# OPEN SESSION

**Consent Agenda**

**Motion:** To approve or receive for information by consent items 1-6 below.

1. Minutes of the 21 April 2014 Meeting
2. Reports from Committees and Councils
   a. Graduate & Research Council
   b. Honorary Degrees Committee [news release at places]
   c. Undergraduate Council
3. Report of the President
   a. Recognition and Commendation
4. Reports from the Faculties
5. Report of the COU Academic Colleague
6. Committee/Council Appointments

**Regular Agenda**

7. Business Arising from the Minutes
   a. Exceptions to Policy 40, The Chair related to Religious Studies
8. Reports from Committees and Councils
   a. Executive Committee
   b. Graduate & Research Council
   c. Long Range Planning Committee
   d. Undergraduate Council
9. Teaching Presentation: Dr. Steve Furino, Mathematics
10. Report of the President
11. Q&A Period with the President
12. Report of the Vice-President, Academic & Provost
    a. Changes to Policy 59, Reduced Workload to Retirement
    b. New Policy 30, Employment of Graduate Student Teaching Assistants
    c. Working Group on a Fall Term Break
13. Report of the Vice-President, University Research
14. Other Business

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### CONFIDENTIAL SESSION

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JLA/tad  
9 May 2014  
Logan Atkinson  
University Secretary & General Counsel
University of Waterloo
SENATE
Minutes of the Monday 21 April 2014 Meeting


Guests: Mario Coniglio, Donna Ellis, Peggy Jarvie, Nick Manning, Carlos Mendes, Daniela Seskar-Hencic, Allan Starr, Dave Wallace

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


*regrets

Organization of Meeting: Geoff McBoyle took the chair in the absence of the president, 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 1-4 below.

1. MINUTES OF THE 24 MARCH 2014 MEETING
Senate approved the minutes of the meeting as distributed.

With respect to the Confucius Institute, a question was raised about the offering of credit courses through the Confucius Institute (as suggested on its website), although the institute was not approved by Senate. Cartwright assured Senate that courses are offered through the Centre for East Asian Studies, not through the Confucius Institute, and confirmed that the website would be corrected.

2. REPORTS FROM COUNCILS
Graduate & Research [revised report at senators’ places]. Senate received the report for information.

Undergraduate
- Chemical Engineering, Faculty of Engineering. Senate approved amendments to the Chemical Engineering program as presented in the report.
- **Mechatronics Engineering, Faculty of Engineering.** Senate approved amendments to the Mechatronic Engineering program as presented in the report.

- **Biology, Faculty of Science.** Senate approved amendments to the Biology plans as presented in the report.

Re: the new Columbia International College Scholarship, Goulden described the arrangement by which scholarships dedicated to students entering the Faculty of Mathematics from the Columbia International College were established and are awarded.

The remaining items in the report were received for information.

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

4. **REPORT FROM THE FACULTIES AND RENISON UNIVERSITY COLLEGE**
   Senate received the reports for information.

Busch and Bobier. Carried.

**Regular Agenda**

5. **BUSINESS ARISING FROM THE MINUTES**
   **March Open House.** Darling provided information on attendance at the March Open House, and explained why attendance was down this year. Changes in timing to assist in parking and access to rooms will be done in coming years to try to maintain attendance. Darling was asked about the advisability of holding the open house on a Saturday, when the university is possibly not shown at its best. He responded by saying that this is a trade-off, the logistical issues outweighing the possible downside for not seeing the academic side of university life operating in its ordinary course.

6. **REPORTS FROM COMMITTEES AND COUNCILS**
   **Executive Committee.** Senate heard a motion to acclaim the membership of Senate committees and councils and the Board of Governors as follows:
   - **Executive Committee.** 2014-15 – Richard Wells (applied health sciences), James Skidmore (arts), George Freeman (engineering), Bruce Frayne (environment), Frank Zorzitto (mathematics), Bernie Duncker (science), Susan Schultz Huxman (affiliated and federated institutions), Chris Lolas (undergraduate student), Coleen Even and Robert Henderson (graduate students).

   - **Senate Finance Committee.** 2014-15 – James Rush (applied health sciences), Lutz-Alexander Busch (arts), Manoj Sachdev (engineering), Olaf Weber (environment), Michele Mosca (mathematics), David Edwards (science), Graham Brown (affiliated and federated institutions), Mohammad Nasif and Alexander Wray (undergraduate students), Boyd Panton (graduate student), Jay Shah (alumni).

   - **Senate Long Range Planning Committee.** 2014-15 – Diana Parry (applied health sciences), Daniel O’Connor (arts), Mario Ioannidis (engineering), Alex Brenning (environment), Dong Eui Chang (mathematics), Paul Murphy (science), Glenn Cartwright (affiliated and federated institutions), Alanna Benson and Danielle Burt (undergraduate students), Maryam Shahtaheri (graduate student), Barbara Veale (alumni).
• Senate Nominating Committee for Honorary Degrees. 2014-15 – John Garcia (applied health sciences), Tara Collington (arts), Samir Elhedhli (engineering), Markus Moos (environment), Bruce Richter (mathematics), Susan Leat (science), Katherine Bergman (affiliated and federated institutions), Nickta Jowhari and Mohammad Nasif (undergraduate students), Samantha Shortfall (graduate student).

• Senate Graduate & Research Council. 2014-16 – Lana Vanderlee (applied health sciences), Daniel McRoberts (environment), Michael Hartz (mathematics).

• Senate Undergraduate Council. 2014-16 – Dan Davison (engineering), Carrie Mitchell (environment), Cynthia Struthers (mathematics), Carey Bissonnette (science), Toni Serafini (federated institution).

• University Committee on Student Appeals. 2014-16 – Duane Kennedy (arts), Daniel Stashuk (engineering), Allyson Francis (undergraduate student, engineering), Sameera Karri (undergraduate student, science), Daniel McRoberts (graduate student, environment).

• Board of Governors. 2014-16 – David Porreca, Hamid Tizhoosh and Frank Zorzitto (faculty), Allyson Francis and Chris Lolas (undergraduate students), Maryam Shahtaheri (graduate student); 2014-15 – Danielle Burt (undergraduate student).

Henderson and Hulan. Carried.

Graduate & Research Council. Horton presented a summary of graduate awards recently received by students at the university.

• International Visiting Graduate Students (IVGS), Graduate Studies Regulations. Senate heard a motion to approve amendments to graduate studies regulations pertaining to IVGS as presented in the report and effective 1 May 2014.

Horton and Bobier. Carried.

• Terms of Reference for the Graduate Student Millennium Bursary Program. Senate heard a motion to approve amendments to the terms of reference for the Graduate Student Millennium Bursary program as presented in the report and effective 1 May 2014.

Horton and Porreca. Carried.

Undergraduate Council

• Minor in Public Policy and Administration, Political Science, Faculty of Arts. Senate heard a motion to approve the Minor in Public Policy and Administration as presented in the report.

DeVidi and Porreca. Carried.

7. PRESENTATIONS

Research. Dixon introduced Melanie Campbell, professor of physics & astronomy and optometry. Campbell presented a report on her research called the “Optics of the Eye as a Window on the Brain,” focusing on adaptive optics and methods to image amyloid beta in the retina as a diagnostic of Alzheimer’s disease.

Federation of Students. The president of the Federation of Students, David Collins, provided a presentation on the work of the Federation of Students, focusing on program delivery, student services, commercial services, and the work it does to represent student interests at the local, provincial and national levels.

Questions were asked about the rationale for ending membership in the Canadian Alliance of Student Associations, and Collins advised that the alliance was not delivering value for the Federation of Students. There are no current plans to affiliate with another national group. With respect to course evaluation, it was observed that students are interested in disclosure of course evaluation results and the accessibility of these evaluations online.


8. REPORT OF THE PRESIDENT
The president was not present.

9. Q&A PERIOD WITH THE PRESIDENT.
The president was not present.

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

   ad hoc Committee on Technological Innovation/Waterloo Innovation Summit. Questions were raised on the utility of the recently approved Board of Governors ad hoc Committee on Technological Innovation and the possible relationship with centers of expertise already in place on campus, the influence that the committee will have on decision-making on IT projects, and the extent of conflicts of interest that might manifest themselves in the deliberations of this committee.

   With respect to the recently held Innovation Summit, questions were raised as to why there were no internal economics professors or political science professors on panels such as “The New Innovation Economy” and “The Role of Government in the Innovation Economy.”

   McBoyle indicated that the questions would be considered and a response provided in due course.

Senators’ Last Meeting. McBoyle thanked those senators completing terms for their role in university governance: faculty representatives – Jean Andrey, Bill Bobier, Dan Brown, David DeVidi, Paul Eagles, Geoffrey Hayes, Jonathan Li, Tracy Peressini, Cynthia Struthers, Barry Warner, Beth Weckman; undergraduate student representatives – Diego Almaraz de la Garza, David Collins, Sean Hunt, Renishaki Kamalanathan, Nicollette Zaptse; graduate student representatives – Maya D’Alessio, Michael Makahnouk; alumni representative – Andrew Williams.

University Professor – Changes to Description and Criteria. Senate heard a motion to approve changes to the description and criteria for University Professor as presented in the report.

Freeman and Porreca.

Comment was made that the initial intention of this designation was to have the honor retained for life.

The motion carried.
Exceptions to Policy 40, The Chair, related to Religious Studies. Senate heard a motion to approve exceptions to Policy 40, The Chair, as presented in the report.

Peers and Bergman.

It was moved that further consideration of the main motion be postponed temporarily, and that the proposal be sent back to the Faculty Relations Committee for additional refinements in wording.

Porreca and Freeman.

Senate agreed by consensus to temporarily postpone consideration of the main motion.

11. REPORT OF THE VICE-PRESIDENT, UNIVERSITY RESEARCH

Dixon reported on the following competition results:

- SSHRC: university researchers were successful on four of six Partnership Development Grant proposals, totaling $798,128 – two have been placed on the supplementary list; two Connection Grants were confirmed at $25,000 each; of 55 applicants to the 2014-2015 Insight program, 20 were successful totaling $4,100,402 – nineteen others have been placed on the supplementary list. These results show significant improvement over the 2013-2014 results.

- NSERC: the university will receive approximately $18,000,000 through various programs, including Discovery Grants, Discovery Accelerator Supplements, and Research Tools and Instruments Grants.

12. OTHER BUSINESS

Vice-President, University Relations. McBoyle confirmed that no decision has yet been made on filling the vacant vice-president, university relations position.

Student Debt. Panton spoke on the relationship between debt, tuition, working for wages, the bankruptcy exception for student debt, and students becoming enslaved by their debt, suggesting that institutions share some of the responsibility for this situation.

Rome Program Offerings. McBoyle indicated that no decision has yet been made on expanding program offerings in Rome. At the moment, the university is focusing on the Architecture program there.

Senate convened in Confidential Session.
Senate Graduate & Research Council met on 14 April 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/committees-and-councils/senate-graduate-research-council

FOR INFORMATION

RENEWAL OF CENTRES AND INSTITUTES

Waterloo Centre for German Studies

Under the current direction of Mathias Schultze, the Waterloo Centre for German Studies has for ten years fulfilled its mandate of research, provision of rich educational and cultural programming, and ongoing engagement with German-Canadian heritage.

Established and approved by Senate in 2004, the centre’s operations are mainly supported by a privately-funded endowment through the outstanding efforts of the centre’s founding director, David John. Some of the notable achievements of the centre include: establishment of five new research groups and overall expansion of research activities; organization of major conferences at the national and international level; an ambitious and ongoing oral history project of German immigrants to the local region which is expected to result in a voluminous publication and the development of research tools; establishment of the Jacob and Wilhelm Grimm Lecture, where scholars highlight the impact of German studies on other academic disciplines; and collaboration with the Special Collections department of the Dana Porter Library to collect, translate and analyze local history documents.

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 April 2019.

PROGRAM REVIEWS

David R. Cheriton School of Computer Science – Programs in Computer Science

On behalf of Senate, council reviewed the programs in computer science offered by the David R. Cheriton School of Computer Science in accordance with the university’s Institutional Quality Assurance Framework.

Based on the material presented in the Final Assessment Report (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 programs were found to be of good quality.

CURRICULAR MODIFICATIONS

On behalf of Senate, council reviewed and approved new courses, courses changes, course inactivations and minor program changes for the Faculty of Applied Health Sciences (School of Public Health and Health Systems; social work); the Faculty of Arts (classical studies; English; global governance; political science; psychology); Engineering (chemical engineering; electrical and computer engineering; management sciences); Environment (environmental and resource studies); Mathematics (applied mathematics); Science (pharmacy); and for Renison University College (English as a second language).

SCHOLARSHIPS AND AWARDS

On behalf of Senate, council approved the creation of the Environmental Graduate Student Scholarship and the Science FunMat Award. Council approved revisions to the eligibility criteria for the Graduate Student Support by a New Faculty Member Award.
AMENDMENTS TO TERMS OF REFERENCE
On behalf of Senate, council approved amendments to the terms of reference for the Graduate Student Millennium Bursary, the Human Research Ethics Committee and the Delegated Ethical Review Committee (Psychology).

