### OPEN SESSION

<table>
<thead>
<tr>
<th>Time</th>
<th>Item</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>3:30</td>
<td>1. Conflict of Interest</td>
<td>Declaration</td>
</tr>
<tr>
<td>3:35</td>
<td><strong>Consent Agenda</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Motion:</strong> To approve or receive for information by consent items 1-6 below.</td>
<td></td>
</tr>
<tr>
<td>3:35</td>
<td>2. Minutes of the 19 May 2015 Meeting</td>
<td>Decision</td>
</tr>
<tr>
<td></td>
<td>3. Reports from Committees and Councils</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. Graduate &amp; Research Council</td>
<td>Information</td>
</tr>
<tr>
<td></td>
<td>b. Undergraduate Council</td>
<td>Decision/Information</td>
</tr>
<tr>
<td></td>
<td>4. Report of the President</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. Recognition and Commendation</td>
<td>Information</td>
</tr>
<tr>
<td></td>
<td>5. Reports from the Faculties</td>
<td>Information</td>
</tr>
<tr>
<td></td>
<td>6. Report of the COU Academic Colleague</td>
<td>Information</td>
</tr>
<tr>
<td></td>
<td><strong>Regular Agenda</strong></td>
<td></td>
</tr>
<tr>
<td>3:40</td>
<td>7. Business Arising from the Minutes</td>
<td></td>
</tr>
<tr>
<td>3:45</td>
<td>8. Presentation on the Propel Centre for Population Health Impact</td>
<td>Information</td>
</tr>
<tr>
<td></td>
<td>Barbara Riley, executive director</td>
<td></td>
</tr>
<tr>
<td>4:00</td>
<td>9. Reports from Committees and Councils</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. Graduate &amp; Research Council</td>
<td>Decision</td>
</tr>
<tr>
<td>4:05</td>
<td>b. Undergraduate Council</td>
<td>Decision</td>
</tr>
<tr>
<td></td>
<td>a. Department Name Change</td>
<td>Decision</td>
</tr>
<tr>
<td></td>
<td>b. Admissions Update</td>
<td>Information</td>
</tr>
<tr>
<td>4:30</td>
<td>11. Report of the Vice-President, Advancement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. Fundraising Priority Setting Update</td>
<td>Information</td>
</tr>
<tr>
<td>4:45</td>
<td>12. Report of the Vice-President, University Research</td>
<td>Information</td>
</tr>
<tr>
<td>5:00</td>
<td>13. Other Business</td>
<td></td>
</tr>
</tbody>
</table>
University of Waterloo  
SENATE  
Minutes of the Tuesday 19 May 2015 Meeting


Guests: Nello Angerilli, William Chesney, Donna Ellis, Rocco Fondacaro, Erin Sargeant Greenwood, Stéphane Hamade, Sarah Hildebrandt, David Jao, Cathy Newell Kelly, Nick Manning, Daniela Seskar-Hencic, Brandon Sweet, Mat Thijsse, Marilyn Thompson, David Wallace

Secretariat & Office of General Counsel: Logan Atkinson, Karen Jack


*regrets

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

OPEN SESSION

1. DECLARATIONS OF CONFLICT OF INTEREST
   Senators were asked to declare any conflicts they may have in relation to the items on the agenda. No conflicts were declared.

Consent Agenda
Senate heard a motion to approve or receive for information by consent items 2-5 below.

Porreca and Henderson.

2. MINUTES OF THE 20 APRIL 2015 MEETING
   Senate approved the minutes of the meeting as distributed.

3. REPORTS FROM COMMITTEES AND COUNCILS
   Graduate & Research Council. Senate received the report for information.
   Undergraduate Council.
   • Undergraduate Admission Requirements. Senate approved the undergraduate admission requirements for 2016 as presented in the report.
• **Honours Recreation and Leisure Studies plan, Faculty of Applied Health Sciences.** Senate approved amendments to the Honours Recreation and Leisure Studies plan as presented in the report.

• **Honours Recreation and Sport Business plan, Faculty of Applied Health Sciences.** Senate approved amendments to the Honours Recreation and Sport Business plan as presented in the report.

• **Honours Therapeutic Recreation plan, Faculty of Applied Health Sciences.** Senate approved amendments to the Honours Therapeutic Recreation plan as presented in the report.

• **Tourism Option plan, Faculty of Applied Health Sciences.** Senate approved amendments to the Tourism Option plan as presented in the report.

• **Parks Option plan, Faculty of Environment.** Senate approved amendments to the Parks Option plan as presented in the report.

• **Tourism Option plan, Faculty of Environment.** Senate approved amendments to the Tourism Option plan as presented in the report.

Carried.

The remaining items in the report were received for information.

4. **REPORT OF THE PRESIDENT**

   **Recognition and Commendation.** Senate received the report for information.

5. **REPORT FROM THE FACULTIES**

   Senate received the reports for information.

   **Regular Agenda**

6. **BUSINESS ARISING FROM THE MINUTES**

   There was no business arising.

7. **PRESENTATION ON THE CENTRE FOR APPLIED CRYPTOGRAPHIC RESEARCH – DAVID JAO, DIRECTOR**

   Senate heard a presentation on the work of the Centre for Applied Cryptographic Research, including cryptography and internet security.


8. **REPORTS FROM COMMITTEES AND COUNCILS**

   a. **Membership and Composition Reports**

   I. **Executive Committee – Bylaw Second Reading.** Senate received the amended Senate bylaw 4 for second reading. The recommended changes include the addition of the associate vice-president, academic as an *ex officio* member of Senate and the deletion of the vice-president, administration & finance as membership for this position is provided in *The University of Waterloo Act*, s. 18.a.3.

   Senate heard a motion to give second reading and approval to the proposed amendments to Senate Bylaw 4.

   Porreca and Lolas.
Senators acknowledged and thanked Senator Richter for his inquiries into the merits of various *ex officio* positions on Senate and Senate committees.

Carried.

II. **Finance Committee.** Senate received the report for information.

III. **Graduate & Research Council.** Senate received the report for information.

IV. **Long Range Planning Committee.** Senate received the report for information.

V. **Undergraduate Council.** Senate received the report for information.

In the case of Graduate & Research Council, Long Range Planning Committee and Undergraduate Council, the president asked for feedback from Senators so as to allow any amendments to come back to Senate in the fall through the Executive Committee. Atkinson advised that he would receive feedback and take suggestions to committees so as to bring any changes forward for Senate approval in the fall.

b. **Graduate & Research Council**

- **School of Public Health and Health Systems, Faculty of Applied Health Sciences.** Senate heard a motion to approve a change in the name and acronym of the PhD and MSc degrees in the School of Public Health and Health Systems from “Health Studies and Gerontology” (HSG) to “Public Health and Health Systems” (PHHS).

  Frank and Rush. Carried.

- **School of Social Work, Faculty of Applied Health Sciences.** Senate heard a motion to approve an amendment the Master of Social Work plan to add the milestone “Master’s Seminar Presentation” and to amend the text of the degree requirements in the graduate calendar as presented in the report.

  Frank and Rush. Carried.

c. **Undergraduate Council**

- **Institutional Quality Assurance Process.** Senate heard a motion to approve amendments to the University’s Institutional Quality Assurance Process (IQAP) as presented in the report.

  Coniglio and Richter.

  It was pointed out that an error appears on page 11 of the report. The second paragraph on that page ought to say “one reviewer” rather than “one or both reviewers.” Coniglio agreed to make this correction in the final version of the report.

  On the basis of that undertaking, the motion was called, and was carried.

- **Mechanical Engineering, Faculty of Engineering.** Senate heard a motion to approve the new Welding and Joining Specialization as presented in the report.
It was agreed that the report as presented ought to be amended by deleting reference to the optional course [ME 547] where it appears on page 73 of the Senate materials, and to delete reference to ME 547 where it appears on page 74.

Coniglio and Sullivan. Carried.

- **Recreation and Leisure Studies, Faculty of Applied Health Sciences.** Senate heard a motion to approve a change in the plan name from Honours Tourism and Parks Management to Honours Tourism Development, and to approve amendments to the plan as presented in the report.

  Coniglio and Rush. Carried.

- **School of Public Health and Health Systems, Faculty of Applied Health Sciences.** Senate heard a motion to rename the Bachelor of Health Promotion program and degree nomenclature to Bachelor of Public Health.

  Coniglio and Rush. Carried.

- Senate heard a motion to the following effects:

  - **Plan Standardization, Faculty of Arts.** To approve the plan standardization templates as presented in the report.

  - **Anthropology, Faculty of Arts.** To approve amendments to all anthropology plans as presented in the report.

  - **Sociology, Faculty of Arts.** To approve amendments to all sociology plans as presented in the report.

    Coniglio and Peers. Carried.

- **Amendments to Regulations, Office of the Registrar.** Senate heard a motion to approve amendments to the exam regulations and related matters to add the prohibition of food at final exams effective 20 May 2015, as presented.

  Darling and Lolas.

  Senate was advised that students who are required to have a nutrition break will continue to have that opportunity with proper medical documentation. There will be a period of adjustment as this change is implemented. Darling was asked whether the restriction would be extended to others in attendance at the examination room, and he agreed to take the matter under advisement.

  Carried.
• **Amendments to Regulations, Office of the Registrar.** Senate heard a motion to approve amendments to regulations on changes to a student record or transcript post degree conferment to disallow any change to a student’s record once the degree has been conferred, the change to be effective 1 September 2016, as presented in the report.

Darling and Lolas. Carried.

9. **REPORT OF THE PRESIDENT**
   a. **Advisory Committee on Sustainability: Progress and Next Steps.** Andrey reported on the establishment of the President’s Advisory Committee on Sustainability. She introduced sustainability coordinator Mat Thijssen, and summarized the mandate of the committee.

The president offered a welcome to new senators and re-elected senators. He reminded Senate of the pending visit of the King and Queen of Netherlands to the university, to witness the signature on a significant research agreement with a Dutch university, and to announce the establishment of scholarships jointly sponsored by the governments of Canada and the Netherlands. The president updated Senate on the HeforShe campaign launched here under the auspices of the United Nations, summarizing the 10 x 10 x 10 impact factor – participation by ten heads of state, ten university presidents, and ten corporate leaders. The University of Waterloo will focus on outreach in STEM disciplines, faculty hiring in STEM disciplines, and leadership opportunities for women in the university.

10. **Q&A PERIOD WITH THE PRESIDENT**
    In response to a question, Senate was advised that students will be integrated into HeforShe initiatives through consultation being developed to identify student-centric and faculty-centric projects at this university. Senate congratulated all those involved in working to change the culture at the university on gender equity.

