese Language I  

   Chinese Language II  

   Note: Students are allowed a maximum of two 100-level courses.
3. **Motion:** To approve the certificate in Croatian language as presented.

Students registered in degree programs at the University of Waterloo may pursue the certificate program in Croatian Language.

Students must successfully complete two academic course units (four courses) with a cumulative average of 70% as follows:

- CROAT 101, 102, 201, 202

Notes:
1. Please note that not all courses are offered on a yearly basis.
2. Faculty of Arts double-counting rules apply.

**Rationale:** See rationale for Motion #1.

4. **Motion:** To approve the certificate in Dutch language as presented.

Students registered in degree programs at the University of Waterloo may pursue the certificate program in Dutch Language.

Students must successfully complete two academic course units (four courses) with a cumulative average of 70% as follows:

- DUTCH 101, 102, 201, 202

Notes:
1. Please note that not all courses are offered on a yearly basis.
2. Faculty of Arts double-counting rules apply.

**Rationale:** See rationale for Motion #1.

5. **Motion:** To approve the certificate in German language as presented.

Students registered in degree programs at the University of Waterloo may pursue the certificate program in German Language.

Students must successfully complete two academic course units (four courses) in GER language, with the exclusion of courses taught in English, with a cumulative average of 70%.

Notes:
1. This certificate is not open to students pursuing a German academic plan.
2. Not all courses are offered on a yearly basis.
3. Faculty of Arts double-counting rules apply.

**Rationale:** See rationale for Motion #1.
6. **Motion:** To approve the certificate in Japanese language as presented.

For students registered in degree programs at the University of Waterloo, two certificate programs are offered: Japanese Language I and Japanese Language II. Students must successfully complete two academic course units (four courses) with a cumulative average of 70% as follows:

Japanese Language I  
Note: Students are allowed a maximum of two 100-level courses.

Japanese Language II  
JAPAN 201R, 202R, 301R, 302R

Notes:
1. Certificates I and II are mutually exclusive. Only one certificate will be granted.
2. Faculty of Arts double-counting rules apply.

**Rationale:** See rationale for Motion #1.

7. **Motion:** To approve the certificate in Korean language as presented.

Students registered in degree programs at the University of Waterloo may pursue the certificate program in Korean Language. Students must successfully complete two academic course units (four courses) with a cumulative average of 70% as follows:

KOREA 101R, 102R, 201R, 202R

Note: Faculty of Arts double-counting rules apply.

**Rationale:** See rationale for Motion #1.

8. **Motion:** To approve the certificate in Russian language as presented.

Students registered in degree programs at the University of Waterloo may pursue the certificate program in Russian Language.

Students must successfully complete two academic course units (four courses) in RUSS or REES language, with the exclusion of courses taught in English, with a cumulative average of 70%.

Notes:
1. This certificate is not open to students pursuing a Russian and East European Studies academic plan.
2. Not all courses are offered on a yearly basis.
3. Faculty of Arts double-counting rules apply.

**Rationale:** See rationale for Motion #1.
FOR APPROVAL [effective 1 September 2015]

NEW ACADEMIC PLANS

Faculty of Environment
Geography and Environmental Management
Climate Change Specialization

9. Motion: To approve the new climate change specialization as presented.

Students majoring in Honours Geography and Environmental Management, Geography and Aviation, and Geomatics may choose to graduate with one specialization. (Calendar 2015/16)

Requirements:

Minimum of 4.0 units
1.5 units must be at 400- level

GEOG 209 Hydroclimatology
GEOG 308 Human Dimensions of Global Climate Change
GEOG 309 Physical Climatology
GEOG 459 Energy and Sustainability (1.0 unit)

At least one course of physical geography courses selected from:
GEOG 408 Modelling our Future Climate (1.0 unit)
GEOG 409: Energy Balance Climatology (1.0 unit)
GEOG 418 The Arctic Climate System
GEOG 419 The Cryosphere (1.0 unit)
GEOG 490A Honours Thesis Preparation*
GEOG 490B Honours Thesis Completion* (1.0 unit)

At least one course of human geography courses selected from:
GEOG 203 Environment and Development
GEOG 306 Human Dimensions of Natural Hazards
GEOG 356 Resource Management
GEOG 453 Urban Stormwater Management
GEOG 490A Honours Thesis Preparation*
GEOG 490B Honours Thesis Completion* (1.0 unit)

*Students taking GEOG 490A must also complete GEOG 490B. Topic must be approved by the GEM Undergraduate Officer.