NEW AND CONTINUING MEMBERSHIPS
On behalf of Senate, council approved the membership recommendations for the Clinic Research Ethics Committee and the Human Research Ethics Committee.

/mg    Sue Horton                                       George Dixon
    Associate Provost, Graduate Studies                  Vice President, University Research
Final Assessment Report
Computer Science (BCS, BMath(CS), BCFM, MMath, PhD)
February 2014

Review Process

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

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

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

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

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

Characteristics of the Programs

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

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

Academic Programs Offered

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

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

Program Objectives

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

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

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

The MMath program has two objectives:
1. To prepare students for further studies at the PhD level, and
2. To prepare students for research and/or development careers in industry.

The program aims to provide the necessary background to demonstrate individual accomplishment at a high professional and academic standard.

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

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

**Specific Learning Outcomes**

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

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

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

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

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

**Significant strengths of program**

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

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

Faculty

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

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

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

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

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

Staff/Administration

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

**Students**

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

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

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

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

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

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

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

Summary of programs’ strengths and challenges

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

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

Reviewers’ Recommendations/Departmental response regarding program enhancements

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Response: (Re lecturers): see (3) above.

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

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

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

<table>
<thead>
<tr>
<th>Two-Year Plan: Action steps</th>
<th>Who is responsible?</th>
<th>Who will provide resources?</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Require all applicants to CS undergraduate programs to complete the “Additional Studies”</td>
<td>Director, Undergraduate Studies</td>
<td>n/a</td>
<td>2014</td>
</tr>
</tbody>
</table>
Information Form” as part of their application and focus our admissions process more closely on both what is in these forms and on increasing the gender diversity of our classes.

<p>| | | | |</p>
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</thead>
<tbody>
<tr>
<td>2. Create regular events where faculty at all ranks can discuss innovative teaching practices and share their experiences.</td>
<td>Teaching fellow? Other?</td>
<td>n/a</td>
<td>2014</td>
</tr>
<tr>
<td>3. Re-invigorate our transitional program for Master’s students, making it possible for them to spend their transitional time without a supervisor.</td>
<td>Director, Graduate Studies</td>
<td>n/a</td>
<td>2015</td>
</tr>
<tr>
<td>4. To evaluate applicant quality independently of their undergraduate degree, so that top applicants from other disciplines are evaluated on a level playing field.</td>
<td>Director, Graduate Studies</td>
<td>n/a</td>
<td>2014</td>
</tr>
<tr>
<td>5. To work with the Graduate Studies Office to improve the clarity of the admission offer letter.</td>
<td>Director, Graduate Studies</td>
<td>n/a</td>
<td>2014</td>
</tr>
<tr>
<td>6. To work with the Graduate Studies Office to inform a supervisor when an offer has gone out to an applicant.</td>
<td>Director, Graduate Studies</td>
<td>n/a</td>
<td>2014</td>
</tr>
<tr>
<td>7. To create USRA opportunities at UW and to advertise these at other Canadian universities.</td>
<td>Director, Graduate Studies/ Director Undergraduate Studies</td>
<td>n/a</td>
<td>2014</td>
</tr>
<tr>
<td>8. To create a slide deck for use by faculty to advertise the graduate program during visits.</td>
<td>Director Graduate Studies and School Recruitment Coordinator</td>
<td>n/a</td>
<td>2014</td>
</tr>
<tr>
<td>9. To transition printing support to UW IST.</td>
<td>Director, Infrastructure</td>
<td>n/a</td>
<td>2014</td>
</tr>
<tr>
<td>10. To investigate the use of non-CS TAs in introductory CS UG courses to allow TA support for CS graduate courses, as necessary.</td>
<td>Director, Undergraduate Studies</td>
<td>n/a</td>
<td>Initiate 2014, may take longer</td>
</tr>
<tr>
<td>11. To set up a focus group to get feedback from graduate students in the program.</td>
<td>Director, Graduate Studies</td>
<td>n/a</td>
<td>2014</td>
</tr>
</tbody>
</table>

This report will go to Waterloo Senate Graduate and Research Council on April 14 2014, to Senate Undergraduate Council on May 13, and to Senate on June 16 2014.
Senate Undergraduate Council met on 8 April 2014, and on behalf of Senate approved new courses, course changes, course inactivations and other minor curricular changes. Council agreed to forward these items to Senate for information. As well, council has forwarded to Senate items related to a new regulation and minor regulation changes. Council recommends that these items be included in the consent agenda. The items recommended for inclusion in the regular agenda are contained in a separate report.

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

FOR APPROVAL [effective 1 September 2015]

NEW FACULTY REGULATION

Faculty of Environment
Faculty Regulations – Second Degrees

1. **Motion:** To approve a new Faculty of Environment regulation concerning eligibility for a second Bachelor of Environmental Studies degree as described, effective 1 September 2015.

   Applicants who have already been awarded a Bachelor of Environmental Studies (BES) degree from the University of Waterloo or elsewhere will normally be considered for admission if the applicant is exploring a new and distinct area of study.

   The Admissions Committee’s decision to admit will be based on a number of factors including the reason the applicant is pursuing a second BES degree, the applicant’s post-secondary transcript(s), and the overlap in program content.

   Normally, an applicant who has already received a BES Co-op degree from the University of Waterloo will not be considered for a second BES Co-op program.

   Transfer credits will be granted in accordance with Faculty of Environment guidelines as indicated in the Admissions section of this calendar.

   **Rationale:** There are sufficient differences in environmental studies programs to warrant a student being allowed to complete a second BES degree; however, the final decision will be that of the admitting department/school. Faculty transfer credit rules shall be applied to any student wishing to complete a second BES degree in a new and distinct discipline.

CHANGES TO FACULTY REGULATIONS

Faculty of Engineering
Faculty Regulations – Examinations and Promotions – Rules

2. **Motion:** To amend the Faculty of Engineering’s regulation regarding examinations and promotions as described, effective 1 September 2015.

   (Note: strikethrough = deleted text, underline = new text)

   **Reduced-load (1A) Terms:**
<table>
<thead>
<tr>
<th>Previous Decision</th>
<th>Term average greater than or equal to 60 and:</th>
<th>Term average greater than or equal to 60 and more than one failed course or Term Average greater than or equal to 50 but less than 60</th>
<th>Term Average less than 50</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Previous term</td>
<td>1. May continue in 1A no failed terms 2. May continue in 1A no failed terms (conditional)</td>
<td>Failed - required to repeat</td>
<td>Failed - withdraw from 1A</td>
</tr>
<tr>
<td>MC1A - May continue in 1A, see advisor</td>
<td>1. Promoted 2. Promoted (conditional)</td>
<td>Failed - withdrawal required</td>
<td>Failed - withdrawal required</td>
</tr>
<tr>
<td>MC1A0 - May continue in 1A No Previous Failed Terms, see advisor</td>
<td>1. Promoted 2. Promoted (conditional)</td>
<td>Failed - required to repeat May continue in 1A</td>
<td>Failed - withdraw from 1A</td>
</tr>
<tr>
<td>Failed - required to repeat, see advisor</td>
<td>1. May continue in 1A 2. May continue in 1A (conditional)</td>
<td>Failed - withdrawal required</td>
<td>Failed - withdrawal required</td>
</tr>
</tbody>
</table>

... 

6. A full-load student, at level 2A or higher, who achieves a term average of 60% or better and has failed zero, one or two courses in that term for a cumulative total of three or more uncleared failed courses will receive the decision May Not Proceed. Normally, the student will enrol in a non-degree term devoted to retaking or replacing all or as many as possible of the failed courses. In the event that some of the failed courses are not available, the Department may specify equivalent or appropriate alternative courses to be taken in their place. If the student is otherwise in good standing, the academic decision will be changed to Promoted when the number of uncleared failed courses has been reduced to none. If the student is otherwise in good standing, the academic decision will be changed to Promoted (Conditional) when the number of uncleared courses has been reduced to one. A student clearing failed courses under this rule must achieve a grade of 50% or better in the corresponding courses, otherwise the student will be Required to Withdraw from Engineering.

**Rationale:** The implementation of earlier changes to the first year promotion rules identified a number of challenges. These amendments aim to address issues when students have entered the reduced-load program after a first failed term required re-coding, and provide modified rules to treat failed 1A full-load and reduced-load in the same way.
Faculty of Environment

Faculty Regulations – Letter of Permission

3. **Motion:** To approve amendments to the Faculty of Environment’s regulation regarding letters of permission as described, effective 1 September 2015.
   (Note: strikethrough = deleted text, underline = new text)

   Letter of Permission

   Students may request to take a course(s) at other universities accredited post-secondary institutions for credit towards a Waterloo degree by Letter of Permission. A Letter of Permission is granted only to students who have successfully completed a minimum of four University of Waterloo courses and who are in satisfactory standing; that is, they have satisfied the minimum cumulative average requirements for their current plan.

   A Letter of Permission must be approved by the student's advisor prior to enrolling at the host institution and it is subject to departmental regulations. More information about the Letter of Permission policy and procedures is provided on page two of the form.

   Courses taken on a Letter of Permission must meet the requirements for External Transfer Credits as noted above.

   **Rationale:** This amendment is in line with the introduction of the college/university pathways and the requirements used for external transfer credits upon admission. Approval of college courses will be based on course descriptions, and are subject to department approval, as is the current practice with university courses.

**FOR INFORMATION**

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**CURRICULAR MODIFICATIONS**

Minor academic plan changes were approved of behalf of Senate for the Faculty of Arts (applied language studies) and the Faculty of Engineering (Conrad Business, Entrepreneurship and Technology Centre) effective 1 September 2014.

Changes consisting of new courses, course changes, course inactivations and minor program changes were approved on behalf of Senate for the Faculty of Arts (arts; digital arts communication; drama and speech communication; East Asian studies; English language and literature; history; Jewish studies; religious studies), the Faculty of Engineering (architecture; electrical and computer engineering), the Faculty of Science (chemistry; physics) and for Renison University College (English as a second language) effective 1 January 2015.

Changes consisting of course changes, course inactivations and minor curricular changes were approved on behalf of Senate for the Faculty of Arts (international trade specialization), the Faculty of Engineering (entrepreneurship; professional development; software engineering), the Faculty of Environment (English language proficiency; environment and business; geography and environmental management; international development; knowledge integration) and the Faculty of Science (biology; chemistry; physics; psychology; science) effective 1 September 2015.

Minor calendar changes, course changes and course inactivations in the Faculty of Mathematics (computer science) will be considered for approval at the meeting of council on 13 May 2014, with effective dates to be approved at that meeting.

Mario Coniglio
Associate Vice-President, Academic

/mg
FOR INFORMATION

Recognition and Commendation

In the 2013 Putnam Mathematical Competition, the University of Waterloo team, comprised of mathematics undergraduate students Kangning (Colin) Chen, Volodymyr Lyubinets, and Hao Sun (coached by Professor Stephen New of pure mathematics), finished 7th overall, and first among Canadian universities. The top five teams were MIT, Carnegie Mellon, Stanford, Harvard, and Cal Tech. The William Lowell Putnam Mathematical Competition is an annual contest for university students in the US and Canada. Waterloo has finished in the top five 18 times since 1968. [11 April 2014 Daily Bulletin]

Chemical engineering graduate student and Engineering Science Quest’s Girls Club coordinator, Alison Scott, is this year’s winner of the prestigious Canadian Engineering Memorial Foundation’s Vale Master’s in Engineering Scholarship. As the recipient of the scholarship, which comes with a $10,000 award and an internship with Vale, a global mining company, Scott is required to share her story in at least two high school classrooms – a role she is thrilled to take on. “It’s really important to me to act as a role model and mentor for younger girls and show them that anything is possible when you put your mind to it,” she says. “Through Women in Engineering and Engineering Science Quest’s Girls Club program I’ve been able to act as a sounding board for girls who may not otherwise see themselves in engineering programs later in life.” Mary Wells, engineering’s associate dean of outreach, describes Scott as a dynamic person whose passion is contagious. “Over the past few years, she has made a difference in outreach initiatives including our Girls Club program, Women in Engineering events such as GoEngGirl and our Girl Guides Badge Day,” says Wells. To apply for the scholarship, applicants needed to demonstrate an interest and desire to work in the mining/metallurgical fields of engineering. Scott’s graduate research in polymer reaction engineering, under the supervision of Alex Penlidis, professor of chemical engineering, includes a wide variety of topics such as controlled radical polymerization and water-soluble copolymer and terpolymer systems, some of which have applications in the mining industry. [22 April 2014 Daily Bulletin]

University historian Kenneth McLaughlin was recently honoured with the Lieutenant Governor’s Ontario Heritage Award for Lifetime Achievement. McLaughlin, who in 2009 received the title Distinguished Professor Emeritus after a long career in the Waterloo history department and at St. Jerome’s University, is the author of two books about the history of this institution – Waterloo: The Unconventional Founding of an Unconventional University and Out of the Shadow of Orthodoxy: Waterloo@50 – as well as a history of St. Jerome’s University, and several works about communities in Waterloo Region. [14 April 2014 Daily Bulletin]
A. APPOINTMENTS

Definite-term Appointment

CORBETT, Kitty, Professor, School of Public Health and Health Systems, September 1, 2014 –
August 31, 2019. A.B. (Anthropology), Stanford University, 1975; M.P.H. (Social and
Administrative Health Sciences, Behavioral Science), University of California, Berkeley, 1980; M.A.
(Anthropology), University of California, Berkeley, 1981; Ph.D. (Medical Anthropology), University
of California, Berkeley and San Francisco, 1986. Dr. Corbett is an applied medical anthropologist
and public health scientist, a specialist in health communication, knowledge translation and
exchange, participatory community-based health promotion, program planning and evaluation,
quality improvement in health care, and qualitative methods in public health. She also has a strong
research focus in tobacco control and chronic disease prevention which fits well with the mission of
the school.