Senate was advised that recommendations relating to the Confucius Institute will be brought back to Senate for consideration.

The report intended to be delivered by the Vice-President, Advancement on campaign readiness will be brought forward to the June meeting of Senate.

The president thanked Associate Vice-President, International Nello Angerilli, and Chief Information Officer Dave Wallace, appearing at their last meetings of Senate before leaving their duties at the university.

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

Darling and Tizhoosh. Carried.

12. **REPORT OF THE VICE-PRESIDENT, UNIVERSITY RESEARCH**
    The Vice-President, University Research delivered a wide ranging report, including: the decision on round 1 of the Canada First Research Excellent Fund application process is due 14 July, with guidelines for the second round continuing to evolve; with NSERC Discovery grants, the university has done very well, gaining more awards although the average award is less; counting the Discovery
grants for this year, the university has $18.7 million coming in; the university had a 54% success rate on equipment grants, with 20 out of 37 applications awarded totaling $2.245 million; with respect to NSERC RTI grants, the university was awarded $25 million, representing a success rate of 33%, being 9.73% of the total funding and 9.17% of the total number of grants; with respect to recognition of early career researchers, the university’s success rate was 82.1% compared to the national average of 65%; with respect to established researchers, the university’s success rate was 91.8% compared to the national average of 82%; the university’s overall success rate with NSERC grants was 84%, up from 80% in 2014 and 72% in 2013.

With respect to CIHR, we have been successful with one of three NSERC-CIHR sponsored CHRPs, close to the national success rate. The successful applicant was Edith Law of the School of Computer Science, collaborating with Sunnybrook Hospital and Toronto Western Hospital to receive $436,746 over three years. With respect to SSHRC applications, there was one successful Development Grant application for $200,000, and 16 successful Insight Grant applications totaling $2,185,728, a 26.6% success rate. The SSHRC institutional grant has been received in the amount of $397,740, an increase of $17,000.

There have been major industrial projects finalized totaling $13.6 million in funding, including a proposal from Johnson & Johnson for contact lens research at the CCLR totaling $3 million per year for three years. At WatCo, the second round of the Accelerator Centre Jumpstart program for funding startups has occurred and is now pending evaluation. This program is partly funded by the university and partly by FedDev.

13. OTHER BUSINESS
Atkinson confirmed that the additional faculty-at-large seat on Senate necessitated through the addition of one additional ex officio seat will be filled through an election to be conducted at the first opportunity.

19 May 2015
Logan Atkinson
University Secretary & General Counsel
Secretary to Senate
Senate Graduate & Research Council met on 11 May 2015 and 8 June 2015, and agreed to forward the following items to Senate for approval and 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 Institute for Complexity & Innovation (WICI)

Under the current direction of Dawn Parker, the institute undertakes and facilitates rigorous, transdisciplinary, collaborative research that applies complexity science to problems at the core of human well-being in the 21st century. Innovative problem solving demands a complex systems approach that integrates knowledge across disciplines; by bringing together scholars, practitioners, and policy makers working on both theoretical and applied complex systems problems, WICI connects researchers and students from multiple faculties to create a shared understanding of complexity concepts, theories, and methods and connect with local stakeholders interested in these ideas.

WICI offers a range of programs and activities for Waterloo faculty and students, as well as external researchers and the public to support for cross-faculty collaborative research and to support development of a network of complex systems researchers on campus and beyond. The institute pursues and promotes leading-edge research into complex natural and social systems; applies theories, findings and methods of complexity science to practical problems; creates a university-wide research community in the field of complexity science; strengthens the university’s national and international reputation in this field; and attracts top-flight students and scholars to the University of Waterloo.

The membership of WICI is composed of Waterloo faculty, graduate students and undergraduate students, as well as external members who are leaders in the field of complexity science. Since starting with 22 members, WICI has grown to a membership of 73 at the end of 2014, and members have a successful track record in receiving grants to complement their robust publication activity. In the past five years the membership has graduated five masters and three doctoral students and has hired five postdoctoral fellows, while also being engaged in developing cutting-edge software tools and hosting/participating in approximately 10 seminars/workshops/conferences annually.

In recognition of the solid track record and strong future prospects of the institute, on behalf of Senate, council approved its renewal for a five-year term ending May 2020.

PROGRAM REVIEWS

Civil Engineering

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

Geography

On behalf of Senate, council reviewed the master’s and doctoral plans jointly offered by Waterloo and Wilfrid Laurier University through the Waterloo-Laurier Graduate Program in Geography in accordance with the university’s Institutional Quality Assurance Framework. Based on the material presented in the Final Assessment Report (Attachment 2), and the report of the reading subcommittee formed by council to review in depth the self-study and program materials, as well as to request additional information and provide recommendations, the program was found to be of good quality.
CURRICULAR MODIFICATIONS
On behalf of Senate, council reviewed and approved new courses, course changes, course inactivations and minor plan changes for the Faculty of Applied Health Sciences (kinesiology), the Faculty of Arts (English; sociology), the Faculty of Engineering (chemical engineering) and the Faculty of Mathematics (actuarial science; computational mathematics; PhD comprehensive 1 table of categories and areas; statistics).

SCHOLARSHIPS AND AWARDS
On behalf of Senate, council approved the creation of the Department of Chemistry Scholarship for Graduate Student Excellence, the Xerox Research Scholarship in Polymer Science and Engineering, the Dr. Murray Brown Psychology Graduate Memorial Award, and the Patricia M. Rowe and M. Philip Bryden Psychology Travel Award.

/mg  Jim Frank  George Dixon
    Associate Provost, Graduate Studies  Vice President, University Research
Final Assessment Report
Civil Engineering (MEng, MASc, PhD)
June 2015

Background:

The Department of Civil & Environmental Engineering (CEE) (Civil Engineering until 2006) is one of the founding Departments of the University of Waterloo. The department began offering its graduate program in 1960, with its first Master’s degree being awarded by the University in 1962. CEE’s graduate program provides in-depth training and research opportunities in four fields of study: Environmental & Water Resources (E&WR), Geotechnical (GEO), Structures, Mechanics & Construction (SM&C), and Transportation (TRANS). Degrees offered include: Master of Engineering (MEng) in Civil Engineering or Nuclear Engineering (approved in 2004), a Master of Applied Science (MASc) in Civil Engineering, and a Doctor of Philosophy (PhD) in Civil Engineering. In Fall 2013, CEE’s student population consisted of 972 undergraduate students, and 244 (204.6 Full-Time Equivalent [FTE]) graduate students.

CEE underwent a successful review in 2007. At that time, reviewers concluded: “Amongst the twelve Civil Engineering graduate programs in Ontario, the quality of the program at the University of Waterloo ranks in the top two.”

Summary of Review Process
Submission of Self-Study by Program: August, 2014
Site visit: January 26-27, 2015
External Examiners’ Report: February 12, 2015
Departmental response: April 10, 2015

Review Team

External Reviewers:  Dr. Leonard Lye, Department of Civil Engineering, Memorial University
                    Dr. Ernest Yanful, Department Civil & Environmental Engineering, University of Western Ontario

Internal Reviewer:  Dr. Maria Liston, Department of Anthropology, University of Waterloo

The Associate Provost, Graduate Studies selected the external reviewers from a list provided by CEE. The Review Team conducted a site review over two days on January 26-27, 2015; the self-study report was provided to the Review Team prior to the visit.
The site review included meetings with the Provost & Vice President Academic, Associate Provost of Graduate Studies, Faculty of Engineering Dean and Associate Dean of Graduate Studies, CEE Chair and Associate Chair of Graduate Studies and representatives of CEE faculty, graduate students, and staff. The Review Team was given a tour of the CEE research facilities.

Summary of Review.

The External Reviewers, Dr. Leonard Lye and Dr. Ernest Yanful, submitted a very positive report of the graduate programs in Civil Engineering (MEng, MASc and PhD). They concluded that: “the UWaterloo Civil Engineering graduate program is very strong and comparable to civil engineering programs at other top Canadian universities.”

Strengths:

- “CEE graduate students at UWaterloo feel good about their program, especially the quality of courses and instruction.”
- “Faculty members in the CEE program are well qualified in their various fields.”
- The research productivity of faculty “is comparable to average productivity of faculty members in research intensive Civil Engineering departments in Canada”.
- “CEE admission standards ... are in line with the standards of other major engineering departments in Canadian and U.S. universities”.
- “The moral of faculty staff and students is high”.

Weaknesses:

- The number of faculty supporting the GEO stream (4) is minimal.
- Graduate students raised concern about the availability and flexibility of graduate courses.
- Most PhD students “do not complete their comprehensive examination within the required four terms, but in the fifth term or later”.
- Funding for international MASc students should be “increased to provide a sufficient living stipend”.
- Travel conference support should be increased to encourage participation in conferences.

Reviewer Recommendations & Department Responses:

1. “There should be a clearer written policy in the calendar regarding minimum passing grades in engineering and course failures. The minimum passing grade in a graduate engineering course is not mentioned in the calendar. It is, however, mentioned that an overall average mark of 70% is required for progression.”
We agree. Implementation to occur within the next 12 months.

2. “CEE should encourage and monitor the participation of CEE students in the new MASc and PhD Collaborative Water Program. Students should not miss this unique opportunity.”

We agree. Implementation to occur within the next 12 months.

3. “Inequalities in the quality of graduate student office space should be addressed. The plan to renovate current inadequate and dated offices being used by GEO graduate students is commendable and should be implemented.”

This is being addressed to the greatest extent possible. Substantial financial resources are required for us to execute our plans to continue to renovate existing CEE space into higher-quality graduate student office space. This is a multi-year effort that may take five or more years and at least $300,000 to be realized.

4. “The 4 FTE faculty complement for the GEO group is the minimum and that UWaterloo should do all it can to increase or at least maintain this number. This should be considered mission critical.”

The GEO field of study will continue to be supported by 4 FTE faculty members. An increase in the faculty complement in this field of study is not anticipated in the foreseeable future.

5. “More graduate courses in the GEO area should be offered on a regular basis.”

Over the next 24 months we will carefully monitor the graduate courses in the GEO area with a view to increasing their availability and timing. In the next year (2015/16), two faculty members in this area are planning to take sabbatical leave, and one will be retiring (January 01, 2016). We have begun advertising to replace the impending retirement.

6. “The funding level for international MASc students should be increased so that sufficient funds are available for living expenses after the payment of fees.”