Rationale: The department offers a suite of courses that already includes components of climate change, and the addition of this specialization is expected to be attractive to incoming undergraduates.

CHANGES TO ACADEMIC PLANS

Faculty of Environment
Environment and Business

10. Motion: To approve changes to the environment and business plan as presented. (strikethrough = deleted text; underline = new text)
Legend

* Students in the regular Honours plan must complete at least one of ENBUS 307, ENBUS 308, ENBUS 310, ENBUS 311, or ENBUS 312.

‡ ECON 220 is a listed antireq for ENBUS 203. Academic Advisor approval required to enroll in ECON 220.

† ENVS 131 must be completed with a grade of 65% or higher. Please see the English Language Proficiency Requirement section for the Faculty of Environment if you fail to meet this requirement.

Year One

AFM 123 Accounting Information for Managers
AFM 131 Introduction to Business in North America
ECON 101 Introduction to Microeconomics
ECON 102 Introduction to Macroeconomics
ENBUS 102 Introduction to Environment and Business
ENBUS 112 Operationalizing Sustainable Development within Business
ENVS 131† Communications for Environmental Professions
ENVS 178 Introduction to Environmental Research Methods
ENVS 195 Introduction to Environmental Studies
GEOG 101 Geography and Human Habitat
PHIL 224 Environmental Ethics
INDEV 100 Introduction to International Development
plus 1 elective for a total of five units

Year Two

ECON 102 Introduction to Macroeconomics
ENBUS 202 Environmental Management Systems
ENBUS 203‡ Green Entrepreneurship
ENBUS 204 Principles of Industrial Ecology
ENVS 105 Environmental Sustainability and Ethics
ENVS 278 Advanced Environmental Research Methods
ENVS 200 Field Ecology
ENVS 201 Introduction to Canadian Environmental Law
GEOG 181 Principles of GI Science
GEOG 203 Environment and Development in a Global Perspective
or INDEV 100 Introduction to International Development

One of:
ENBUS 211 Green Marketing
ECON 344 Marketing: Principles of Marketing and Consumer Economics

One course* from the following (see note 5):

ENBUS 307 Environmental Declarations Industrial Ecology: Life Cycle Assessment and Management in Business
ENBUS 308 Advanced Environmental Auditing
ENBUS 310 Strategic Management for Sustainable Business
ENBUS 311 Green Marketing Principles of Marketing for Sustainability Professionals
ENBUS 312 Operationalizing Sustainable Development within Business
HRM 200 Basic Human Resources Management
INDEV 308 Introduction to Social Entrepreneurship
PHIL 215 Professional and Business Ethics
plus 2–3 electives for a total of five units

Year Three

AFM 231 Business Law
ECON 344 Marketing: Principles of Marketing and Consumer Economics
ENVS 201 Introduction to Canadian Environmental Law
ENVS 220 Ecological Economics
ENVS 278 Advanced Environmental Research Methods
ENBUS 302 Strategies for Environment and Business
ENBUS 306 Research Design
ERS 215 Environmental and Sustainability Assessment I

One Two courses* from the following (see note 5):

ENBUS 307 Industrial Ecology: Life Cycle Assessment
ENBUS 308 Sustainability Management Standards and Auditing
ENBUS 309 Applied Social Marketing
ENBUS 310 Strategic Management for Sustainable Business
ENBUS 311 Green Marketing
ENBUS 312 Operationalizing Sustainable Development within Business
HRM 200 Basic Human Resources Management
INDEV 308 Introduction to Social Entrepreneurship
PHIL 215 Professional and Business Ethics

plus 2–3 electives for a total of five units

Year Four

ECON 371 Business Finance 1
ENBUS 402A/B Environment and Business Project

Two courses from the following:

ENBUS 406 Industrial Ecology: Sustainable Materials
ENBUS 407 Corporate Sustainability Accounting and Reporting
ENBUS 408 Best Practices in Regulations
ENBUS 409 Special Topics in Environment and Business
ENBUS 410 Engaging Stakeholders
ENBUS 411 International Corporate Responsibility
ENBUS 412 Advanced Strategic Management for Sustainable Business
ENVS 401 Aboriginal Law and Natural Resource Development

plus 4 electives for a total of five units

Rationale: In light of the recent program growth, the proposed plan changes will provide greater capacity to deliver courses and align with recent exercises to revise the curriculum.

Mario Coniglio
Associate Vice-President, Academic