Adjunct Appointments

Graduate Supervision

HOBIN, Erin, Assistant Professor, School of Public Health and Health Systems, February 1, 2014 –

POSS, Jeff, Associate Professor, School of Public Health and Health Systems, April 1, 2014 –
March 31, 2015.

Postdoctoral Fellow to Research Appointment

VIDT, Meghan, Department of Kinesiology, May 1, 2014 – April 30, 2015.

B. ADMINISTRATIVE APPOINTMENTS

BIGELOW, Philip, Associate Director, Graduate Research Programs, School of Public Health and

QUADRILATERO, Joe, Associate Chair, Graduate Studies, Department of Kinesiology, May 1,

JANES, Craig, Director, School of Public Health and Health Systems, July 1, 2014 – June 30, 2018.

C. SABBATICAL LEAVE

For Approval by the Board of Governors

SMALE, Bryan, Professor, Department of Recreation and Leisure Studies, July 1, 2014 – June 30,
2015, 100% salary.

Susan J. Elliott
Dean, Faculty of Applied Health Sciences
FOR INFORMATION

A. APPOINTMENTS/REAPPOINTMENTS

Adjunct Appointments

Instruction

ROSE, David, Lecturer, Department of Economics, May 1, 2014 to August 31, 2014.

TIMBERG, Robert, Lecturer, School of Accounting and Finance, May 1, 2014 to August 31, 2014.

Adjunct Reappointments

Instruction

BANKS, Melany, Lecturer, School of Accounting and Finance, May 1, 2014 to August 31, 2014.

BARICHELLO, Steve, Lecturer, School of Accounting and Finance, May 1, 2014 to August 31, 2014.

BASHIR, Mohsin, Lecturer, School of Accounting and Finance, May 1, 2014 to August 31, 2014.

BIRKE, Lisa, Lecturer, Department of Fine Arts, May 1, 2014 to August 31, 2014.

BLOEMHOF, Barbara, Lecturer, Department of Economics, May 1, 2014 to August 31, 2014.

CUMMINGS, Ruth, Lecturer, School of Accounting and Finance, May 1, 2014 to August 31, 2014.

CYR, Dylan, Lecturer, Department of History, May 1, 2014 to August 31, 2014.

DE ROOIJ-MOHLE, Margreet, Lecturer, Department of Germanic and Slavic Studies, May 1, 2014 to August 31, 2014.

DUCHARME, Robert, Lecturer, School of Accounting and Finance, May 1, 2014 to August 31, 2014.

FLERAS, Augie, Lecturer, Department of Sociology and Legal Studies, May 1, 2014 to August 31, 2014.

HUNTER, Natalie, Lecturer, Department of Fine Arts, May 1, 2014 to August 31, 2014.

KRELLER, Paul, Lecturer, Department of English Language and Literature, May 1, 2014 to August 31, 2014.

LAIKEN, Stan, Professor, School of Accounting and Finance, May 1, 2014 to August 31, 2014.

LOVE, Craig, Lecturer, Department of English Language and Literature, May 1, 2014 to August 31, 2014.

MAES, Nick, Lecturer, Department of Classical Studies, May 1, 2014 to August 31, 2014.

MARIJAN, Branka, Lecturer, Department of Political Science, May 1, 2014 to August 31, 2014.
MARTINELLO, Linda, Lecturer, Department of Fine Arts, May 1, 2014 to August 31, 2014.

MCARTHUR, Kathryn, Lecturer, Department of English Language and Literature, May 1, 2014 to August 31, 2014.

NEEDHAM, Brent, Lecturer, Department of Political Science, May 1, 2014 to August 31, 2014.

RAHMAN, Fiona, Lecturer, Department of Economics, May 1, 2014 to August 31, 2014.

REIDEL, Laura, Lecturer, Department of Political Science, May 1, 2014 to August 31, 2014.

ROGOZYNISKI, Daniel, Lecturer, School of Accounting and Finance, May 1, 2014 to August 31, 2014.

ROTH, Wendy, Lecturer, Department of Economics, May 1, 2014 to August 31, 2014.

SHARMA, Ajay, Lecturer, Department of Political Science, May 1, 2014 to August 31, 2014.

STETTNER, Shannon, Lecturer, Women’s Studies, May 1, 2014 to August 31, 2014.

STEVenson, Michael, Lecturer, Department of Political Science, May 1, 2014 to August 31, 2014.

WENSLEY, Karen, Lecturer, School of Accounting and Finance, May 1, 2014 to August 31, 2014.

WOOLSTENCROFT, Peter, Associate Professor, Department of Political Science, May 1, 2014 to August 31, 2014.

ZACHARIAS, Robert, Lecturer, Department of English Language and Literature, May 1, 2014 to August 31, 2014.

Graduate Student to Part-time Lecturer Appointment
DOYLE, Jennifer, Department of Drama and Speech Communication, May 1, 2014 to August 31, 2014.

B. ADMINISTRATIVE APPOINTMENTS
FAULKNER, Andrew, Acting Chair, Department of Classical Studies, July 1, 2014 to June 30, 2015.

Appointment Date Change
AGER, Sheila, Chair, Department of Classical Studies, from May 1, 2013 to April 30, 2017 to May 1, 2013 to June 30, 2014.

C. SABBATICAL LEAVES
AURINI, Janice, Assistant Professor, Department of Sociology and Legal Studies, January 1, 2015 to June 30, 2015, 85% salary.

STILLAR, Glenn, Associate Professor, Department of Drama and Speech Communication, September 1, 2014 to February 28, 2015 and September 1, 2015 to February 28, 2016, 100% salary.

For Approval by the Board of Governors
BLIT, Joel, Assistant Professor, Department of Economics, January 1, 2015 to June 30, 2015, 100% salary.
BRISLEY, Neil, Associate Professor, School of Accounting and Finance, November 1, 2014 to April 30, 2015, 100% salary.

CHEN, Tao, Assistant Professor, Department of Economics, September 1, 2014 to February 28, 2015, 100% salary.

DANISCH, Robert, Assistant Professor, Department of Drama and Speech Communication, July 1, 2014 to December 31, 2014, 100% salary.

DEJUAN, Joseph, Associate Professor, Department of Economics, September 1, 2014 to August 31, 2015, 85% salary.

DIXON, Mike, Professor, Department of Psychology, July 1, 2014 to June 30, 2015, 96.8% salary.

FORAND, Jean Guillaume, Assistant Professor, Department of Economics, January 1, 2015 to June 30, 2015, 100% salary.

FRASER, Doreen, Associate Professor, Department of Philosophy, July 1, 2014 to December 31, 2014, 75.6% salary.

GROSSMANN, Igor, Assistant Professor, Department of Psychology, February 1, 2015 to July 31, 2015, 100% salary.

HAYES, Geoffrey, Associate Professor, Department of History, September 1, 2014 to August 31, 2015, 100% salary.

HUNT, Andrew, Professor, Department of History, July 1, 2014 to December 31, 2014, 100% salary.

KENYON, Tim, Associate Professor, Department of Philosophy, July 1, 2014 to June 30, 2015, 100% salary.

NORTH, John, Professor, Department of English, July 1, 2014 to December 31, 2014, 85% salary.

OREND, Brian, Professor, Department of Philosophy, July 1, 2014 to June 30, 2015, 100% salary.

PHILLIPS, Blake, Assistant Professor, School of Accounting and Finance, November 1, 2014 to April 30, 2015, 100% salary.

POIRIER, Guy, Professor, Department of French Studies, January 1, 2015 to June 30, 2015, 100% salary.

POIRIER, Guy, Professor, Department of French Studies, January 1, 2015 to June 30, 2015, 100% salary.

WAINBERG, James, Assistant Professor, School of Accounting and Finance, January 1, 2015 to June 30, 2015, 100% salary.

WOODY, Erik, Professor, Department of Psychology, July 1, 2014 to December 31, 2014, 100% salary.

D. ADMINISTRATIVE LEAVES

For Approval by the Board of Governors

HORTON, Susan, Professor, Balsillie School of International Affairs, Faculty of Arts, January 1, 2015 to April 30, 2015, 100% salary.
POIRIER, Guy, Professor, Department of French Studies, September 1, 2014 to December 31, 2014, 100% salary.

E. LEAVES OF ABSENCE

BOEHRINGER, Michael, Associate Professor, Department of Germanic & Slavic Studies, September 1, 2014 to November 30, 2014.

HORTON, Susan, Professor, Balsillie School of International Affairs, Faculty of Arts, May 1, 2015 to June 30, 2015.

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

Probationary-term Appointment Date Changes
PRZYBYLSKI, Maya, Assistant Professor, School of Architecture, changed from September 1, 2011 – June 30, 2014 to September 1, 2011 – June 30, 2015.

RAYSIDE, Derek, Assistant Professor, Department of Electrical and Computer Engineering, changed from July 1, 2014 – June 30, 2017 to July 1, 2014 – June 30, 2018.

Definite-term Reappointment
SLIWKA, Ryszard, Associate Professor, School of Architecture, January 2, 2015 – August 31, 2015. MArch Washington University, St. Louis, USA 1978.

Visiting Appointments
BANSAL, Aprajita, Scholar, Department of Chemical Engineering, May 11, 2014 – August 1, 2014.

FAN, Huiling, Professor, Department of Chemical Engineering, July 1, 2014 – July 31, 2015.

JASZCZYSZYN, Katarzyna, Scholar, Department of Civil & Environmental Engineering, May 1, 2014 – August 31, 2014.

RAJABZADEH, Amin Reza, Scholar, Department of Chemical Engineering, April 1, 2014 – March 31, 2015.

XU, Li-Jun, Scholar, Department of Systems Design Engineering, March 1, 2014 – December 31, 2014.

Visiting Reappointments
CHANG, Cun, Scholar, Department of Electrical & Computer Engineering, June 1, 2014 – June 14, 2014.

NABAVI, Abdolreza, Professor, Department of Electrical & Computer Engineering, April 1, 2014 – March 31, 2015.

ZANDIEH, Alireza, Researcher, Department of Electrical & Computer Engineering, April 1, 2014 – March 31, 2015.

Special Appointments
Undergraduate Instruction
BAYLEY, Tiffany, Lecturer, Department of Management Sciences, May 1, 2014 – August 31, 2014.

IBRAHIM, Michael, Lecturer, Department of Electrical & Computer Engineering, May 1, 2014 – August 31, 2014.
KWON, Tae, Lecturer, Department of Civil & Environmental Engineering, May 1, 2014 – August 31, 2014.

LU, Da, Lecturer, Department of Management Sciences, May 1, 2014 – August 31, 2014.

MOHAMED, Samar, Lecturer, Department of Electrical & Computer Engineering, May 1, 2014 – August 31, 2014.

MORENO, Carlos, Lecturer, Department of Electrical & Computer Engineering, May 1, 2014 – August 31, 2014.

MORITA, Plinio, Lecturer, Department of Systems Design Engineering, May 1, 2014 – August 31, 2014.

SADHU, Ayan, Lecturer, Department of Civil & Environmental Engineering, May 1, 2014 – August 31, 2014.

SEDRA, Adel, Lecturer, Department of Electrical & Computer Engineering, May 1, 2014 – August 31, 2014.

STEWART, Terry, Lecturer, Department of Systems Design Engineering, January 1, 2014 – April 30, 2014.

XU, Zhaoxia (Amy), Lecturer, Department of Management Sciences, May 1, 2014 – August 31, 2014.

WANG, James Jiaming, Lecturer, Department of Mechanical & Mechatronics Engineering, May 1, 2014 – August 31, 2014.

Graduate Instruction

RAYMOND, Darrell, Lecturer, Department of Management Sciences, May 1, 2014 – August 31, 2014.

Special Reappointments
Undergraduate Instruction
KEATS, Brian, Lecturer, Department of Electrical & Computer Engineering, May 1, 2014 – August 31, 2014.

Undergraduate and Graduate Instruction
MATHER, David, Lecturer, Department of Mechanical & Mechatronics Engineering, May 1, 2014 – August 31, 2014.

Adjunct Appointments
Graduate Supervision
SHARMA, Jitendrapal, Professor, Department of Civil & Environmental Engineering, April 1, 2014 – May 31, 2017.
Graduate Supervision and Research

AHMAD, Abdul-Rahim, Associate Professor, Department of Systems Design Engineering, March 1, 2014 – February 28, 2017.