While we agree that this is a concern, there is little CEE can do aside from requiring supervisors to increase their funding level for international MASc students. We are not prepared to take action on this recommendation; however, we will continue to encourage supervisors of international MASc students to provide higher-than-minimum GRS payments.
7. “To encourage conference attendance and participation by graduate students, travel support should be increased. The department, faculty, graduate student union and the university could share this increase.”

Although we do not have supporting data, we believe conference attendance by CEE graduate students is quite high, particularly for PhD students. The largest part of these expenses should be borne by the supervisor since it is in their best interest to disseminate their research findings at these venues and provide their graduate students with a rewarding experience. We will collect the appropriate data to make an informed conclusion, and then re-visit this recommendation within the next 12 months.

The Dean of Engineering, Dr. Pearl Sullivan, viewed the External Review Report to be positive and endorsed the Department response. She commended the Department for the progress on a number of recommendations.

This report will go to Senate Graduate and Research Council on June 8, 2015, and to Senate on June 15, 2015.
Final Assessment Report
Geography (MA, MES, MSc, PhD) (joint with Wilfrid Laurier)
June 2015

The Department of Geography and Environmental Management (GEM) at the University of Waterloo (UW) and the Department of Geography and Environmental Studies (GES) at Wilfrid Laurier University (WLU) jointly deliver the Waterloo Laurier Graduate Program in Geography (W-LGPIG). The W-LGPIG was approved in 1992 and became fully operational in September 1993. The W-LGPIG offers four graduate programs: the Master of Arts (MA), Master of Environmental Studies (MES), Master of Science (MSc), and PhD degrees. Specialization fields across these programs include: Environmental and Resource Management, Environmental Science, Geomatics, and Human Geography. The joint W-LGPIG was appraised in 2007 and classified as Good Quality.

The directorship of the program alternates between the two universities every three years; the current Director, Dr. Johanna Wandel, is at the University of Waterloo. The Vice-President Academic & Provost of the two universities, on the recommendation of the Graduate Deans and the Faculty Deans and Department Chairs of the participating department of the two universities, appoint the Director.

Summary of Review Process
Submission of Self-Study by Program: July 2014
Site visit: March 19-20, 2015
External Examiner’s Report: March 29, 2015
Departmental Response: May 26, 2015

Review Team:
External Reviewers: Dr. Peter Keller, Department of Geography, University of Victoria
Dr. James Buttle, Department of Geography, Trent University

Internal Reviewers: Dr. Mustafa Yavuz, Department of Mechanical & Mechatronics Engineering, University of Waterloo
Dr. Jane Rutherford, Department of Biology, Wilfrid Laurier University
The Associate Provost, Graduate Studies, at the University of Waterloo selected the external reviewers from a list provided by the W-LGPIG program director. Each of the partner universities appointed an internal reviewer who accompanied the external reviewers during the visit to their home university. The Review Team conducted a site review of the joint Geography graduate programs over two days on March 19th to 20th; the self-study report was provided prior to the visit. Their agenda included meetings with representatives of each institution (Waterloo, and Wilfrid Laurier), including: Vice President Academic & Provosts, Associate Provost/Dean of Graduate Studies & Postdoctoral Studies, Associate Deans (Graduate Studies) and Deans of Faculties; Department Chairs; W-LGPIG Director & committee members; faculty members, graduate students, and staff of the respective Departments, and Library staff. They were given a tour of the research facilities at each of the partner universities.

Summary of Review.

The External Reviewers, Dr. Peter Keller and Dr. James Buttle, submitted a very positive report on the Joint Graduate Program in Geography (MA, MES, MSc and PhD) programs. The Reviewers were “impressed by the overall structure and quality of this joint graduate program, its faculty and students”. They concluded that W-LGPIG program “overall is a very strong and highly reputable graduate program competitive with the best in Canada and internationally”.

Strengths:

- The joint delivery of the program by UW and WLU “gives students access to a very significant pool of research faculty and research infrastructure not available in most other Geography graduate programs in Canada”.
- The joint program is “amongst the strongest graduate programs in the country” in “water-related research, particularly in wetland and northern environments as well as geomatics. The program also could have other strengths recognized to be amongst the top nationally if the research programs of faculty in the various sub-disciplines were aligned and promoted under strategic umbrella themes. As an example, Human Geography could seek to identify strength under “Climate Change” as well as “Governance”. Geomatics could identify similar overarching common themes.”
- The “technical Library and data support accessible to graduate students both at UW and WLU”.
- “Strong-to-excellent research and scholarly records” and external funding of faculty in all fields of study.
- A “very good track record of completion rates at both the Masters and PhD levels”.
- Student reports of the high quality of graduate supervision.
Weaknesses:

- “The number of courses required for completion of the research-based Masters program is greater than for comparable programs.”
- Concerns raised by some students for “delivery of graduate courses using undergraduate style course evaluations focusing on examinations”.
- Many of the 60 courses listed in the calendar are not offered on a regular basis.
- Potential loss of critical mass of faculty to offer graduate supervisory capacity in Human Geography.
- Limited enrolment of Master’s students from other universities.

Reviewer Recommendations & Department Responses:

The Reviewers offered 12 recommendations under three themes: a) Raising the Profile, b) Program and Courses and c) Resourcing. These recommendations and the program responses appear below.

a) Raising the Profile.

1. The quality and positioning of this program relative to others in Canada and internationally is poorly advertised and marketed, and therefore it operates in relative obscurity. The websites of both Departments and the joint program would benefit from investments to get the story out. It is unlikely that the expertise or resources to achieve this can be found within the units. We suggest that responsibility for program marketing and promotion be assigned elsewhere at UW and WLU, and that the unit then receive training in how to capitalise on social media and other methods to keep redesigned web-presences up-to-date and dynamic.

We agree with this recommendation. The program committee for the W-LGPIG will undertake to develop a better marketing strategy for this program, with the goal of raising the program’s overall profile in Canada. This graduate marketing strategy will be coordinated with current and future undergraduate marketing activities. In particular, we will endeavour to enhance our program website. We will be seeking assistance and resources from both UW and WLU to develop, implement, and maintain this enhanced marketing and promotion program.

2. Both Departments are encouraged to develop ways to identify and stay engaged with their graduate student alumni to track their careers and successes. This information can then become part of a revised web presence.

We agree with this recommendation. The program committee will work with the alumni affairs offices at both UW and WLU to review the current status of our alumni tracking and outreach activities. Information gained from these outreach activities will be used
to both enhance our marketing efforts and to address issues in the delivery of the program.

3. All graduating graduate students should receive an exit interview with a neutral party so that the program can receive ongoing feedback on the student’s experience with the overall program, their supervisor, and supervisory committee.

We agree with this recommendation. The program committee will develop a list of questions to guide these semi-structured exit interviews. Exit interviews will be administered by the graduate officers at UW and WLU, through a confidential process. Feedback from these exit interviews will be reviewed annually.

b) Program and Courses.

4. The numbers and specificity of graduate courses currently offered in the program’s curriculum could be simplified and generalized to accommodate flexibility and realism. Courses that have not been offered for several years should be removed, particularly in instances where the faculty member who initiated the course has left the university. The program should explore more generalized “umbrella” course titles within cognate areas that can then be “customized” with sub titles to reflect any one specific offering. Courses offered in any one year should be advertised and, if at all possible, courses offered for the following year should also be agreed upon and advertised so that there is an honest contract between entering students and the program.

We agree with this recommendation. The program committee will undertake a curriculum review with a view to streamlining graduate course offerings and eliminating older courses that can no longer be offered. This curriculum review will be undertaken in coordination with our responses to recommendations 5 and 6.

5. The number of required courses (five) is high for typical equivalent Masters programs of this type across Canada and we suggest that the possibility of reducing this by one course be considered. Courses that are cross-listed and/or offered by academic units other than the two Departments participating in the joint program should be clearly identified as such, with an explicit pointer that students must check the availability of these courses during their degree.

We are taking this recommendation under advisement. We are currently (at WLU) undertaking a detailed review of the course requirements for research masters programs across Canada. This information will inform a broader discussion regarding the appropriateness of the current course requirements and the possible revision of these requirements.

6. The learning outcomes, design and delivery of GEOG 691 should be revisited. We encourage that this process be externally facilitated through one of the two universities “Learning and Teaching Centres”, and that the process include input from past students.
who have taken this course. Given relatively high enrolment numbers for this type of
course (often over 50), the option to divide the course into two - one specific to Masters
students, the other specific to doctoral students - should be considered. Separation of
the two groups would also serve to establish a sense of community amongst the PhD
student cohort across the program that appears to be missing at present. As starting
discussion points for redesign of GEOG 691 we offer exploration of what may be simply
“busy work assignments” vs. assignments that will help the students “advance in their
program of study”, what aspects of professional development the course may wish to
cover (e.g. writing proposals and grants, strategies for publishing, producing conference
posters and presentations, preparation of teaching dossiers, project management,
ethics, ... ), what the most effective ways are to teach these professional development
skills, and how the course may facilitate community building across the graduate body,
and between graduate students and faculty. The question of whether the course should
remain Pass/Fail or be graded could also be revisited. Finally, thought could be given to
how the course could be adjusted on an annual basis to reflect the research interests of
that year’s cohort.

We agree with this recommendation. As part of the broader curriculum review
undertaken in response to recommendation 4, we will undertake a review of the
delivery of GEOG 691.

7. We would like to encourage the establishment of a weekly or bi-weekly seminar series
across the entire program. We understand that such series exist within individual fields
within the program but feel that a pan-program series would assist in promoting a
greater sense of community amongst students in the program as well as raising
awareness of the diversity, breadth and excitement of the discipline.

We agree with this recommendation. The department chairs at WLU and UW will
coordinate to organize a pilot seminar series for the 2015-16 academic year. The initial
response to this series will inform the continued development of a regular seminar
series.

8. The stated timeline and deadline for the comprehensive examination should be
aligned with the current reality (completion within the second year and by the end of the
sixth term in the program). The evaluative pieces of the comprehensive examination
should match clearly stated purposes and learning objectives and as much as possible
facilitate delivering components of the doctoral theses (i.e. literature review, theoretical
context, relevance to the discipline, statement of research problem to be advanced).

We do not agree that adjustments should be made to the comprehensive exam
schedule. Normally, PhD students are required to complete the comprehensive exam in
the 4th term of study (usually the fall term of the second year in the program). Most
students successfully complete the comprehensive exam in the 4th term, or early in the
5th term (if there are scheduling issues). We believe this timing should be maintained to
ensure that students move on to their thesis research in a timely manner. Delaying the
timing of the comprehensive exam would unnecessarily slow students’ progress through
the PhD program.
We will review the current structure of the evaluative pieces of the comprehensive
exam with respect to stated desired learning outcomes.

9. The opportunities to prepare for a career that includes teaching, including advancing
an understanding of delivery of pedagogy and developing teaching skills, should be
made more explicit for PhD students. The possibility of incorporated this as requirements
for completion of the doctoral degree should be considered.

PhD students are currently made aware of resources on the two campuses to assist
them in the development of their teaching skills. We can examine efforts to reinforce
the availability and awareness of these resources (e.g., via GEOG 691). We will explore
the possibility of incorporating teaching skills into the requirements for the degree.
However, adding the requirement that a PhD student teach a class will not be possible
or advisable, for a variety of reasons.

10. The potential for developing a course-based Masters degree in Geomatics should be
explored. There looks to be support for this amongst the Geomatics faculty, and it would
be consistent with the desire on the part of UW to increase the number of professional
Masters programs.

UW has discussed the possibility of creating a course-based masters in Geomatics
before. This will be discussed again.

c) Resources

Given the current fiscal realities we do not offer specific recommendations for holding
onto existing or securing new resources. However, we recommend following:

11. That the impact of not replacing vacated faculty positions on each of: 1) the joint
graduate degree under review, 2) each Department’s undergraduate programs, and 3)
other graduate program initiatives the two Departments are involved in, be given very
careful consideration when it comes to reallocating or investing new resources in the
Faculty. More specifically, we recommend that close consideration be given to a
replacement tenure-track position at WLU in the Environment and Resources
Management field not only to ensure coverage of critical needs in the undergraduate
curriculum, but also to regain capacity to offer graduate courses and to supervise
students in this field in the program. We understand that the strategic need for this
position is recognized by the Administration at the highest level.

We agree with this recommendation.
12. It was brought to our attention by the students that there may not exist equal ease of access to facilities at the “other” university. The problem may arise in part from lack of awareness by all students of how access may be secured, in part from lack of awareness on behalf of the UW and WLU administrative structures as to why equal access is important given the nature of this joint-program. We recommend that W-LGPIG investigate and negotiate the resolution to issues of unequal access.

We are aware of historic complaints regarding access to resources. It should be pointed out that access to academic resources is equal for students from both campuses. Students from WLU and UW have the same access to wireless internet, the library, lab, online learning resources, and Ithenticate (through UW). The only difference, when it comes to access, is in the "social" resources - i.e. athletics, bus pass etc. These services are part of student fees and specific to each campus. We understand that WLU provides more access here. For example, UW students may use the WLU athletic facilities, but WLU students may not use those at UW. However, this is not a W-LGPIG issue and beyond the control of our academic units.

The Dean of Environment at UWaterloo has endorsed the department’s response to the reviewers’ recommendations.

This report will go to Senate Graduate and Research Council on June 8, 2015, and to Senate on June 15, 2015.
Senate Undergraduate Council met on 5 May 2015, and on behalf of Senate approved minor changes to academic plans, changes to faculty regulations, new courses, course changes, and course inactivations. Council agreed to forward the following items to Senate for information and approval. Council recommends that these items be included in the consent agenda.

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

FOR APPROVAL

CHANGES TO ACADEMIC PROGRAMS [effective 1 September 2016]

- Faculty of Science
  - Physics and Astronomy
    1. **Motion:** To approve amendments to the honours physics (regular and co-operative), honours physics and astronomy (regular and co-operative), honours mathematical physics (regular and co-operative), and honours life physics (regular and co-operative) plans as described in Attachment #1.

      **Rationale:** The special 65% average requirement in first year courses in the honours physics (regular and co-operative) and honours physics and astronomy (regular and co-operative) plans are eliminated as many exceptions to this rule have been made in the past and removing this requirement is anticipated to facilitate the transition from high school to university for many students. A number of changes common to all plans aim to make plans consistent, flexible and lend greater clarity to the plans for students.

CHANGES TO REGULATIONS [effective 1 September 2016]

- Faculty of Science
  - School of Optometry & Vision Science
    2. **Motion:** To approve amendments to the regulations pertaining to clearing a single failed course as described.
      
      (strike-through = deleted text, underline = new text)

      **Supplemental Examinations**
      All required courses must be passed. The Faculty of Science guidelines regarding examinations and standings will be followed. However, in some circumstances, supplemental examinations may be offered as a means to clear a failed course. Students will be notified if they are eligible to write a supplemental examination. All eligible students, who decide to take this option, must complete an application for a supplemental examination and a fee will be collected with the application. Supplemental examinations may not be available for all courses. The original grade will be used in all average calculations. The Doctor of Optometry program is a four-year professional program. As such, academic standing is based upon the student’s ability to successfully complete all course requirements within a given year. Promotion to a subsequent year is severely compromised when all courses have not been passed.

      **Clearing a Single Failed Course**
      Students can choose to clear a single failure in a course by one of two methods: 1) retaking a course
when it is next offered, or 2) passing a supplemental exam.

Students qualify to write a supplemental exam when they:

- Obtained the failure in an OPTOM 100 to 300 ‘LEC’ or ‘LAB,LEC’ course
- Had a satisfactory or better standing in the term preceding the course failure,
- Have not previously failed the course, and
- Pay the supplemental examination administrative fee

Students who do not qualify to write a supplemental exam must retake the failed course when it is next offered.

When completed, supplemental grades are recorded as:

- On Quest: “S”, if passed, or “N”, if failed, in the column labelled “SUPP”, adjacent to the original grade for the course
- On official transcripts: “Supplementary Exam Completed Grade: Satisfied”, if passed, or “Grade: Not Satisfied”, if failed

Students who fail a supplemental examination must re-take the course when it is next offered and may not proceed into the next term. Students who obtain a failing grade in a repeated course will receive the academic decision, “Failed – May Not Continue in Optometry Academic Plan”.

Rationale: Based on a recent case, the Faculty Committee on Student Appeals had asked that the optometry and pharmacy rules for clearing a failed course be explained more clearly. The revision is the current practice in optometry. In preparing the revisions, it was also noted that some of the references to what appears on the transcript were not accurate with current practices.

Faculty of Science
School of Pharmacy

3. Motion: To approve amendments to the regulations pertaining to clearing a single failed course as described.

Clearing Failed Courses

Normally, a failed course may be passed in one of two ways, and the course instructor will decide which mechanism is appropriate. The two options are:

1. Obtaining a minimal passing grade for the course based on the outcome of a supplemental examination or another assessment determined by the course instructor. There is a fee for supplemental exams. Supplemental examinations may not be available for in all courses; course syllabi will indicate whether a supplemental assessment is available. Normally, a supplemental examination for a course may be offered if there is a maximum of 2 failed courses/term and the student is in satisfactory academic standing. For courses that offer a supplemental examination, students will be eligible to write it only if they have a maximum of one failed course in that academic term and they are in satisfactory or better academic standing entering that term. If a supplemental examination is to be offered, the student will be notified regarding the supplemental examination. Students will be notified if they are eligible for a supplemental examination in any course they have failed. There is a fee for supplemental exams. When a supplemental examination is passed, "Sup Satisfied" will appear on Quest and on the transcript in the “Sup” field adjacent to the original grade for the course. If the supplemental examination is passed, an “S” will appear on Quest in the column labelled “SUPP” adjacent to
the original grade for the course. An “N” will appear if the student fails the supplemental. “Supplementary Exam Completed Grade: Satisfied” will appear on the official transcript adjacent to the original grade for the course, if the examination is passed. When students fail, then “Grade: Not Satisfied” will appear on the official transcript. Only one attempt at a supplemental examination or assessment is allowed. If the students are not successful, s/he must re-take the course when it is next offered, and may not proceed to the next term.

2. Re-taking the failed course or an approved alternative and obtaining a minimal the passing grade for the course. When a failed course has been successfully cleared the grade obtained in the cleared course is indicated on Quest and on the Transcript. The original course and failing grade remain on the Transcript. If a grade of less than the minimal passing grade is obtained for a repeat course, or approved alternative, the students are given the academic decision "Failed - May Not Continue in Pharmacy Academic Plan.” Readmission into the Pharmacy program is not possible; however, a students receiving this standing may be considered for admission to another program in the Faculty of Science.

Academic decisions will be revised as appropriate based on clearing of failed courses.

Rationale: See rationale for Motion #2.

4. Motion: To approve amendments to the regulations pertaining to admissions requirements as described.

Rationale: Prospective students have inquired about the acceptability of courses that were offered by their institution’s English department which were focused on theatre, drama, social media or technical writing. These types of courses do not meet the intent of this admission requirement. The English Academic Requirement reference above will provide examples of acceptable and unacceptable courses.

FOR INFORMATION

CURRICULAR MODIFICATIONS

Course changes and course inactivations were approved for the Faculty of Mathematics (applied mathematics; computer science) and Renison University College (English for multilingual speakers) effective 1 September 2015.

New courses and course changes were approved for the Faculty of Arts (English language & literature; history; School of Accounting and Finance) and the Faculty of Science (biology; physics) effective 1 May 2016.

New courses, courses changes, a course inactivation and minor plan changes were approved for the Faculty of Arts (classical studies; global business and digital arts; philosophy; School of Accounting and Finance;
studies in Islam), the Faculty of Mathematics (actuarial science; applied mathematics; business administration/mathematics double degree; computer science; mathematical business; mathematics/chartered professional accountancy; pure mathematics) and the Faculty of Science (chemistry; earth and environmental sciences; physics; science) effective 1 September 2016.

ACADEMIC PROGRAM REVIEW REPORTS

Final Assessment Report – Applied Language Studies – Please see Attachment #2.
The report was reviewed by Senate Undergraduate Council and the programs were found to be of good quality.

Final Assessment Report – Legal Studies – Please see Attachment #3.
The report was reviewed by Senate Undergraduate Council and the programs were found to be of good quality.

Two-Year Report – Human Resources Management – Please see Attachment #4.

PROCEDURE FOR HANDLING FINAL ASSESSMENT REPORTS

Council approved minor changes to its procedure for handling final assessment reports.

Mario Coniglio
Associate Vice-President, Academic
a. Honours Physics

The Honours Physics Academic Plan is in the form of a core of required courses, plus appropriate electives. The electives available in all years allow students to strengthen complementary areas of interest whether in some specific field in Physics or in some other subject area. Some examples are described below under the heading "Elective Choices."

Continuation in Honours Physics requires a cumulative overall average of 60% and a 60% Physics average. In addition, students must have an average of at least 65% in the lecture courses PHYS 121, PHYS 122, PHYS 124, MATH 114, and MATH 127, MATH 128 (or equivalents) in order to continue into Year Two.