SIVA, Parthipan, Assistant Professor, Department of Systems Design Engineering, March 1, 2014 – February 28, 2017.

Adjunct Reappointments

Graduate Supervision and Research

YUAN, Xianxun (Arnold), Associate Professor, Department of Civil & Environmental Engineering, May 1, 2014 – February 28, 2016.

Research

BAKA, Mohamed El-Kamel, Associate Professor, Department of Management Sciences, May 1, 2014 – April 30, 2017.

B. ADMINISTRATIVE REAPPOINTMENTS

FOWLER, Michael, Associate Chair, Undergraduate Studies, Department of Chemical Engineering. May 1, 2014 – April 30, 2015.

HE, Qi-Ming, Associate Chair, Undergraduate Studies, Department of Management Sciences, July 1, 2014 – June 30, 2015.

C. RESIGNATION

YU, Aiping, Assistant Professor, Department of Chemical Engineering, effective April 30, 2014.

Pearl Sullivan
Dean, Faculty of Engineering
FOR INFORMATION

A. APPOINTMENTS
   Special Appointment
   Instruction
   KEVAN, Sherrene, Lecturer, Department of Environment and Resource Studies, May 1, 2014 to August 31, 2014.

   Cross Appointment
   LIN, Haiying, Assistant Professor, School of Environment, Enterprise and Development to the Department of Environment and Resource Studies, January 1, 2014 to December 31, 2018.

B. SABBATICAL LEAVES
   For Approval by the Board of Governors
   JOHNSON, Laura, Professor, School of Planning, January 1, 2015 to June 30, 2015, 85% salary.

   SWATUK, Larry, Associate Professor, School of Environment, Enterprise and Development, September 1, 2014 to August 31, 2015, 85% salary.

André Roy
Dean, Faculty of Environment
FOR INFORMATION

A. APPOINTMENTS/REAPPOINTMENTS

Definite-term Reappointments
LIU, Zhiyong, Lecturer, David R. Cheriton School of Computer Science, September 1, 2014 – August 31, 2017.
LOO, Clinton, Lecturer, Office of the Dean, August 31, 2014 – August 29, 2016.
LUSHMAN, Bradley, Lecturer, David R. Cheriton School of Computer Science, July 1, 2014 – June 30, 2017.
SPEZIALE, Sean, Lecturer, Office of the Dean, August 31, 2014 – August 29, 2016.

Adjunct Appointments

Instruction
GESHNIZJANI, Ghazal, Lecturer, Dept. of Applied Mathematics, May 1, 2014 – August 31, 2014.
HOVING, Darryl, Lecturer, Office of the Dean, May 1, 2014 – August 31, 2014.
OAKDEN, David, Lecturer, Dept. of Statistics and Actuarial Science, May 1, 2014 – August 31, 2014.
STECHLINSKI, Peter, Lecturer, Dept. of Applied Mathematics, May 1, 2014 – August 31, 2014.

Research

Adjunct Reappointments

Instruction
ALWAN, Mohamad, Lecturer, Dept. of Applied Mathematics, May 1, 2014 – August 31, 2014.
CHOW, Amenda, Lecturer, Dept. of Applied Mathematics, May 1, 2014 – August 31, 2014.
IVKOVIC, Igor, Lecturer, David R. Cheriton School of Computer Science, May 1, 2014 – December 31, 2014.
KHALAR, Rosina, Lecturer, David R. Cheriton School of Computer Science, May 1, 2014 – August 31, 2014.
LANCTOT, Kevin, Lecturer, David R. Cheriton School of Computer Science, May 1, 2014 – August 31, 2014.
McKINNON, Jennifer, Lecturer, Office of the Dean, May 1, 2014 – August 31, 2014.
MILLER, Killian, Lecturer, Dept. of Applied Mathematics, May 1, 2014 – August 31, 2014.
NAEEM, Nomair, Lecturer, David R. Cheriton School of Computer Science, May 1, 2014 – August 31, 2014.


SHUM, Alex, Lecturer, Office of the Dean, May 1, 2014 – August 31, 2014.

VASS, Jozsef, Lecturer, Dept. of Applied Mathematics, May 1, 2014 – August 30, 2014.

Research


RADJAVI, Heydar, Professor, Dept. of Pure Mathematics, September 1, 2014 – August 31, 2019.


Graduate Student to Part-time Lecturer Appointment
ELAHI, Mohammad Tariq, David R. Cheriton School of Computer Science, September 1, 2014 – December 31, 2014.

Graduate Student to Part-time Lecturer Reappointments


STEINMOELLER, Derek, Dept. of Applied Mathematics, May 1, 2014 – August 31, 2014.


Postdoctoral Fellow to Part-time Lecturer Reappointments
AHMED, Reaz, David R. Cheriton School of Computer Science, April 1, 2014 – March 31, 2015.

B. ADMINISTRATIVE APPOINTMENT

C. ADMINISTRATIVE REAPPOINTMENT

D. RETIREMENT
HOLT, Richard, Professor, David R. Cheriton School of Computer Science, effective June 30, 2014.

E. SABBATICAL LEAVES
For Approval by the Board of Governors
GOLDBERG, Ian, Associate Professor, David R. Cheriton School of Computer Science, September 1, 2014 – August 31, 2015, 85.7% salary.

HOEY, Jesse, Associate Professor, David R. Cheriton School of Computer Science, July 1, 2014 – June 30, 2015, 85% salary.

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

Probationary-term Appointment

ALSABBAGH, Wasem, Assistant Professor, School of Pharmacy, October 1, 2014 to June 30, 2018. BPharm, Damascus University (2000); PhD, University of Saskatchewan (expected 2014). After practicing as a pharmacist for a number of years, Mr. Alsabbagh began graduate studies in pharmacoepidemiology at the University of Saskatchewan and is expected to receive his PhD in July. His research uses large administrative databases to examine medication-related problems and health issues. Mr. Alsbbagh’s research is synergistic with ongoing research at the School of Pharmacy examining clinical and economic outcomes related to the use of medications and the evolving scope of pharmacy practice.

Adjunct Appointments

Undergraduate Instruction

BYNKOSKI, Kaitlin, Assistant Clinical Professor, School of Pharmacy, April 1, 2014 to August 31, 2015.

DELUCO, Carla, Assistant Clinical Professor, School of Pharmacy, April 1, 2014 to August 31, 2015.

DeVILLIERS, Peet, Assistant Clinical Professor, School of Pharmacy, April 1, 2014 to August 31, 2015.

EDWARDS, Donnie, Assistant Clinical Professor, School of Pharmacy, April 1, 2014 to August 31, 2015.

FOLEY, Heather, Assistant Clinical Professor, School of Pharmacy, April 1, 2014 to August 31, 2015.

KNOPPERT, David C., Assistant Clinical Professor, School of Pharmacy, April 1, 2014 to August 31, 2015.

PATODIA, Rosemarie, Assistant Clinical Professor, School of Pharmacy, April 1, 2014 to August 31, 2015.

ROBERT-KAPPEL, Noella, Assistant Clinical Professor, School of Pharmacy, April 1, 2014 to August 31, 2015.

SADIKIAN, Stephen G., Assistant Clinical Professor, School of Pharmacy, April 1, 2014 to August 31, 2015.

WENTZELL, Jason R., Assistant Clinical Professor, School of Pharmacy, April 1, 2014 to August 31, 2015.

Other

THIESSEN, Jake J., Professor, School of Pharmacy, April 1, 2014 to March 31, 2017.
Adjunct Reappointments

Graduate Supervision
GRUNSKY, Eric C., Professor, Department of Earth and Environmental Sciences, February 1, 2014 to January 31, 2017.

Graduate Supervision and Research
GUINEL, Frederique C., Professor, Department of Biology, September 1, 2014 to August 31, 2017.

THOMPSON, John E., Professor, Department of Biology, July 1, 2014 to June 30, 2017.

Research
PASTERNAK, Jack J., Professor, Department of Biology, July 1, 2014 to June 30, 2017.

Special Appointment
Undergraduate Instruction
DAMIAN, Festo, Lecturer, School of Pharmacy, May 1, 2014 to August 31, 2014.

Cross Reappointments
CHILDS, Andrew MacGregor, Associate Professor, Department of Combinatorics and Optimization to the Department of Physics and Astronomy, March 1, 2014 to February 28, 2017.

CHOH, Vivian, Associate Professor, School of Optometry and Vision Science to the Department of Biology, June 1, 2014 to May 31, 2017.

EMERSON, Joseph, Associate Professor, Department of Applied Mathematics to the Department of Physics and Astronomy, January 1, 2014 to December 31, 2017.

KEMPF, Achim, Professor, Department of Applied Mathematics to the Department of Physics and Astronomy, March 1, 2014 to February 28, 2017.

B. ADMINISTRATIVE REAPPOINTMENTS
BARRA, Monica, Associate Chair, Department of Chemistry, May 1, 2014 to April 30, 2015.

McNAMARA, Brian, Director, Guelph-Waterloo Physics Institute, January 1, 2014 to December 31, 2016.

C. SABBATICAL LEAVES
For Approval by the Board of Governors
MANN, Robert, Professor, Department of Physics and Astronomy, September 1, 2014 to August 31, 2015, 100% salary.

STRICKLAND, Donna, Associate Professor, Department of Physics and Astronomy, July 1, 2014 to December 31, 2014, 100% salary.

TAYLOR, Scott, Professor, Department of Chemistry, September 1, 2014 to August 31, 2015, 93.3% salary.

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

Council met on 2-3 April in Thunder Bay, hosted by Lakehead University. This was a full meeting, so both the presidents and the colleagues were in attendance, though the only joint events were a banquet on Wednesday night and the official council meeting over lunch on Thursday.

An addition to the usual pattern for meetings held outside Toronto was that four colleagues (those from Carleton, Guelph, Royal Military College, and Waterloo) gave research talks at Lakehead before the council meeting; these were well attended and brought diverse research discussions to the northern Ontario campus.

The actual meetings were largely focused, as have so many been this past year, on the Strategic Mandate Agreement process, whereby all Ontario universities and colleges are making bilateral agreements with the Ministry of Training, Colleges and Universities about prioritization and recognition of university strengths. It continues to be unclear what the actual effects of all of these agreements are to be: it is clear that they will have effects on graduate student allocations, but it is not clear whether they will affect undergraduate enrolments or program approvals, though these have been mentioned enough times that it would be an unsurprising outcome. It is likely (presuming no change from political leadership) that this process will repeat again in three years. It continues to be unclear whether the metrics put into these SMAs will actually affect university funding.

Another key project in the university sector has been the possible opening of new GTA undergraduate-focused branch campuses. There is a Request for Proposals from the MTCU in this area, with a September deadline. Laurier will likely submit a proposal to open a campus in Milton, and other universities are talking up campuses in Barrie. It is unclear how well this project might go if a different party controls the Ontario Legislature.

The other main topic of concern for council has been the Ontario Online Initiative. This will create many online courses with a system-wide focus. It seems that government is intending to fund creation primarily of introductory courses, which has interesting economic consequences (such courses tend to be large and profitable, in effect subsidizing smaller upper-year courses). Four colleagues presented at council a series of concerns about this project, and suggested that real opportunities might instead be with development of specialized upper-year courses that might be too small if offered only at one campus, but which could thrive if taken by students at many universities at once. However, this would not likely result in much improvement in “efficiency,” though it might offer Ontario students better learning opportunities. There was also an extensive discussion of the blended model of online learning, and of flipped classrooms, where students learn basic concepts online and apply them during in-class tutorial and problem-solving sessions.

The colleagues will meet for the final time in this academic year in May.

Dan Brown
Academic Colleague
Council of Ontario Universities
FOR APPROVAL

Committee/Council Appointments

Motion: To approve the following committee/council appointments:

- **COU Academic Colleague/Colleague Alternate**: Marios Ioannidis (chemical engineering) as COU Academic Colleague (replacing Dan Brown), term 1 July 2014 to 30 June 2016 [this is an appointment change from COU Academic Colleague Alternate, term to 30 June 2016]; John Garcia (public health & health systems) as COU Academic Colleague Alternate (replacing Marios Ioannidis), term 1 July 2014 to 30 June 2017.

- **Executive Committee**: Maryam Shahtaheri (president, Graduate Student Association) as graduate student representative, replacing Coleen Even, term to 30 April 2015.

- **Faculty Policy Drafting Committee**: Kelly Anthony (public health & health systems) and George Freeman (electrical & computer engineering)

- **Graduate & Research Council Appointment**: Samantha Shortall (pharmacy) as the science graduate student representative, replacing Maya D’Alessio, term to 30 April 2015.

- **Long Range Planning Committee**: Coleen Even (arts) as graduate student representative, replacing Maryam Shahtaheri, term to 30 April 2015.