In order to graduate with an Honours Physics degree, the following requirements must be met:

1. Successful completion of 19.0 lecture units plus 2.25 Physics lab units.
2. Mandatory (core) courses as listed below plus an additional 2.5 units of physics electives of which 1.5 units must be 400-level courses (PHYS 437A and 437B may not be counted towards these 1.5 units).
3. No more than 3.0 "SCI-labelled" units can be used.
4. Completion of the English Language Proficiency Requirement.

Legend
+ Year-One Chemistry CHEM may be replaced by Year-One Biology BIOL or EARTH Earth Sciences courses. Note that all students in Year One Science are required to have units from at least two different disciplines from the Faculty of Science (see "Science Academic Plans").

Year One
Fall
CHEM 120/CHEM 120L+ Physical and Chemical Properties of Matter/Laboratory
MATH 114 Linear Algebra for Science
MATH 127 Calculus 1 for the Sciences
PHYS 10 Physics Seminar
PHYS 121/PHYS 131L Mechanics/Laboratory
One elective (0.5 unit)

Winter
CHEM 123/CHEM 123L+ Chemical Reactions, Equilibria and Kinetics/Laboratory
MATH 128 Calculus 2 for the Sciences
PHYS 10 Physics Seminar
PHYS 122 Waves, Electricity and Magnetism
PHYS 132L Waves, Electricity, Magnetism and Measurement Laboratory
PHYS 124 Modern Physics
One elective (0.5 unit)

Year Two
Fall
MATH 227 Calculus 3 for Honours Physics
MATH 228 Differential Equations For Physics and Chemistry
PHYS 10 Physics Seminar
PHYS 232L Measurement Laboratory
PHYS 236 Computational Physics 1
PHYS 256 Geometrical and Physical Optics
PHYS 256L Optics Laboratory
One elective (0.5 unit)

Winter
PHYS 10 Physics Seminar
PHYS 234 Quantum Physics 1
PHYS 242 Electricity and Magnetism 1
PHYS 242L Electricity and Magnetism Lab
PHYS 260L Intermediate Physics Laboratory
PHYS 263 Classical Mechanics and Special Relativity
Two electives (1.0 unit)

Year Three
Fall
PHYS 10 Physics Seminar
PHYS 342 Electricity and Magnetism 2
PHYS 358 Thermal Physics
PHYS 360A Modern Physics Laboratory 1
PHYS 363 Intermediate Classical Mechanics
PHYS 364 Mathematical Physics 1
One elective (0.5 unit)

Winter
PHYS 10 Physics Seminar
PHYS 334 Quantum Physics 2
PHYS 359 Statistical Mechanics
PHYS 365 Mathematical Physics 2
One elective 300- or 400-level Physics lab (0.25 unit)
Two electives (1.0 unit)

Year Four
Students in Year Four should normally take a total of 5.0 units, which must include PHYS 10, and 1.5 units of 400-level Physics electives and an additional 1.0 unit of Physics electives.

Note to all Honours Physics Students
Students intending to continue to Graduate School after completing their undergraduate degree program may wish to choose electives that will give them the desired background for their choice of graduate program and school. Students intending to pursue graduate studies may wish to choose electives that will give them the desired background for their choice of graduate program and school. It is recommended that these students take PHYS 437A, PHYS 434, and PHYS 442. Examples of recommended electives include the following:

1. for graduate work in Physics: PHYS 437A, PHYS 434, PHYS 442 and PHYS 454
2. for graduate work in Experimental Physics: PHYS 391, PHYS 392
3. for graduate work in Theoretical Physics: PHYS 437A, PHYS 434, PHYS 442, PHYS 444, PHYS 454, and PHYS 475
4. for graduate work in Biophysics: PHYS 437A, PHYS 280, PHYS 380, one or both of PHYS 395 and PHYS 396

Students intending to do graduate work in Biophysics, Astrophysics, Condensed Matter, Quantum Computing, Optics or other areas should note this list is not exhaustive and elective course selection depends on the graduate program being pursued. Students should consult with an undergraduate advisor and our a graduate officer regarding other electives needed for their choice of graduate program.

Elective Choices
The "core plus electives" structure of the Honours Physics and Honours Co-operative Physics Academic Plans allows a great variety of combinations of courses to be taken. By judicious selection of elective courses, students can deepen their knowledge of theoretical or experimental physics, or emphasize particular aspects of the subject, for example optics, condensed matter physics, astrophysics or biophysics. It is also possible (subject to timetable restrictions) for physics students to use their elective courses to gain expertise in other subjects, for example business administration, computing, electrical engineering or philosophy. The departmental Undergraduate Advisors are available to assist any student who wishes to select a particular set of elective choices.

b. Honours Co-operative Physics

The Honours Co-operative Physics Academic Plan is in the form of a core of required courses, plus appropriate electives. The electives available in all years allow students to strengthen complementary areas of interest whether in some specific field in Physics or in some other subject area. Some examples are described below under the heading "Elective Choices".

Continuation in Honours Co-operative Physics requires a cumulative overall average of 60% and a 60% Physics average. In addition, students must have an average of at least 65% in the lecture courses PHYS 121, PHYS 122, PHYS 124, MATH 114, and MATH 127, MATH 128 (or equivalents) in order to continue into Year Two. In order to graduate with an Honours Co-operative Physics degree, the following requirements must be met:

1. Successful completion of 19.0 lecture units plus 2.25 physics lab units.
2. Mandatory (core) courses as listed below plus an additional 2.5 units of physics electives of which 1.5 units must be 400- level courses (PHYS 437A and PHYS 437B may not be counted towards these 1.5 units).
3. A minimum of four work terms, and submission of a minimum of four satisfactory work reports.
4. No more than 3.0 "SCI-labelled" units can be used.
5. Completion of the English Language Proficiency Requirement.
6. For detailed information on co-op program requirements, please see the Co-operative Program Evaluation information and the Co-operative Education and Career Action section of the undergraduate calendar.
Legend
+ Year-One Chemistry CHEM may be replaced by Year-One Biology BIOL or Earth Sciences courses. Note that all students in Year One Science are required to have units from at least two different disciplines from the Faculty of Science (see "Science Academic Plans").

Year 1A (Fall)
CHEM 120/CHEM 120L+ Physical and Chemical Properties of Matter/Laboratory
MATH 114 Linear Algebra For Science
MATH 127 Calculus 1 for the Sciences
PHYS 10 Physics Seminar
PHYS 121/PHYS 131L Mechanics/Laboratory
One elective (0.5 unit)

Year 1B (Winter)
CHEM 123/CHEM 123L+ Chemical Reactions, Equilibria and Kinetics/Laboratory
MATH 128 Calculus 2 for the Sciences
PHYS 10 Physics Seminar
PHYS 122 Waves, Electricity and Magnetism
PHYS 132L Mechanics, Waves and Measurement Laboratory
PHYS 124 Modern Physics
One elective (0.5 unit)

Year 2A (Fall)
MATH 227 Calculus 3 for Honours Physics
MATH 228 Differential Equations For Physics and Chemistry
PHYS 10 Physics Seminar
PHYS 232L Measurement Laboratory
PHYS 236 Computational Physics 1
PHYS 256/PHYS 256L Geometrical and Physical Optics/Laboratory
One elective (0.5 unit)

Year 2B (Spring)
PHYS 10 Physics Seminar
PHYS 234 Quantum Physics 1
PHYS 242/PHYS 242L Electricity and Magnetism 1/Laboratory
PHYS 260L Intermediate Physics Laboratory
PHYS 263 Classical Mechanics and Special Relativity
Two electives (1.0 unit)

Year 3A (Spring)
PHYS 10 Physics Seminar
PHYS 342 Electricity and Magnetism 2
PHYS 358 Thermal Physics
PHYS 360A Modern Physics Laboratory 1
PHYS 363 Intermediate Classical Mechanics
PHYS 364 Mathematical Physics 1
One elective (0.5 unit)
Year 3B (Winter)
PHYS 10 Physics Seminar
PHYS 334 Quantum Physics 2
PHYS 359 Statistical Mechanics
PHYS 365 Mathematical Physics 2
One elective 300- or 400-level PHYS lab (0.25 unit)
Two electives (1.0 unit)

4A and B (Fall and Winter)
Students in Year Four must take a total of 5.0 units, which must include PHYS 10, and 1.5 units of 400-level Physics electives and an additional 1.0 unit of physics electives.

Note to all Honours Co-operative Physics Students
Students intending to continue to Graduate School after completing their undergraduate degree program may wish to choose electives that will give them the desired background for their choice of graduate program and school. Students intending to pursue graduate studies may wish to choose electives that will give them the desired background for their choice of graduate program and school. It is recommended that these students take PHYS 437A, PHYS 434, and PHYS 442. Examples of recommended electives include the following:

1. for graduate work in Physics: PHYS 437A, PHYS 434, PHYS 442 and PHYS 454
2. for graduate work in Experimental Physics: PHYS 391, PHYS 392
3. for graduate work in Theoretical Physics: PHYS 437A, PHYS 434, PHYS 442, PHYS 444, PHYS 454 and PHYS 475
4. for graduate work in Biophysics: PHYS 437A, PHYS 280, PHYS 380, one or both of PHYS 395 and PHYS 396

Students intending to do graduate work in Biophysics, Astrophysics, Condensed Matter, Quantum Computing, Optics or other areas should note this list is not exhaustive and elective course selection depends on the graduate program they intend to pursue. Students should consult with an undergraduate advisor and our graduate officer regarding other electives needed for their choice of graduate program.

Elective Choices
The "core plus electives" structure of the Honours Physics and Honours Co-operative Physics Academic Plans allows a great variety of combinations of courses to be taken. By judicious selection of elective courses, students can deepen their knowledge of theoretical or experimental physics, or emphasize particular aspects of the subject, for example optics, condensed matter physics, astrophysics or biophysics. It is also possible (subject to timetable restrictions) for physics students to use their elective courses to gain expertise in other subjects, for example business administration, computing, electrical engineering or philosophy. The departmental Undergraduate Advisors are available to assist any student who wishes to select a particular set of elective choices.
c. Honours Physics and Astronomy

The Honours Physics and Astronomy academic plan is intended for students with a strong interest in astronomy. The plan provides depth and breadth in physics equal to our current Honours Physics plan, but with additional depth in astronomy. The plan will allow graduates the flexibility to pursue jobs or graduate study in either physics or astronomy. The Honours Physics and Astronomy Academic Plan is in the form of a core of required courses, plus appropriate electives.