*Initiated by the Faculty Relations Committee under Policy 1, Initiation and Review of University Policies (Class F), this committee, being established to review Policy 76, Faculty Appointments, will consist of six members as follows:

- Appointed by the president of the university: Gerry Schneider (mechanical & mechatronics engineering), John Burbidge (economics)

- Appointed by the president of FAUW: Christopher Small (statistics & actuarial science), Sally Gunz (accounting & finance)

- Appointed by Senate, as listed above
FOR APPROVAL

Exceptions to Policy 40, The Chair related to Religious Studies
Motion: To approve exceptions to Policy 40, The Chair, as described in Attachment 1.

Rationale: The proposed exceptions are necessary in order to provide for the eligibility of the affiliated and federated institutions of Waterloo (AFIW) faculty members to serve as chair of the Department of Religious Studies and/or to serve on a nominating committee for the chair of that department, which is a collaborative undertaking between the University of Waterloo and the AFIW.

Background: The proposed exceptions were approved by the Faculty Relations Committee on 21 November 2013, and by the relevant academic group at each of the AFIW.
Exceptions to Policy 40, The Chair related to Religious Studies

Each of the University of Waterloo (“UW”), St. Jerome’s University, Conrad Grebel University College, Renison University College, and St. Paul’s University College is a legal entity, with its own constitution and governance system. The latter four are referred to in this document as “AFIW” (affiliated and federated institutions of Waterloo). The Department of Religious Studies is a collaborative undertaking of the five institutions, which functions as a UW department within the Faculty of Arts.

This document sets out exceptions to Policy 40, The Chair, which are necessary in order to provide for the eligibility of AFIW faculty members (as defined below) to serve as chair of the Department of Religious Studies, and/or serve on a nominating committee for the chair of that department.

In this document, “AFIW faculty member” means a faculty member in the Department of Religious Studies, who is employed by an AFIW institution with a tenure-track appointment at the rank of assistant professor, associate professor or professor.

1. Qualification
Policy 40 provides that the chair of a department will be a tenured associate professor or professor at UW (as defined in Policy 76 – Faculty Appointments). In the case of religious studies, an AFIW tenured faculty member will be eligible to be appointed chair, despite not being a tenured faculty member at UW. AFIW members serving in administrative positions at the level of associate dean or higher at an AFIW institution are not eligible to serve as chair of a UW department.

Before an AFIW faculty member applies for consideration as chair of the department, the faculty member will inform the head of his/her AFIW institution that he/she is running for office.

2. Appointment of a Nominating Committee
The nominating committee for the chair of religious studies shall consist of:
- The dean of the Faculty, who shall chair the committee.
- Three faculty members elected by and from the regular and AFIW faculty members of the department. At least one of these three faculty members will be tenured at UW.
- One regular staff member, elected by and from the regular staff members of the department.
- A regular faculty member from another department within or outside the Faculty, selected by the vice-president academic & provost in consultation with the dean of the Faculty.
- The vice-president academic & provost or delegate, ex officio, non-voting.
- One undergraduate student and one graduate student, chosen by the dean. Normally, the dean shall consult with department or Faculty student organizations where these exist. Student appointees are voting members of the committee.
- One additional non-voting member (e.g., non-regular faculty or staff) may be appointed by the dean following appropriate consultation with department members and associated members.

3. Agreement Required
Prior to an AFIW faculty member being appointed chair, the arrangement must be documented in an agreement between UW and the AFIW institution that employs the faculty member.

4. Application of UW Policies, Procedures, Guidelines and the MOA
Insofar as they are relevant to the activities of a chair at UW, UW policies, procedures, guidelines and the Memorandum of Agreement between the Faculty Association of the University of Waterloo and UW (the “MofA”), as they all are amended from time to time, will apply to and be binding upon an AFIW faculty member in the performance of his or her duties as chair at UW, as if such AFIW faculty member were a regular UW faculty member as defined by the MofA, and such AFIW faculty member will have all of the rights and obligations that these documents and practices confer on the chair of a UW department.
Senate Executive Committee met on 5 May 2014 and agreed to recommend the following item to Senate for approval.

FOR APPROVAL

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Roster of Graduands
Since the roster of graduands will not be available until after the regular meeting of Senate in May and approval is required before the June meeting, the following motion is proposed:

Motion: That Senate delegate such approval to its Executive Committee for its 2 June 2014 meeting.
Senate Graduate & Research Council met on 14 April 2014 and will meet on 12 May 2014, and agreed to forward the following items to Senate for approval. These items are recommended for inclusion in the regular agenda.

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

FOR APPROVAL

ACADEMIC PROGRAM CHANGES

1. **Motion:** To approve the Environmental Health Sciences field of the Master of Public Health program, as described in Attachment 1 to this report.

   **Rationale:** During the original development of the program in 2006, environmental health was identified as a program field; however, a hiring freeze at that time prohibited the addition of new faculty necessary to feasibly offer the field, and so the field was not included in the original approval of the program. Since that time, faculty hires and course development have resulted in the capacity to now fully deliver the field. While this new field is not expected to have an immediate impact on program enrolment, it is expected to improve the demand for and offer a competitive advantage to the program.

2. **Motion:** To approve changes to the Master of Architecture program as described in Attachment 2 and subject to the recommendation of Senate Graduate & Research Council at its meeting on 12 May 2014.

   **Rationale:** The amended program provides significantly better alignment with four-year pre-professional degrees from other universities and will make the program more attractive to students applying from other undergraduate programs at other universities.

AMENDMENTS TO GRADUATE STUDIES CALENDAR

3. **Motion:** To approve the following amendments to English language proficiency requirements.(Note: 

   Applicants who have not completed three or more years of post-secondary work at a Canadian institution or a university at which English was the primary language of instruction, or have not completed a graduate degree at a university where English is the primary language of instruction, or have not been employed for a similar period of time in a position in which English was the primary language of business will be required to provide certification of English language proficiency through one of the accepted examinations listed below.

   Individual departments/schools may require higher scores. Test scores are valid for two years from the test date.
### Graduate Studies Accepted Examinations and Required Scores

<table>
<thead>
<tr>
<th>Paper-Based TOEFL (PBT)</th>
<th>Internet-Based TOEFL (iBT)</th>
<th>IELTS (Academic)</th>
<th>MELAB</th>
<th>CAEL</th>
<th>PTE (Academic)</th>
<th>EFAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>580</td>
<td>90; writing 25; speaking 25</td>
<td>7.0</td>
<td>85; 80 per section</td>
<td>70; 60 per band; 70 writing; 70 speaking</td>
<td>63; writing 65; speaking 65</td>
<td>80% 75% overall in level 400 with at least 75% in writing, oral and academic skills</td>
</tr>
</tbody>
</table>

### Graduate Studies Accepted Examinations and Alternative Minimum Scores

Departments accepting the alternative minimum scores are: Chemical Engineering, Civil and Environmental Engineering, Electrical and Computer Engineering, Mechanical and Mechatronics Engineering, and Systems Design Engineering.

<table>
<thead>
<tr>
<th>Paper-Based TOEFL (PBT)</th>
<th>Internet-Based TOEFL (iBT)</th>
<th>IELTS (Academic)</th>
<th>MELAB</th>
<th>CAEL</th>
<th>PTE (Academic)</th>
<th>EFAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>550</td>
<td>80; writing 22; speaking 20; reading 20; listening 18</td>
<td>6.5</td>
<td>80; 78 per section</td>
<td>60; 60 per band</td>
<td>60; writing 60; speaking 60</td>
<td>75% overall in level 300; minimum 70% in each category with at least 75% in writing, oral and academic skills or, 70% in level 400 with at least 70% in writing, oral and academic skills.</td>
</tr>
</tbody>
</table>

**Rationale:** These amendments originate from the recommendations of the comprehensive curriculum review exercise carried out by the English Language Institute at Renison University College. At the March 2014 Graduate Operations Committee meeting, the faculty associate deans of graduate studies accepted the recommendations for EFAS 300- and 400-level revised scores and the mapping to other accepted examinations.

/sgd
George Dixon 
Vice-President, University Research

Sue Horton 
Associate Provost, Graduate Studies
Program Name: Master of Public Health
Degree Designation: MPH
New Field: Environmental Health Sciences

Addition of the *Environmental Health Sciences* stream to the Master of Public Health Program

Content and definition of the new field
The *Environmental Health Sciences* stream will focus on the protection of human populations from harmful environmental factors. The stream will develop and enhance students’ knowledge and analytic skills in the core disciplines of public health for practical application to environmental health issues in Canada and abroad. Within the stream, students will gain an understanding of public health tools and concepts through targeted coursework in environmental epidemiology and environmental toxicology; these domains have been chosen as core to the stream in order to provide students with the greatest range of health issues, analytic skills, and disciplinary perspectives. The *Environmental Health Sciences* stream will prepare public health professionals to assess and manage risks to public health associated with environmental exposures to physical, chemical and microbial contaminants.

Rationale for the new field
During the development of the Master of Public Health (MPH) program in the early 2000’s, environmental health was identified as both a core need for public health practitioners, and a unique strength of the University of Waterloo (UW). Thus, an *Environmental Health Sciences* stream was initially developed and included as part of the MPH proposal. The subsequent UW hiring freeze prohibited the addition of new faculty with expertise necessary to successfully deliver the stream; the resulting inability to develop and deliver stream courses resulted in the decision to delete the stream from the original proposal shortly before the Ontario Council on Graduate Studies (OCGS) site visit in March 2006. The MPH program was subsequently approved in 2006.

Since 2006, faculty hires and course development within the School of Public Health and Health Systems (SPHHS) and the MPH program have resulted in the capacity to fully deliver the *Environmental Health Sciences* stream. Specific faculty information is given in the next section. Both courses for the proposed stream are currently offered annually: PHS 634, “Environmental Epidemiology for Public Health”; and PHS 624, “Environmental Toxicology in Public Health”.

Student enrolment in these courses and recent ad hoc external stakeholder consultations demonstrate that need for this program area remains, consistent with the original proposal in 2006. Formally offering this stream is also consistent with one of the SPHHS’s strategic focus areas (i.e., health and the environment), the Applied Health Sciences strategic plan 2013-2018 (i.e., protecting and promoting individual and community health), and the UW Strategic Plan 2013 (i.e., water focus).

Faculty Capacity and Expertise
The core faculty members involved in the stream are:
- Dr. Philip Bigelow – PhD, Epidemiology
- Dr. Brian Laird – PhD, Toxicology
- Dr. Shannon Majowicz – PhD, Epidemiology
- Dr. Jane Law – PhD, Geomatics Engineering
Numerous other faculty provide additional expertise and capacity (see Table 1).

**Existing and new courses related to the new field**

Both required courses for the proposed *Environmental Health Sciences* stream currently exist (PHS 634, “Environmental Epidemiology for Public Health”; PHS 624, “Environmental Toxicology in Public Health”); both are offered annually in the online format necessary for the program. No new courses are required.

Course calendar descriptions are as follows:

<table>
<thead>
<tr>
<th>Course ID</th>
<th>Course Title</th>
<th>Prerequisite</th>
<th>Course Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>012535</td>
<td>PHS 624 Environmental Toxicology in Public Health (0.50) LEC</td>
<td>PHS 604</td>
<td>Introduction to the underlying principles governing the interactions of foreign chemicals with biological systems, including a description of the human health effects that can occur as a result of chemico-biological interactions in the environment. Course open to MPH students. Others may be admitted with consent of instructor. Prerequisite: PHS 604 Master of Public Health students only Only offered Online</td>
</tr>
<tr>
<td>012539</td>
<td>PHS 634 Environmental Epidemiology for Public Health (0.50) OLN</td>
<td>PHS 606 or HSG 606</td>
<td>This course will cover epidemiological theories, methods, and applications used to address major environmental risks to public health, through a focus on the design, conduct, and interpretation of results from epidemiological studies of various designs. Public health risks will include the major pathways for exposure to microbial, chemical and physical hazards (e.g. ambient and indoor air, drinking and recreational water, food, physical contact). Prereq: PHS 606 or HSG 606</td>
</tr>
</tbody>
</table>

Future environmental scans and stakeholder consultation with public health agencies may identify the need for new courses or content areas, as the environmental health issues and methods available to address them evolve. The program currently has other relevant courses that allow students additional training related to environmental health, including Health and Risk Communication in Public Health (PHS 608); Risk and Exposure Assessment in Public Health (PHS 623); Public Health Surveillance (PHS 631); Public Health, Environment, and Planning (PHS 635); Geographic Information Systems and Public Health (PHS 661); and Global Health (PHS 662).

**Relationship of the new field to the parent program**

The *Environmental Health Sciences* stream will have a structure equivalent to the MPH’s existing *Socio- Behavioural* stream, requiring students to take two stream specialization courses as electives. As described above, these courses (PHS 624 and PHS 634) are currently offered. Admission requirements for *Environmental Health Sciences* stream students will be the same as those for other MPH students.

**Impact of the new field on the program**

The new stream is expected to have minimal effect on the program with regard to faculty capacity and course offerings. Dr. Laird, who will teach PHS 624 “Environmental Toxicology in Public Health” in Winter 2014, is a new hire in 2013. This course had previously been taught regularly by Dr. McColl (retired July 2013). PHS 634 “Environmental Epidemiology in Public Health” is already offered
by Dr. Majowicz. Both courses can also be offered by Dr. Bigelow. Offering the stream will therefore not have an effect on other course offerings (or on graduate supervision, which is not applicable to the MPH program).

The MPH program has a practicum requirement, and it is expected that students in the new stream will pursue practicum placements in the area of environmental health. Both the core faculty and faculty with expertise in the stream area (Table 1) have connections with environmental health practitioners, and have already facilitated numerous environmental health-oriented practicum placements for MPH students at organizations such as the Canadian Institute for Public Health Inspectors, the Public Health Agency of Canada, and the World Health Organization.

In the short term, the new stream is not expected to substantially impact total MPH enrolment, although it is expected to improve the demand for, and offer competitive advantage to, the UW MPH. The original environmental scan and program appraisal brief identified the Environmental Health Sciences stream as filling an important need in public health education, and building on several of UW’s strengths. Its addition now will help further differentiate the UW MPH from other MPH programs, allow us to continue to attract excellent students, and thus maintain the program’s high quality through its differentiation. Should the new stream substantially increase demand for the program, enrolment targets may be revised pending the availability of appropriate resources and new faculty.
<table>
<thead>
<tr>
<th>Name</th>
<th>Expertise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthony, Kelly</td>
<td>Educational research in health sciences training, attitudes regarding public policies (both US and Canadian) designed to protect disadvantaged groups; prejudice; attitudes towards, and responses to, dying and the death process; individualism and collectivism and culture</td>
</tr>
<tr>
<td>Arocha, Jose</td>
<td>Health informatics and socio-cognitive studies of human-computer interaction, principles of HCI design, health education and modeling understanding of health and disease</td>
</tr>
<tr>
<td>Bigelow, Philip</td>
<td><strong>Interventions in occupational health; epidemiology, exposure and risk assessment, and standard setting in occupational health</strong></td>
</tr>
<tr>
<td>Campbell, Sharon</td>
<td>Cancer prevention, health policy, tobacco control, health program evaluation</td>
</tr>
<tr>
<td>Chen, Helen (Agfa Research Chair in Health Informatics)</td>
<td>Health Informatics, Translational Research in Healthcare and Medicine, Health System Integration, Semantic Interoperability, Healthcare Decision Making and Decision Support, Health Data Analytics, Medical Imaging Informatics, Patient Safety</td>
</tr>
<tr>
<td>Cooke, Martin (joint appointment with Sociology and Legal Studies)</td>
<td>The social demography and health of Aboriginal peoples; Social inequality, the welfare state, and the life course; Population ageing and retirement</td>
</tr>
<tr>
<td>Dubin, Joel (joint appointment with Statistics and Actuarial Science)</td>
<td>Longitudinal data methodology and analysis, survival methodology and analysis, graphical methods. Application areas include nephrology, cancer, smoking cessation, aging, and the environment</td>
</tr>
<tr>
<td>Elliott, Susan (primary appointment as Dean)</td>
<td>Environment and health, medical geography, global environment, urban social geography, philosophy and method</td>
</tr>
<tr>
<td>Garcia, John</td>
<td>Population-based chronic disease prevention, knowledge exchange, capacity building, implementation, practice-based evidence, public health policy and systems, qualitative and mixed methods, realistic evaluation</td>
</tr>
<tr>
<td>Hall, Peter (joint appointment with Kinesiology)</td>
<td>Health psychology, social neuroscience, health promotion, ecological factors</td>
</tr>
<tr>
<td>Hammond,</td>
<td>Population health, tobacco control, nutrition policy, risk communication, harm</td>
</tr>
<tr>
<td>Name</td>
<td>Expertise</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>David</td>
<td>reduction, global health, policy evaluation</td>
</tr>
<tr>
<td>Hanning, Rhona</td>
<td>Human nutrition and chronic disease, evidence-based practice, body composition</td>
</tr>
<tr>
<td>Heckman, George</td>
<td>Chronic disease management in frail seniors - focus on cardiovascular disease and long term care</td>
</tr>
<tr>
<td></td>
<td>Primary Panel Canadian Consensus Guidelines on Heart Failure</td>
</tr>
<tr>
<td></td>
<td>Lead Geriatrician Waterloo-Wellington LHIN: developing plan to integrate seniors health services</td>
</tr>
<tr>
<td>Hirdes, John</td>
<td>Gerontology, mental health, health informatics, assessment, health policy, international comparisons, performance measurement, health care funding</td>
</tr>
<tr>
<td>Hoffman-Goetz, Laurie</td>
<td>Health, health literacy, science and risk communication, consumer health informatics, mass media and health education</td>
</tr>
<tr>
<td>Horton, Susan</td>
<td>Economics of public health, economics of nutrition, development economics, poverty</td>
</tr>
<tr>
<td>(joint appointment with Economics)</td>
<td></td>
</tr>
<tr>
<td>Husted, Janice</td>
<td>Prognosis of rheumatic conditions specifically psoriatic arthritis, epidemiology of mental health</td>
</tr>
<tr>
<td>Jessup, Linda</td>
<td>Impact of normative and alternate developmental transitions and pathways on healthy lifespan development</td>
</tr>
<tr>
<td>Kirkpatrick, Sharon</td>
<td>Food access issues among marginalized populations, with a particular focus on research aimed at informing policy and program interventions to reduce food insecurity. Work in this area focuses on a broad range of potential factors that might influence food security, including social policy, housing, and neighbourhood characteristics. Dr. Kirkpatrick’s second main area of inquiry relates to dietary assessment and strategies to mitigate measurement error in dietary intake data. Such work is needed to enable a better understanding of the diets of populations, relationships between diet and health, and the impact of interventions on diet. Dr. Kirkpatrick also has interests in nutrition and food policy, dietary guidance, and food environments, and is a registered dietitian.</td>
</tr>
<tr>
<td>Laird, Brian</td>
<td>The underlying objective of Dr. Laird’s research is to improve the characterization of human exposures from environmental contamination. Dr. Laird is particularly interested in the development of novel risk assessment tools that: (i) quantify the health risks from dietary contaminants, (ii) develop optimal intervention strategies where necessary, and (iii) improve the link between external dose and target organ concentration using the concepts of bioaccessibility and bioavailability.</td>
</tr>
<tr>
<td>Law, Jane</td>
<td>Health geomatics; healthy communities; disease mapping; measurement error, data uncertainty, and missing data adjustment in public health research; Bayesian spatial modeling and analysis in health research; determinants of health outcomes; health and crime; diet and health outcomes.</td>
</tr>
<tr>
<td>(joint appointment with School of Planning)</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>Expertise</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Leatherdale, Scott</td>
<td>Health behaviour surveillance (physical activity, obesity, alcohol and drug use, tobacco use, eating behaviour, sedentary behaviour); built environment and behaviour; impact of policies / programs on behaviour; co-morbid health behaviours; internet gambling and problem gambling; knowledge translation and exchange systems; cancer epidemiology; social epidemiology</td>
</tr>
<tr>
<td>Lee, Joon</td>
<td>Health informatics, decision making in health care, applied machine learning, data mining, biomedical signal processing, time series analysis, biostatistics, random variables and stochastic processes, signals and systems</td>
</tr>
<tr>
<td>Majowicz, Shannon</td>
<td><strong>Infectious disease epidemiology, particularly foodborne and enteric diseases, surveillance and burden of illness methods, epidemiology and epidemiologic methods, public health practice, systems approaches to food-related health outcomes, knowledge synthesis methods, knowledge brokering</strong></td>
</tr>
<tr>
<td>Manske, Stephen (Senior Scientist, PROPEL)</td>
<td>Content: tobacco control, physical activity, healthy eating Settings: schools, community, health systems Topics: knowledge synthesis (best practices), knowledge exchange (e.g., knowledge brokers, communities of practice), evaluation &amp; planning systems</td>
</tr>
<tr>
<td>McColl, Stephen (Associate Professor Emeritus)</td>
<td>Health effects of air pollution; Health effects of water pollution; environmental health risk assessment; cancer prevention; sustainable technology and health; risk communication</td>
</tr>
<tr>
<td>Meyer, Samantha</td>
<td>My research interests are wide-ranging but central to all projects is the application of social theory to social health research. Principally, I am interested in the application of social theories of trust in investigations of the nature and extent of patient trust in healthcare and the potential policy and practice implications. I also conduct research in the areas of bariatric surgery, equity in access to healthcare services, food scares and trust in food.</td>
</tr>
<tr>
<td>McKillop, Ian (joint appointment with School of Computer Science)</td>
<td>Design and use of health information systems; costing and performance measurement of health services; data standards, security and privacy of health information</td>
</tr>
<tr>
<td>Mielke, John</td>
<td>Neurobiological embedding of adversity (e.g., poor nutrition, psychosocial stress); Neuroplasticity during learning and following injury (e.g., ischemia)</td>
</tr>
<tr>
<td>Myers, Anita</td>
<td>Health program evaluation, gerontology Current projects include: evaluating licensing policies and procedures, assessing medically at risk drivers, and examining naturalistic driving behavior (using in-vehicle devices and GPS) in healthy drivers and those with neurological disorders (such as Parkinson’s)</td>
</tr>
<tr>
<td>Perlman, Chris</td>
<td>Evaluation of health and human services, health policy, quality and performance measurement, mental health systems and services</td>
</tr>
<tr>
<td>Riley, Barbara</td>
<td>Politics of prevention, dissemination, public health system,</td>
</tr>
<tr>
<td>Name</td>
<td>Expertise</td>
</tr>
<tr>
<td>------</td>
<td>-----------</td>
</tr>
<tr>
<td><em>(Executive Director, PROPEL)</em></td>
<td>chronic disease and prevention, knowledge translation, research-policy interface, population interventions</td>
</tr>
<tr>
<td>Satvat, Elham</td>
<td>Behavioural neuroscience; neuroscience laboratory; psychopharmacology; brain in health and disease; development, aging and health; psychosocial perspectives on lifespan and psychology of aging</td>
</tr>
<tr>
<td>Stolee, Paul</td>
<td>Geriatric health services, rehabilitation, long-term care, home care, health information systems and databases, health outcome measurement, optometric practice, and the integration and use of knowledge and information in practice. Current major research focus on better use of information systems in the rehabilitation of older persons</td>
</tr>
<tr>
<td>Tyas, Suzanne <em>(joint appointment with Psychology)</em></td>
<td>Epidemiology of aging and epidemiologic methods; cognition in aging, encompassing cognitive impairment, cognitive reserve and healthy aging</td>
</tr>
</tbody>
</table>
Brief description of proposed major modification to an existing graduate program:

The School of Architecture has undertaken a thorough review of the current Master of Architecture (MArch) degree program. As a result of this review and recommendations from the recent OCGS visit and follow up report, the following modifications to the Master of Architecture are being proposed:

1. Eliminate the Architecture Qualifying terms for external applicants and modify current Master of Architecture degree from three terms to six terms to incorporate qualifying course curriculum into Year 1 of the MArch program to ensure external students meet accreditation requirements.

   Applicants with Waterloo BAS degree (and external students with equivalent pre-professional Architecture degree) will be given advanced standing into Year 2 (term 4). All other applicants will start in Year 1 (term 1).

2. Admit all students as regular full-time graduate students so they are assessed graduate tuition fees and are eligible to apply for any applicable funding opportunities.

3. Eliminate the two-step application for external students (currently students must apply for qualifying and then make a second application for MArch admission), reducing workload at department, faculty and Graduate Studies Office levels.
Proposed Course Structure for the two year MArch degree:

**Year 1***

**Fall: Term 1**

<table>
<thead>
<tr>
<th>Course / Area</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design Studio</td>
<td>ARCH 690</td>
<td>Option Studio</td>
<td>1.5</td>
</tr>
<tr>
<td>History/Theory</td>
<td>ARCH 641</td>
<td>Modernism</td>
<td>.5</td>
</tr>
<tr>
<td>Building Technology</td>
<td>ARCH 673</td>
<td>The Science of the Building Envelope</td>
<td>.5</td>
</tr>
<tr>
<td>Media/Methods</td>
<td>ARCH 610</td>
<td>Architectural Analysis (New course)</td>
<td>.5</td>
</tr>
</tbody>
</table>

**Winter: Term 2**

<table>
<thead>
<tr>
<th>Course / Area</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design Studio / Technology</td>
<td>ARCH 691</td>
<td>Comprehensive Design Studio</td>
<td>1.5</td>
</tr>
<tr>
<td>History/Theory</td>
<td>ARCH 642</td>
<td>Contemporary Theory, Culture + Criticism (New course)</td>
<td>.5</td>
</tr>
<tr>
<td>Building Technology</td>
<td>ARCH 662</td>
<td>Steel + Concrete: Design, Structure and Construction</td>
<td>.5</td>
</tr>
<tr>
<td>(held with ARCH 362)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elective</td>
<td>ARCH 6XX</td>
<td>Open Elective</td>
<td>.5</td>
</tr>
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</table>

**Spring: Term 3**

<table>
<thead>
<tr>
<th>Course / Area</th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Internship /Graduate Research Assistantship</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Year 2**

**Fall: Term 4**

<table>
<thead>
<tr>
<th>Course / Area</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Practice</td>
<td>ARCH 655</td>
<td>Architectural Practice: Ethics, Professional Liability and Business</td>
<td>.5</td>
</tr>
<tr>
<td>Elective</td>
<td>ARCH 6XX</td>
<td>Open Elective</td>
<td>.5</td>
</tr>
</tbody>
</table>

**Winter: Term 5**

<table>
<thead>
<tr>
<th>Course / Area</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research + Design Thesis</td>
<td>Masters Thesis in Design</td>
<td></td>
<td>1.5</td>
</tr>
<tr>
<td>Building Technology</td>
<td>ARCH 652</td>
<td>Specifications</td>
<td>.25</td>
</tr>
<tr>
<td>Professional Practice</td>
<td>ARCH 654</td>
<td>Acts and Codes</td>
<td>.25</td>
</tr>
<tr>
<td>Elective</td>
<td>ARCH 6XX</td>
<td>Open Elective</td>
<td>.5</td>
</tr>
</tbody>
</table>

**Spring: Term 6**

<table>
<thead>
<tr>
<th>Course / Area</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research + Design Thesis</td>
<td>Masters Thesis in Design</td>
<td></td>
<td>2.0</td>
</tr>
<tr>
<td>Elective</td>
<td>ARCH 6XX</td>
<td>Open Elective</td>
<td>.5</td>
</tr>
</tbody>
</table>

* External applicants with pre-professional Architecture degree would be admitted into Year 1 in order to fulfill accreditation requirements. These students are currently admitted into "Qualifying program".