Continuation in Honours Physics and Astronomy requires a cumulative overall average of 60% and a 60% cumulative physics average. In addition, students must have an average of at least 65% in the lecture courses PHYS 121, PHYS 122, PHYS 124, MATH 114, and MATH 127, MATH 128 (or equivalents) in order to continue into Year Two.

In order to graduate with an Honours Physics and Astronomy degree, the following requirements must be met:

1. Successful completion of 19.0 lecture units plus 2.0 physics lab units.
2. Mandatory (core) courses as listed below plus an additional 1.5 units of physics electives which must include both 1.0 unit of astronomy electives and 0.5 unit 400-level PHYS courses (neither PHYS 437A nor PHYS 437B may be counted towards this 0.5 unit).
3. No more than 3.0 SCI-labelled units can be used.
4. Completion of the English Language Proficiency Requirement.

Legend
*Year-One CHEM may be replaced by Year-One BIOL or EARTH courses.

Year One
Fall
CHEM 120/CHEM 120L* Physical and Chemical Properties of Matter/Laboratory
MATH 114 Linear Algebra for Science
MATH 127 Calculus 1 for the Sciences
PHYS 10 Physics Seminar
PHYS 121/PHYS 131L Mechanics/Laboratory
One elective (0.5 unit)

Winter
CHEM 123/CHEM 123L* Chemical Reactions, Equilibria and Kinetics/Laboratory
MATH 128 Calculus 2 for the Sciences
PHYS 10 Physics Seminar
PHYS 122/PHYS 122L Waves, Electricity and Magnetism/Laboratory
PHYS 124 Modern Physics
PHYS 175/PHYS 175L Introduction to the Universe/Laboratory

Year Two
Fall
MATH 227 Calculus 3 for Honours Physics
MATH 228 Differential Equations for Physics and Chemistry
PHYS 10 Physics Seminar
PHYS 236 Computational Physics 1
PHYS 256/PHYS 256L Geometrical and Physical Optics/Laboratory
One elective (0.5 unit)

Winter
PHYS 10 Physics Seminar
PHYS 234 Quantum Physics 1
PHYS 242/PHYS 242L Electricity and Magnetism 1/Laboratory
PHYS 270/PHYS 270L Astronomical Observations, Instrumentation and Data
Analysis/Laboratory
PHYS 263 Classical Mechanics and Special Relativity
One elective (0.5 unit)

Year Three
Fall
PHYS 10 Physics Seminar
PHYS 342 Electricity and Magnetism 2
PHYS 358 Thermal Physics
PHYS 363 Intermediate Classical Mechanics
PHYS 364 Mathematical Physics 1
One PHYS lab elective at the 300- or 400-level (may also be taken in 3B or Year 4)
(0.25 unit)
One elective (0.5 unit)

Winter
PHYS 10 Physics Seminar
PHYS 334 Quantum Physics 2
PHYS 359 Statistical Mechanics
PHYS 370L Astronomy Laboratory
PHYS 375 Stars
Two electives (1.0 unit)

Year Four
Fall
PHYS 10 Physics Seminar
PHYS 474 Galaxies
PHYS 475 Cosmology
Three electives (1.5 units)

Winter
PHYS 10 Physics Seminar
Five electives (2.5 units)

Note
Students in Year Four should normally take a total of 5.0 units. In addition to the
required courses noted for Fall and Winter terms, these must include an additional of
0.5 unit of 400-level physics PHYS-labeled electives and an additional 1.0 unit of
physics PHYS-labeled electives.

Astronomy Electives
Two of: PHYS 275, PHYS 239, PHYS 476
Note to all Honours Physics and Astronomy Students

Students intending to pursue graduate studies may wish to choose electives that will give them the desired background for their choice of graduate program and school. It is recommended that these students take PHYS 437A, PHYS 434, and PHYS 442.

Students should consult with an undergraduate advisor and a graduate officer regarding other electives needed for their choice of graduate program.

d. Honours Co-operative Physics and Astronomy

The Honours Physics and Astronomy academic plan is intended for students with a strong interest in Astronomy. The plan provides depth and breadth in physics equal to our current Honours Physics plan, but with additional depth in astronomy. The plan will allow graduates the flexibility to pursue jobs or graduate study in either physics or astronomy.

The Honours Co-operative Physics and Astronomy Academic Plan is in the form of a core of required courses, plus appropriate electives.

Continuation in Honours Co-operative Physics and Astronomy requires a cumulative overall average of 60% and a 60% cumulative physics average. In addition, students must have an average of at least 65% in the lecture courses PHYS 121/PHYS 122/PHYS 124, MATH 114, and MATH 127/MATH 128 (or equivalents) in order to continue into Year Two.

In order to graduate with an Honours Co-operative Physics and Astronomy Bachelor of Science (BSc) degree, the following requirements must be met:

1. Successful completion of 19.0 lecture units plus 2.0 physics lab units.
2. Mandatory (core) courses as listed below plus an additional 1.5 units of physics electives which must include both 1.0 unit of astronomy electives and 0.5 unit of 400-level PHYS courses (neither PHYS 437Anor PHYS 437B may be counted towards this 0.5 unit).
3. Completion of the English Language Proficiency Requirement.
4. For detailed information on co-op program requirements, please see the Co-operative Program Evaluation information and the Co-operative Education and Career Action section of the undergraduate calendar.

Legend

*Year-One CHEM may be replaced by Year-One BIOL or EARTH courses.

Year 1A (Fall)

CHEM 120/CHEM 120L Physical and Chemical Properties of Matter/Laboratory
MATH 114 Linear Algebra for Science
MATH 127 Calculus 1 for the Sciences
PHYS 10 Physics Seminar
PHYS 121/PHYS 131L Mechanics/Laboratory
One elective (0.5 unit)
Year 1B (Winter)
CHEM 123/CHEM 123L Chemical Reactions, Equilibria and Kinetics/Laboratory
MATH 128 Calculus 2 for the Sciences
PHYS 10 Physics Seminar
PHYS 122/PHYS 122L Waves, Electricity and Magnetism/Laboratory
PHYS 124 Modern Physics
PHYS 175/PHYS 175L Introduction to the Universe/Laboratory

Year 2A (Fall)
MATH 227 Calculus 3 for Honours Physics
MATH 228 Differential Equations for Physics and Chemistry
PHYS 10 Physics Seminar
PHYS 236 Computational Physics 1
PHYS 256/PHYS 256L Geometrical and Physical Optics/Laboratory
One elective (0.5 unit)

Year 2B (Spring)
PHYS 10 Physics Seminar
PHYS 234 Quantum Physics 1
PHYS 242/PHYS 242L Electricity and Magnetism 1/Laboratory
PHYS 270/PHYS 270L Astronomical Observations, Instrumentation and Data Analysis/Laboratory
PHYS 263 Classical Mechanics and Special Relativity
One elective (0.5 unit)

Year 3A (Spring)
PHYS 10 Physics Seminar
PHYS 342 Electricity and Magnetism 2
PHYS 358 Thermal Physics
PHYS 363 Intermediate Classical Mechanics
PHYS 364 Mathematical Physics 1
One PHYS lab elective at the 300- or 400-level (may also be taken in 3B or Year 4) (0.25)
One elective (0.5 unit)

Year 3B (Winter)
PHYS 10 Physics Seminar
PHYS 334 Quantum Physics 2
PHYS 359 Statistical Mechanics
PHYS 370L Astronomy Laboratory
PHYS 375 Stars
Two electives (1.0 unit)

Year 4A (Fall)
PHYS 10 Physics Seminar
PHYS 474 Galaxies
PHYS 475 Cosmology
Three electives (1.5 units)
Year 4B (Winter)
PHYS 10 Physics Seminar
Five electives (2.5 units)

**Note**
Students in Year Four should normally take a total of 5.0 units. In addition to the required courses listed above, these must include an additional 0.5 unit of 400-level Physics electives and an additional 1.0 unit of physics electives. Students must include one, 400-level PHYS-labeled elective course (0.5 unit), and two additional PHYS-labeled electives (1.0 unit) as part of the eight elective courses in Year Four.

**Astronomy Electives**
Two of: PHYS 275, PHYS 239, PHYS 476

**Note to all Honours Co-operative Physics and Astronomy Students**

Students intending to pursue graduate studies may wish to choose electives that will give them the desired background for their choice of graduate program and school. It is recommended that these students take PHYS 437A, PHYS 434, and PHYS 442.

Students should consult with an undergraduate advisor and a graduate officer regarding other electives needed for their choice of graduate program.

e. **Honours Mathematical Physics**

The Honours Mathematical Physics Academic Plan leading to a Bachelor of Science (BSc) degree is in the form of a core of required physics and mathematics courses, plus appropriate electives. The electives available in all years allow students to strengthen complementary areas of interest whether in some specific field in Physics or in some other subject area. Some examples are described below under the heading "Elective Choices". This plan is designed for physics students who are mathematically inclined and wish to concentrate their effort in theoretical studies.

Continuation in Honours Mathematical Physics requires a cumulative overall average of 60% and a 65% Physics and Math average. Students from Honours Physics may transfer into this program in their Year Two if they have grades of 80% or higher in MATH 127, MATH 128, and MATH 114 in Year One, and a minimum 65% Physics average.

In order to graduate with an Honours Mathematical Physics Bachelor of Science (BSc) degree, the following requirements must be met:

1. Successful completion of 21.25 units.
2. Mandatory (core) courses as listed below.
3. No more than 3.0 "SCI-labelled" units can be used.
4. Completion of the English Language Proficiency Requirement.

**Legend**
+ Year-One Chemistry CHEM may be replaced by Year-One Biology BIOL or Earth Sciences EARTH courses. Note that all students in Year One Science are required to
have units from at least two different disciplines from the Faculty of Science (see "Science Academic Plans").

* PHYS 334 may be substituted for AMATH 373.

**Year One**

**Fall**
CHEM 120/CHEM 120L Physical and Chemical Properties of Matter/Laboratory
PHYS 10 Physics Seminar
PHYS 121/PHYS 131L Mechanics/Laboratory
MATH 136 Linear Algebra 1
MATH 137 Calculus 1
One elective (0.5 unit)

**Winter**
CHEM 123/CHEM 123L Chemical Reactions, Equilibria and Kinetics/Laboratory
PHYS 10 Physics Seminar
PHYS 122/PHYS 132L Waves, Electricity and Magnetism/Laboratory
PHYS 124 Modern Physics
MATH 138 Calculus 2
One elective (0.5 unit)

**Year Two**

**Fall**
PHYS 10 Physics Seminar
PHYS 236 Computational Physics 1
MATH 237 Calculus 3
MATH 235 Linear Algebra 2
MATH 250 Introduction to Differential Equations
One elective (0.5 unit)

**Winter**
PHYS 10 Physics Seminar
PHYS 234 Quantum Physics 1
PHYS 242 Electricity and Magnetism 1
PHYS 263 Classical Mechanics and Special Relativity
AMATH 231 Calculus 4
STAT 230 Probability

**Year Three**

**Fall**
PHYS 10 Physics Seminar
PHYS 358 Thermal Physics
PHYS 363 Intermediate Classical Mechanics
PHYS 342 Electricity and Magnetism 2
AMATH 351 Ordinary Differential Equations
STAT 231 Statistics

**Winter**
PHYS 10 Physics Seminar
PHYS 359 Statistical Physics
AMATH 373 Quantum Theory 1*
AMATH 332 or PMATH 332 Applied Complex Analysis
AMATH 353 Partial Differential Equations 1
One elective (0.5 unit)

Year Four
Students in Year Four should normally take a total of 5.0 units, which must include PHYS 10, PHYS 442, PHYS 434, and three of PHYS 444, PHYS 454, PHYS 476, AMATH 361, AMATH 463, AMATH 456. In addition, 1.5 units of electives must be selected from 300- or 400-level PHYS or AMATH courses, although 0.5 of these units can be 300- or 400-level Applied Mathematics course.

Note to all Honours Mathematical Physics Students
Students intending to continue to Graduate School after completing their undergraduate degree program may wish to choose electives that will give them the desired background for their choice of graduate program and school. Students intending to pursue graduate studies may wish to choose electives that will give them the desired background for their choice of graduate program and school. It is recommended that these students take PHYS 437A. Examples of recommended electives include the following:

- for graduate work in Physics: PHYS 256, PHYS 437A and PHYS 454
- for graduate work in Experimental Physics: PHYS 391, PHYS 392.
- for graduate work in Theoretical Physics: PHYS 256, PHYS 437A, PHYS 444, PHYS 454 and PHYS 475.
- for graduate work in Biophysics: PHYS 437A, PHYS 280, PHYS 380, one or both of PHYS 395 and PHYS 396

Students intending to do graduate work in Biophysics, Astrophysics, Condensed Matter, Quantum Computing, Optics or other areas should note this list is not exhaustive and elective course selection depends on the graduate program being pursued. Students should consult with an undergraduate advisor and our graduate officer regarding other electives needed for their choice of graduate program.

Elective Choices
The "core plus electives" structure of the Honours Mathematical Physics and Honours Co-operative Mathematical Physics Academic Plans allows a great variety of combinations of courses to be taken. By judicious selection of elective courses, students can deepen their knowledge of theoretical or experimental physics, or emphasize particular aspects of the subject, for example optics, condensed matter physics, astrophysics or biophysics. It is also possible (subject to timetable restrictions) for physics students to use their elective courses to gain expertise in other subjects, for example business administration, computing, electrical engineering or philosophy. The departmental Undergraduate Advisors are available to assist any student who wishes to select a particular set of elective choices.

f. Honours Co-operative Mathematical Physics

The Honours Co-operative Mathematical Physics Academic Plan leading to a Bachelor of Science (BSc) degree is in the form of a core of required physics and mathematics courses, plus appropriate electives. The electives available in all years allow students to strengthen complementary areas of interest whether in some specific field in Physics or in some other subject. Some examples are described below.
under the heading "Elective Choices". This plan is designed for physics students who are mathematically inclined and wish to concentrate their effort in theoretical studies.

Continuation in Honours Co-operative Mathematical Physics requires a cumulative overall average of 60% and a 65% Physics and Math average. Students from Honours Co-operative Physics may transfer into this program in their Year Two if they have grades of 80% or higher in MATH 127, MATH 128, and MATH 114 in Year One, and a minimum 65% Physics average.

In order to graduate with an Honours Co-operative Mathematical Physics BSc degree, the following requirements must be met:

1. Successful completion of 21.25 units.
2. Mandatory (core) courses as listed below.
3. A minimum of four work terms, and submission of a minimum of four satisfactory work reports.
4. No more than 3.0 "SCI-labelled" units can be used.
5. Completion of the English Language Proficiency Requirement.
6. For detailed information on co-op program requirements, please see the Co-operative Program Evaluation information and the Co-operative Education and Career Action section of the undergraduate calendar.

Legend
+ Year-One Chemistry CHEM may be replaced by Year-One Biology BIOL or Earth Sciences courses. Note that all students in Year One Science are required to have units from at least two different disciplines from the Faculty of Science (see Science Academic Plans).

*PHYS 334 may be substituted for AMATH 373.

Year 1A (Fall)
CHEM 120/CHEM 120L + Physical and Chemical Properties of Matter/Laboratory
PHYS 10 Physics Seminar
PHYS 121/PHYS 131L Mechanics/Laboratory
MATH 136 Linear Algebra 1
MATH 137 Calculus 1
One elective (0.5 unit)

Year 1B (Winter)
CHEM 123/CHEM 123L + Chemical Reactions, Equilibria and Kinetics/Laboratory
PHYS 10 Physics Seminar
PHYS 122/PHYS 132L Waves, Electricity and Magnetism/Laboratory
PHYS 124 Modern Physics
MATH 238 Calculus 2
One elective (0.5 unit)

Year 2A (Fall)
PHYS 10 Physics Seminar
PHYS 236 Computational Physics 1
MATH 237 Calculus 3
MATH 235 Linear Algebra 2
AMATH 250 Introduction to Differential Equations
One elective (0.5 unit)

**Year 2B (Spring)**
PHYS 10 Physics Seminar
PHYS 234 Quantum Physics 1
PHYS 242 Electricity and Magnetism 1
PHYS 263 Classical Mechanics and Special Relativity
AMATH 231 Calculus 4
STAT 230 Probability

**Year 3A (Spring)**
PHYS 10 Physics Seminar
PHYS 358 Thermal Physics
PHYS 342 Electricity and Magnetism 2
PHYS 363 Intermediate Classical Mechanics
AMATH 351 Ordinary Differential Equations
STAT 231 Statistics

**Year 3B (Winter)**
PHYS 10 Physics Seminar
PHYS 359 Statistical Physics
AMATH 373 Quantum Theory 1*
AMATH 332/PMATH 332 Applied Complex Analysis
AMATH 353 Partial Differential Equations 1
One elective (0.5 unit)

**4A and B (Fall and Winter)**
Students in Year Four should normally take a total of 5.0 units, which must include PHYS 10, PHYS 442, PHYS 434, and three of PHYS 444, PHYS 454, PHYS 476, AMATH 361, AMATH 463, AMATH 456. In addition, 1.5 units of electives must be selected from 300- or 400- level PHYS or AMATH courses, although 0.5 of these units can be a 300- or 400- level Applied Mathematics course.

**Note to all Honours Mathematical Physics Students**
Students intending to continue to Graduate School after completing their undergraduate degree program may wish to choose electives that will give them the desired background for their choice of graduate program and school. Students intending to pursue graduate studies may wish to choose electives that will give them the desired background for their choice of graduate program and school. It is recommended that these students take PHYS 437A. Examples of recommended electives include the following:

- for graduate work in Physics: PHYS 256, PHYS 437A, PHYS 434, PHYS 442, and PHYS 454
- for graduate work in Experimental Physics: PHYS 391, PHYS 392
- for graduate work in Theoretical Physics: PHYS 256, PHYS 437A, PHYS 434, PHYS 442, PHYS 444, PHYS 454, and PHYS 475
- for graduate work in Biophysics: PHYS 437A, PHYS 280, PHYS 380, one or both of PHYS 395 and PHYS 396
Students intending to do graduate work in Biophysics, Astrophysics, Condensed Matter, Quantum Computing, Optics or other areas should note this list is not exhaustive and elective course selection depends on the graduate program being pursued. Students should consult with an undergraduate advisor and a graduate officer regarding other electives needed for their choice of graduate program.

**Elective Choices**

The "core plus electives" structure of the Honours Mathematical Physics and Honours Co-operative Mathematical Physics Academic Plans allows a great variety of combinations of courses to be taken. By judicious selection of elective courses, students can deepen their knowledge of theoretical or experimental physics, or emphasize particular aspects of the subject, for example optics, condensed matter physics, astrophysics or biophysics. It is also possible (subject to timetable restrictions) for physics students to use their elective courses to gain expertise in other subjects, for example business administration, computing, electrical engineering or philosophy. The departmental Undergraduate Advisors are available to assist any student who wishes to select a particular set of elective choices.

**g. Honours Life Physics**

Continuation in Honours Life Physics requires a cumulative overall average of 60% and a cumulative average of 60% in Physics courses and 60% in Biology courses.

In order to graduate with an Honours Life Physics degree, the following requirements must be met:

1. Successful completion of 22.25 units.
2. Mandatory (core) courses as listed below.
3. No more than 3.0 "SCI-labelled" units can be used.
4. Completion of the English Language Proficiency Requirement.

**Notes**

1. Electives may be taken in any area of the student's choosing. Students should be aware that health profession programs often require courses in one or more of the following subject areas: English, mathematics, computer science, sociology, accounting, economics, languages, psychology, philosophy and humanities. The departmental Undergraduate Advisors in Physics and Astronomy are available to assist any student in the plan and further information is available from the Life Physics website.
2. Students considering entry into the School of Optometry and Vision Science or the School of Pharmacy Doctor of Optometry or Doctor of Pharmacy programs should verify the admission requirements for each program to guide selection of elective courses.

**h. Honours Co-operative Life Physics**

Continuation in Honours Life Physics requires a cumulative overall average of 60% and a cumulative average of 60% in Physics courses and 60% in Biology courses.

In order to graduate with an Honours Co-operative Life Physics degree, the following
requirements must be met:

1. Successful completion of 22.25 units.
2. Mandatory (core) courses as listed below.
3. No more than 3.0 "SCI-labelled" units can be used.
4. Completion of the English Language Proficiency Requirement.
5. For detailed information on co-op program requirements, please see the Co-operative Program evaluation information and the Co-operative Education and Career Action section of the undergraduate calendar.

Notes
1. Electives may be taken in any area of the student's choosing. Students should be aware that health profession programs often require courses in one or more of the following subject areas: English, mathematics, computer science, sociology, accounting, economics, languages, psychology, philosophy and humanities. The departmental Undergraduate Advisors in Physics and Astronomy are available to assist any student in the plan and further information is available from the Life Physics website.