**Students with a Waterloo BAS or equivalent would be admitted with advanced standing into Year 2 (term 4).
Rationale for major modification to an existing graduate program:

In general, there are currently three forms of undergraduate architectural preparation in North America: architectural majors in liberal arts or science degrees, pre-professional architecture degrees, and five-year, accredited BArch programs. Typically students coming into a graduate first professional architecture degree program (MArch) require a minimum of two years to completion beyond their pre-professional undergraduate degree. This is known as a “4+2” program.

As noted in our OCGS external review, because our pre-professional Bachelor of Architectural Studies (BAS) program evolved out of the previous professional Bachelor of Architecture (BArch) program, the BAS degree compressed almost all of the professional degree requirements into the undergraduate degree. With co-op, this program takes five years to complete and has made the program, as noted in the review, “arguably the strongest undergraduate [pre-professional] program [in Architecture] in Canada.” It is also, by far, one of the most professional, pre-professional architecture degrees in North America.

Although this current structure ensures that our BAS students have fulfilled the vast majority of their professional requirements before undertaking their theses at the Masters level, it has produced a misalignment with other four year pre-professional degrees and was the initial reason for the institution of the “qualifying year.” The main problem with the qualifying year, however, is that we have been admitting external students, who have already completed an undergraduate pre-professional degree at another university, into our undergraduate, rather than graduate program, requiring them to pay international undergraduate tuition, and requiring them to re-apply to the graduate program after the completion of the qualifying year.

In response to the recommendations of our OCGS external review of the MArch program (June 27, 2013), the intention of the above set of modifications is to bring our program into alignment with the structure and accreditation requirements of the discipline, while also supporting the strategic planning initiatives of the Faculty of Engineering and the University of Waterloo. It will address the problem of placing external students into undergraduate coursework who should be studying at the graduate level, remove the implication that they are “unqualified” for graduate studies, and eliminate the barriers, financial and otherwise, that have diminished the attraction of our graduate program to external students. In addition, it will bring our structure into better alignment with the calendar and expectations of external students seeking a first professional graduate degree in architecture. The path for our continuing BAS students would not change, but by granting them advanced standing into the second year of the MArch program, it would also acknowledge the advanced level of professional coursework that they have already completed in their honours pre-professional degree and positively support our continuing recruitment of these students into the Masters program.

1. Objectives

a) The program modifications are consistent with the University of Waterloo’s Draft Strategic Plan, 2013-17 that identified three broad goals that apply to the Master of Architecture program: research excellence and impact, educational quality, and student opportunities. The above modifications are also intended to more closely align the graduate architecture program with the Vision 2015 Strategic Plan of the Faculty of Engineering in its directive to increase graduate enrollment, improve graduate programs, improve graduate operations, and enhance the graduate student experience.

b) The program modifications and associated learning outcomes are in alignment with Waterloo’s graduate Degree Level Expectations while also ensuring, as described above, that the program is consistent with its peer first professional degree programs in Architecture across North America.

c) The program does not change degree nomenclature, but ensures that students who have completed a pre-professional degree in architecture from another university and who have been deemed qualified to meet our graduate admissions standards are admitted into the Master of Architecture degree program.
2. Admission Requirements

a) The proposed modifications to the existing structure ensure the alignment between our admission requirements and the North American accredited standards for first professional graduate degree programs in Architecture (MArch) that admit students with pre-professional undergraduate degrees in architecture from other universities.

b) Admission to the program requires the completion of at least a four-year undergraduate pre-professional program in Architecture or equivalent, with an average of 75% or higher. Requirements in addition to an OUAC application, official transcripts and curriculum vitae include academic references, statement of interest outlining thesis research interests, proof of English language proficiency (TOEFL or equivalent) and a portfolio of design work.

3. Structure

a) The modifications are based on the existing structure of requirements and current number of credits for qualifying students yet improve upon these by ensuring that all courses taught will be at the graduate level. In addition, the program has been shifted to begin in the fall, rather than the winter semester to also align the calendar of the program with the vast majority of graduate programs in architecture. This adjustment to the calendar will better enable us to recruit qualified graduate students and to allow for the spring/summer semester for these students to pursue professional internships, undertake research assistantships or travel in support of thesis topics that deal with global issues and/or that are focused on international territories.

b) The proposed modifications do not change the length or number of courses and credits of the current program.

4. Program Content

a) As noted above, the modifications are intended to ensure that the MArch curriculum better reflects the current state of the architecture discipline and the structure and content of our aspirant peer academic institutions.

b) Two new courses will be offered to support the above modifications: the first is a course in architectural analysis and research methodology, and the second is a course in contemporary architectural theory, both intended to better prepare students for precedent analysis and thesis research in the second year of their studies in the MArch program.

c) As designated in the above proposed course structure, all courses for this program will be at the graduate level.

5. Mode of Delivery

a) Although the majority of the course content that the students are currently receiving within the qualifying year will continue to be the same within this modified structure, the development of these courses for students at the graduate level will render them more appropriate to the expected learning outcomes of a graduate program. It will also enable these courses to be developed to account for the different educational backgrounds of external applicants and to fulfill the professional requirements of the degree program, while better preparing them to undertake a graduate level research thesis.

6. Assessment of Teaching and Learning

a) The proposed modifications to the existing program will better enable a more focused assessment of both the teaching and learning outcomes of external applicants accepted into the first year of the MArch program and, by removing these students from the undergraduate program, ensure that the expectations and work produced are consistent with graduate degree level expectations.
b) The methods for documenting and assessing the level of performance of students will be consistent with the Master of Architecture degree professional accreditation requirements as defined by the CACB in addition to the graduate degree requirements as determined by the University of Waterloo.

**Institutional Approval**

Architecture Faculty Approval:

On February 27th, 2014 the faculty of the School of Architecture unanimously voted in support of eliminating the qualifying year for external applicants to the MArch program and integrating this year into the MArch program in relation to the above described two year format. The architecture faculty just completed a faculty retreat, is currently undertaking a strategic planning process in relation to the graduate Master of Architecture program and will be preparing a document that will integrate additional modifications as a response to the recommendations proposed in the OCGS external review to be presented at the beginning of the Fall 2014.
Senate Long Range Planning Committee met on 8 May 2014 and forwarded the following items to Senate for approval. Council recommends that these items be included in the regular agenda.

Further details are available at: https://uwaterloo.ca/secretariat/committees-and-councils/long-range-planning-committee

FOR APPROVAL

—

ESTABLISHMENT OF NEW DEPARTMENT

Faculty of Environment

1. Motion: To approve the transformation of the Centre for Knowledge Integration into the Department of Knowledge Integration within the Faculty of Environment, as described in Attachment 1 and effective 1 September 2015.

   Rationale: Since its establishment in 2007, the centre has sustained and grown a significant undergraduate program (Bachelor of Knowledge Integration) while also growing its faculty complement and maintaining a substantial level of activity overall. Since undergraduate programs typically fall under the responsibility of a department or school, it would be suitable for the centre to be transformed into a department at this time. This change was endorsed by Environment’s Faculty Council and by Deans’ Council on 17 March 2014 and 9 April 2014, respectively.

   Geoff McBoyle
   Vice-President, Academic and Provost

/mb
Department of Knowledge Integration

Proposal
The Faculty of Environment is currently composed of four primary academic units — the Department of Environment and Resource Studies (ERS), the Department of Geography and Environmental Management (GEM), the School of Planning (SOP), and the School of Environment, Enterprise and Development (SEED). The Faculty proposes to create a fifth academic unit — the Department of Knowledge Integration (DKI) from the existing Centre for Knowledge Integration. This new academic unit will build upon and provide a “home” for an existing undergraduate program, currently delivered at the Faculty level through the Centre. It will also house Waterloo Unlimited and the Shad Valley programs, which are heavily involved in outreach activities for high school students across Canada.

Context and Rationale:
The Centre for Knowledge Integration (CKI) was established in 2007 in the Faculty of Environment with the primary mission of developing and sustaining the new undergraduate degree program in Knowledge Integration. That program grew out of a university wide high school outreach and enrichment program, Waterloo Unlimited, created in 2004 at the request of then Provost Amit Chakma. CKI has now operated Waterloo Unlimited for seven years, and has graduated two cohorts of Knowledge Integration students. Since its inception, CKI has also run the national award winning Shad Valley summer program on behalf of the university.

The Knowledge Integration program is unique in its balance of core courses, breadth requirements and elective flexibility, as reflected in its unique degree designation. The Bachelor of Knowledge Integration program was approved and endorsed by the Ontario Ministry for Training, Colleges and Universities in August 2007. KI students take full advantage of the diversity of course offerings across campus and in 2013, the roughly 100 KI students across four years took 320 different courses from 58 different departments across campus. The first two graduating classes have gone on, in roughly equal numbers, to enroll in graduate programs in everything from Philosophy to Biology to Public Policy to Speech Language Pathology and Anthropology, or into gainful employment across the public and private sectors.

In 2013, the Faculty of Environment hired two new faculty members for the Centre (bringing the total to five) to enhance the capacity of CKI in both teaching and research and to deliberately strengthen its connections within the Faculty. In its strategic plan, CKI has articulated three main goals:

- to continue to grow the undergraduate program in KI, offering additional electives designed to attract students from across campus;
• to continue to operate and grow Waterloo Unlimited, which attracts over 120 outstanding high school students from across Canada to campus each year (about two-thirds of whom apply to Waterloo, with half of them actually enrolling in programs across all six faculties); and
• to develop a significant research activity supporting interdisciplinary and trans-disciplinary study, and to explore the potential of a graduate program (MKI).

The integration of CKI within the Faculty of Environment has been very successful. Not only has CKI deepened our interdisciplinary approach, which is a hallmark of our Faculty, it has contributed significantly to develop the problem solving skills of our students. The recent faculty hires fit exceptionally well with the vision of the Faculty of Environment and are already well integrated within the activities of CKI and the Faculty at large.

Furthermore, having achieved a significant level of activity and an initial steady state, CKI has become a fully-fledged academic unit in its own right. The term “Centre” is typically linked to research centres or other (administrative) centres such as CTE or CEL on campus. Since academic units responsible for undergraduate degree programs at Waterloo are either departments or schools, it would seem appropriate at this time to grant CKI academic unit status as the Department of Knowledge Integration.

André Roy
Dean
Faculty of Environment

Ed Jernigan
Director, Centre for Knowledge Integration
Faculty of Environment

March 21, 2014

The change in status for Knowledge Integration (from Centre to Department) was endorsed by Environment’s Faculty Council at its meeting on March 17, 2014.
Senate Undergraduate Council met on 8 April 2014 and will meet on 13 May 2014, and agreed to forward the following items to Senate for approval. Council recommends that these items be included in the regular agenda. Items recommended for inclusion in the consent agenda are contained within a separate report.

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

FOR APPROVAL [effective 1 September 2015]

________________________

NEW ACADEMIC PLANS

▶ Faculty of Arts
  Political Science – International Trade Minor

  1. Motion: To approve a new minor in international trade as presented and effective 1 September 2015.

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

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

- ECON 101
- ECON 102
- ECON 231
- PSCI 150
- PSCI 283
- PSCI 402
- Two language or culture courses from the same language / culture group.

Rationale: This new minor adapts the current specialization under the arts & business plan in order to allow students in any program or plan to register for it. The Faculty of Arts aims to increase its offering of more practical minors, and make them accessible to all students. The new minor leverages existing strengths within the specified departments and programs.

▶ Faculty of Mathematics
  David R. Cheriton School of Computer Science
  Bioinformatics Option

  2. Motion: To approve a new option in bioinformatics under the Bachelor of Mathematics plan, as described and effective 1 September 2015, subject to the recommendation of Senate Undergraduate Council at its meeting on 13 May 2014.

The Bioinformatics Option is available for both the Bachelor of Computer Science (BCS) and the Bachelor of Mathematics (BMath) (Computer Science) plans. The requirements are the same as for the BCS and BMath (CS) plans except that:

1. the elective breadth and depth requirements are waived, and
2. both plans include the following additional constraints on course selection:

   All of
   BIOL 130    Introductory Cell Biology
   BIOL 130L   Cell Biology Laboratory
   BIOL 239    Genetics
BIOL 240  Fundamentals of Microbiology  
BIOL 240L  Microbiology Laboratory  
BIOL 309  Analytical Methods in Molecular Biology  
BIOL 365  Resources in Bioinformatics  
BIOL 465  Current Topics in Bioinformatics  
CHEM 120  Physical and Chemical Properties of Matter  
CHEM 120L  Chemical Reaction Laboratory 1  
CHEM 123  Chemical Reactions, Equilibria and Kinetics  
CHEM 123L  Chemical Reaction Laboratory 2  
CS 482  Computational Techniques in Biological Sequence Analysis

Rationale: The new option will be open to both BCS and BMath (CS) students, as there is no obvious reason to restrict to only BCS students. Also, unlike the current Bioinformatics plans, students will be required to satisfy the full requirements of a Computer Science degree, which will enable the students' degrees to be accredited by the Canadian Information Processing Society.

ACADEMIC PLAN INACTIVATIONS [effective 1 September 2015]

► Faculty of Arts  
Deans of Arts  
Arts & Business – International Trade Specialization

3. Motion: To approve the inactivation of the International Trade Specialization, effective 1 September 2015.

Rationale: Item #1 of this report establishes a minor in the same area with the objective of making this area of study available to more students.

► Faculty of Mathematics  
David R. Cheriton School of Computer Science  
Bachelor of Computer Science – Honours Bioinformatics Option  
Bachelor of Science – Honours Bioinformatics, Honours Biology and Bioinformatics

4. Motion: To approve the inactivation of the Bachelor of Computer Science (Honours Bioinformatics Option) plan, the Bachelor of Science (Honours Bioinformatics) plan, and the Bachelor of Science (Honours Biology and Bioinformatics) plan, and to approve the inactivation of bioinformatics as a first-year admission plan, effective 1 September 2015 and subject to the recommendation of Senate Undergraduate Council at its meeting on 13 May 2014.

Rationale: Item #2 of this report establishes an option in the bioinformatics area which is intended to replace plans in which enrollment has been small and declining. The new option also serves the same target audience with a substantial plan that better deploys the resources available.

Mario Coniglio  
Associate Vice-President, Academic
FOR APPROVAL

Changes to Policy 59, Reduced Workload to Retirement

Motion: To approve changes to Policy 59, Reduced Workload to Retirement, as detailed in Attachment 1.

Note: strikethrough = deleted text, underline = new text.

Rationale: The proposed changes include:
- A clarification regarding the reduction of salary when benefiting from a reduced workload [p. 2, par. 1];
- A clarification regarding the duration of the reduced workload and establishing an arrangement [p. 2, par. 2 and 4].

Background: The proposed changes were approved by the Staff Relations Committee on 4 April 2014 and by the Faculty Relations Committee on 10 April 2014.

Geoff McBoyle
Vice-President, Academic & Provost
The policies found on the website of the Secretariat & Office of General Counsel (SOGC) are compulsory rules for the university community. The authoritative copies of the policies are held by the SOGC and bear the seal of the university. The online version accessible through the website of the SOGC is available for information purposes only. In case of discrepancy between the online version and the authoritative copy held by the SOGC, the authoritative copy shall prevail. Please contact the SOGC for assistance if necessary.

Established: 2 October 1979
Revised: [Insert every revision date.]
Type of revision: Housekeeping
Mandatory Review Date: [If a new policy, insert the second anniversary of the establishment date. If revised, insert the fifth anniversary after the date when last revised.]
Supersedes: N/A
Class: FS
Responsible/Originating Department: Human Resources
Executive Contact: Vice-President, Academic & Provost
Related Policies, Guidelines and Procedures:
- Policy 3 – Sabbatical and Other Leaves for Faculty Members
- Policy 5 – Salary Administration – University Support Staff
- Policy 39 – Leaves of Absence for Staff Members
- Policy 54 – Definition of Staff
- Policy 76 – Faculty Appointments

1. General
Reduced workloads may be of interest to faculty and staff members who wish to reduce the time committed to their university careers in the years prior to retirement [see section 2]. Normally, such arrangements remain in place until retirement.

Reduced workloads in other circumstances are either temporary or are considered a change from full-time to part-time or fractional-load status [see section 3].

Faculty and staff members are strongly advised to consult Human Resources regarding pension and benefits implications in advance of requesting a reduced workload. All university policies continue to apply to those on reduced workload. Leaves of absence for faculty and staff are described in Policies 3 and 39, respectively.
2. Reduced Workload to Retirement

Faculty and staff members who are at least 45 years of age with completion of at least 10 years of uninterrupted regular full-time service immediately prior to the commencement of the arrangement, may request a reduction of their daily, weekly, monthly or annual period of work to as low as 50% of that required for a full-time position. Salary is adjusted proportionately to reflect reduction of work. Leaves of absence, temporary reduced workloads, maternity/parental leaves and sick leaves/LTD are not deemed as interruptions in service for purposes of this policy. However, with the exception of a paid leave of absence and time worked during a temporary reduced workload, they do not contribute toward the ten years' service requirement.

Reduced workload to retirement arrangements can be for a maximum of 17 years, or to the person’s 71st birthday, whichever comes first. A retirement date that is mutually agreeable to the employee and his or her department head must be established as part of the arrangement.

Requests for such arrangements must be recommended in writing via the appropriate administrative chain to the vice-president, academic & provost (VPAP) for approval. Before the VPAP level, requests not granted at one level may be appealed to the next higher level. If not granted, an individual is entitled to receive a written explanation of the decision, if so requested.

Before a reduced workload to retirement is approved, Human Resources will confirm details of the arrangement in writing to the faculty or staff member and to the department; expectations under the arrangement will be specified in a revised appointment letter. Mutual agreement by the faculty or staff member and the university is required for any change to a reduced workload to retirement; once in place, changing such an arrangement may be difficult.

Note: special pension and benefits arrangements, as outlined below, are available for approved reduced workloads to retirement. Cost sharing arrangements will be adjusted to match those for full-time appointments.

- Pension participation based on nominal full-time salary subject to Canada Customs and Revenue Agency limitations on the accumulation of pension service credit for time not worked. This legislation allows an employee to earn up to five years of pension credit (plus up to three years additional credit for pregnancy leaves) for periods of reduced pay or temporary absences. This applies to any situation following 1 January 1992 in which an employee contributes to the Pension Plan at her/his nominal full-time salary and the actual salary received is a lesser amount. Sabbaticals, unpaid leaves, reduced workloads and layoffs are included in this calculation.
- Extended Health Care and Dental coverage as if full-time.
- Life Insurance premiums and benefits based on nominal full-time salary.
- Vacation, sick leave as well as Long Term Disability premiums and benefits will be based on actual salary and reduced workload time commitment.
- Paid holidays paid only on scheduled work days subject to Employment Standards regulations.
- Canada Pension Plan, Employment Insurance and Workers’ Compensation available according to government regulations.
3. Other (Temporary) Reduced Workload Arrangements

Staff or faculty members who wish to devote increased time to family or other outside interests during a portion of their careers may apply to reduce their daily, weekly, monthly or annual period of work to as low as 50% of that for a full-time position. Normally, such arrangements will be considered for approval for a period of at most two years but may be extended by mutual agreement to a maximum of four years in total. Continuation beyond four years will normally be on a fractional-load [see Policy 76 – Faculty Appointments] or regular part-time appointment [see Policy 54 – Definition of Staff].

A request for a temporary reduced workload will be assessed on its benefits to the employee and the university. Written approval must be given (with a copy to Human Resources) by the faculty or staff member's supervisor and department head and, where the period exceeds four calendar months, by the appropriate senior administrative officer (e.g., dean or associate provost).

Similarly, approval as noted above is required if a faculty or staff member wants to increase her/his workload before the expiration of the reduced workload arrangement. Note however, that the university has the right to require an increase in workload and/or return to full-time employment with the provision of at least three month's written notice.

During a temporary reduced workload arrangement, benefits other than pension, sick leave and long term disability (LTD) are the same as for full-time appointments. Pensions may be based on nominal salary subject to limits established by the Canada Customs and Revenue Agency. The LTD premium is based on nominal salary; the LTD benefit is based on actual salary until the end of the approved temporary reduced workload arrangement, and then on nominal salary.
FOR INFORMATION

New University Policy – Policy 30, Employment of Graduate Student Teaching Assistants

Rationale: The attached policy is necessary to elevate and give greater profile to the remuneration rate for graduate teaching assistants at the university. In the past, there have been instances where remuneration at the published TA rate did not occur due to a lack of awareness of its applicability in certain situations.

Background: The policy was developed under the provisions of Policy 1 and was recommended unanimously by the Graduate Student Relations Committee at its meeting on 10 February 2014. This draft was endorsed by Senate Graduate & Research Council at its meeting on 14 April 2014. The policy was given final approval and issued as a university policy by the provost under the provisions of Policy 1 on 28 April 2014, with an effective date of 1 May 2014. The establishment of this policy does not alter the TA rate.

Geoff McBoyle
Vice-President, Academic & Provost

/mg
Policy 30 – Employment of Graduate Student Teaching Assistants

The authoritative copy of this policy is held by the Secretariat and bears the seal of the University of Waterloo. The online version accessible through the website of the Secretariat is available for information purposes only. In case of discrepancy between the online version and the authoritative copy held by the Secretariat, the authoritative copy shall prevail. Please contact the Secretariat for assistance if necessary.

Established: 1 May 2014
Revised: N/A (New)
Mandatory Review Date: 1 May 2016
Supersedes: N/A
Class: Z
Responsible/Originating Department: Graduate Studies Office
Executive Contact: Associate Provost, Graduate Studies

Related Policies, Guidelines and Procedures:
1. Policy 33 – Ethical Behavior
2. Graduate Studies Calendar guidelines on graduate student support:
   http://uwaterloo.ca/graduate-studies/guidelines-graduate-student-support
3. Graduate Studies Calendar guidelines on Resolution of Disputes between TAs and Instructors
   http://gradcalendar.uwaterloo.ca/page/GSO-Resolution-of-Disputes-Between-TAs-and-Instructors
4. Graduate Studies Calendar committees: Graduate Student Support Advisory Committee:
   http://gradcalendar.uwaterloo.ca/page/GSO-Committees-and-Councils
5. Employment of Graduate Students – Special Arrangements

1. Introduction

2. Scope
This policy applies to currently-registered graduate students in any graduate program offered by the university, doing work which forms a normal part of a teaching assistant (TA) assignment in any program leading to a degree or diploma offered by the university.

3. Legal Framework
In addition to the abovementioned “Related Policies, Guidelines & Procedures”, the Policy must be construed in accordance with the following legal provisions:
   • Employment Standards Act, 2000, S.O. 2000, c. 41;
   • Human Rights Code, R.S.O. 1990, c. H.19;
   • Pay Equity Act, R.S.O. 1990, c. P.7;
   • Occupational Health and Safety Act, R.S.O. 1990, c. O1;
   • Statute Labour Act, R.S.O. 1990, c. S.20;
   • The University of Waterloo Act 1972, S.O., 1972, c. 200 (“The University of Waterloo Act 1972”),

If any of these legal provisions are modified, abrogated, superseded, or added to, the Policy shall be interpreted in accordance with this new legal framework.
4. **Principles**
   The university will endeavour to administer and distribute teaching assistantships in a fair and equitable manner, act in good faith and in the best interests of all students of the University of Waterloo.

5. **Employment of Graduate Students as Teaching Assistants**
   Graduate students employed as TA are paid at an hourly rate which is set annually by the Provost, with advice from Graduate Student Support Advisory Committee (GSSAC). Vacation pay is paid in addition to the hourly rate.

   The number of hours per term for one TA unit will be between 100 and 160 hours. A half TA unit may be awarded. Ideally, each Faculty should have a common number of hours of service per TA unit; failing that, uniformity must be sustained at the department or school level.

   If additional work which forms a normal part of a TA assignment (including, but not limited to, marking and proctoring) is offered to graduate students, graduate students must be paid at the graduate TA hourly rate for the number of hours specified. Such opportunities for additional work should be advertised. However, it is preferable to group such hours into a half TA unit or full TA unit wherever possible. Specifically, all academic units (Departments, Schools, Faculties and Institutes) must pay graduate students hired to mark coursework and proctor course examinations for academic programs at the TA rate, whether or not this forms part of a TA contract.