2. Students considering entry into the School of Optometry and Vision Science or the School of Pharmacy Doctor of Optometry or Doctor of Pharmacy programs should verify the admission requirements for each program to guide selection of elective courses.

Legend
* Can be taken Fall of first, second or third year.
** Can be taken in third or fourth year.

Year 1A (Fall)
PHYS 10 Physics Seminar
BIOL 130/BIOL 130L Introductory Cell Biology/Laboratory
PHYS 121/(PHYS 111L or PHYS 131L) Mechanics/Laboratory
PHYS 10 Physics Seminar
CHEM 120/CHEM 120L Physical and Chemical Properties of Matter/Laboratory
MATH 127 Calculus 1 for the Sciences
One elective (0.5 unit)

Year 1B (Winter)
PHYS 10 Physics Seminar
BIOL 239 Genetics
PHYS 122/(PHYS 122L or PHYS 132L) Waves, Electricity and Magnetism/Laboratory
PHYS 111/PHYS 111L Physics 1/Laboratory
CHEM 123/CHEM 123L Chemical Reactions, Equilibria and Kinetics/Laboratory
MATH 128 Calculus 2 for the Sciences
One elective (0.5 unit)

Year 2A (Fall)
PHYS 10 Physics Seminar
CHEM 266/CHEM 266L Basic Organic Chemistry 1/Laboratory (For students interested in Medical Physics, CHEM 266/CHEM 266L may be taken in 4A)
PHYS 224 Electricity and Magnetism for Life and Medical Physics
or PHYS 242/PHYS 242L Electricity and Magnetism 1/Laboratory
PHYS 256/PHYS 256L Geometrical and Physical Optics/Laboratory
PHYS 225 Modeling Life Physics
One elective (0.5 unit)

Year 2B (Spring)
PHYS 10 Physics Seminar
PHYS 280 or BIOL 280 Introduction to Biophysics
BIOL 273/BIOL 273L Principles of Human Physiology 1/Laboratory
or One 100- or 200-level Biology course
CHEM 237/CHEM 237L Introductory Biochemistry/Laboratory
Two electives (1.0 unit)

Year 3A (Spring)
PHYS 10 Physics Seminar
PHYS 380 Molecular and Cellular Biophysics
Four electives (2.0 units)

Year 3B (Winter)
PHYS 10 Physics Seminar
PHYS 395 Biophysics of Therapeutic Methods
or PHYS 396 Biophysics of Imaging
Four electives (2.0 units)

Year 4A (Fall)
PHYS 10 Physics Seminar
PHYS 491 Special Topics in Life, Medical and Biophysics
Four electives (2.0 units)

Year 4B (Winter)
PHYS 10 Physics Seminar
PHYS 395 Biophysics of Therapeutic Methods
or PHYS 396 Biophysics of Imaging
Four electives (2.0 units)

Electives courses for Life Physics
Students must take a minimum of 2.25 units of the following courses:
BIOL 240/BIOL 240L Fundamentals of Microbiology/Laboratory*
BIOL 308 Principles of Molecular Biology
BIOL 373/BIOL 373L Principles of Human Physiology 2/Laboratory**
or BIOL 301 Human Anatomy
PHYS 124 Modern Physics
PHYS 233 Introduction to Quantum Mechanics
or PHYS 234 Quantum Physics 1
PHYS 263 Classical Mechanics and Special Relativity
PHYS 358 Thermal Physics
PHYS 359 Statistical Mechanics
PHYS 383 Medical Physics
Final Assessment Report of
Applied Language Studies Program
(Minor and Diploma)
January 2015

Introduction
The Applied Language Studies program is one of only a handful of such programs across Canada, especially at the undergraduate level. Offered through the English Language Institute in Renison University College, the program’s curriculum consists of eight courses that are related to second language acquisition, methodology, identity, and assessment, and requires that students demonstrate a commitment to being second language learners.

Prior to 2012, the program as an Option (for degree students) or Diploma (for non-degree students) consisted of 10 courses. In 2012, the Option was converted to an eight-course Minor. The current requirements for both the Minor and Diploma are identical. The APPLS plan consists of three APPLS core courses, four language courses in a student’s second language, and a single course from a list of courses on education-related topics. Once the most recent changes to the APPLS program take effect in September 2015, the APPLS plan will consist of four core courses, and four language courses in a student’s second language from any language department on campus.

In accordance with uWaterloo’s Institutional Quality Assurance Process (IQAP), this final assessment report provides a summary and synthesis of (i) the external review of the Applied Language Studies (APPLS) program at Renison University College, (ii) the program response to the site visit team’s review, and (iii) an implementation plan for improvements that lists specific actions, timelines, required resources and responsibility.

Previous Program Review
The APPLS program was last reviewed in 2010 as part of the review of the English Language Institute (ELI). At the time, the program consisted of 10 courses and was recognized as an Option for degree students and as a Diploma for people who were not University of Waterloo students enrolled in other plans. The 2010 review focused primarily on the ELI’s English language programs. With reference to the APPLS program, the recommendation was made to transform the Minor to a Major. This recommendation was not followed up by Renison due to the very significant resource requirements, namely tenured and tenure-track faculty to teach the increased number of courses that a major would require. A second recommendation was to complete a detailed review of all Applied Language Studies (and English Language Studies) courses. The review confirmed that APPLS courses are all very strong and focused. Although
there were suggested changes for individual courses, there were no overall recommendations for changing the set of APPLS courses.

**Self-Study Process and Site Visit**

Preparation the self-study report was a cooperative effort amongst APPLS faculty and instructors, current students and alumni, and was completed under the direction of the APPLS Coordinator. In fall 2013, current APPLS students responded to an in-class survey. In the winter of 2014, both APPLS students and alumni responded to an online survey. With the assistance of the Centre for Teaching Excellence at the University of Waterloo, in the spring of 2014 a workshop was held for APPLS faculty and instructors to review the mapping of the APPLS course objectives to the Universities Undergraduate Degree Level Expectations (UDLES).

The APPLS program submitted its self-study to office of the Associate Vice President, Academic on July 21, 2014. In addition to CVs of key academic and administrative personnel connected to the program (volume II of the submission), a comprehensive set of appendices accompanied the report, containing information on: APPLS Steering Committee membership, course details (lists, descriptions, outlines, etc.), APPLS assignments meeting the Global Experience Certificate’s requirements, student profiles, the 2010 review of the English Language Institute and the 2013 mid-cycle response, APPLS program level outcomes mapped to core courses, survey information and letters of support.

The site visit was conducted November 3, 2014. The members of review team were both “internal” - Prof. Laura Gray (Department of Music, Conrad Grebel University College) and Prof. François Paré (Department of French Studies, University of Waterloo).

The review team met with the Principal and Dean of Renison University College, Renison’s Lusi Wong librarian, uWaterloo’s Associate Vice President, Academic, and the coordinator, an instructor, ten current students and three recent graduates of the APPLS program.

The reviewers’ report was received on December 4, 2014 and the program’s response and implementation strategy, with timelines, responsibilities and resource needs assessment as well as the approval by the Dean at Renison University College was received on March 9, 2015.

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

**Strengths and Challenges**

**Strengths**

- The APPLS program contributes to collaborative activity across the Faculty of Arts, involving a broad range of departments, as well as to Waterloo’s focus on global prominence and internationalization.
- APPLS courses are taken by students enrolled in a wide variety of academic programs, contributing to a vibrant student experience.
• Survey results show clearly that the program is meeting its goals. Of those respondents who indicated a profession, many were currently working as French teachers, French immersion teachers, English Second Language teachers, or in teaching. 90% of respondents indicated the APPLS courses had influenced or will influence their choice of profession, their future studies and/or how they learned a second language.

• Enthusiastic, engaged and competent instructors involved in the program.

Challenges
• The APPLS program is largely supported by a very small number of well-qualified people - one full professor and two instructors.
• There is no dedicated administrative staff position affiliated with the APPLS program.
• Due to scheduling problems, some students find it difficult to complete the eight-course Minor.

Reviewers’ Report
The overall impression of the APPLS program was notably positive and encouraging, with the reviewers indicating that “the program presents innovative features in a fast-developing field...” With respect to the evolution of the APPLS program, the reviewers remarked that “Although the current APPLS Minor continues to refer largely to the teaching of English as Second Language in terms of course content and practicum within ELI, some of the more recent courses tend to cover a much wider range of cultural and linguistic situations. More generally, APPLS offers students a relatively coherent introductory program to issues in second language acquisition, applied language pedagogy, cultural sensitivity, and identity theory.” The APPLS programs goals were judged to be “consistent with the University’s and Arts’ strategic plans, as well as Renison University College’s current mission document...”. The curriculum structure is sound and course objectives were seen to meet the requirements of the Undergraduate Degree Level Expectations. Methods of student assessments in courses were judged to be appropriate. Financial, space and library resources are sufficient to sustain the program in its current form.

The reviewers were impressed with the variety of students in the APPLS program, and both current and former students were unanimous in their praise for the program.

Although the reviewers viewed the APPLS program positively, they indicated that the APPLS program “does not fully reflect the thriving, innovative fields of Applied Linguistics and Multilingualism Studies. It should be emphasized that, given additional resources, a greater focus on current research in the field, and increased collaboration with the language departments, this small Minor/Diploma has the potential to offer a very original contribution not only to the study of multilingualism and language acquisition in a global context, but also to the development of courses in cutting-edge areas, such as computer-assisted language learning and virtual language worlds.”

The reviewers made a series of six recommendations for improvement of the APPLS program. These recommendations and the program responses follow below.
Recommendation 1:

The Reviewers recommend that that the APPLS program define a clear discrete identity from the ESL program. Although, in its current acception, the program greatly benefits from its close association with ELI teaching activities, it is too often seen in a supporting role. The reviewers believe that APPLS has the potential to further develop into a distinct “brand”, focusing on the links between second-language acquisition, multilingualism and the global economy.

Response:

Renison appreciates the Reviewers’ confidence that the APPLS program has the ability to develop into a distinct ‘brand’ with an independent reputation. APPLS maintains a stable connection to Germanic and Slavic Studies through the teaching of Dr. Barbara Schmenk, who teaches one of the APPLS core courses. We hope to strengthen this connection and build similar links to other language departments and units (e.g. Global Experience Certificate) on campus.

It is important to note that the APPLS program’s association with the English Language Institute (ELI) has been essential in offering experiential education opportunities for APPLS students. For example, APPLS students benefit from their interactions with ELI students in conversation and email partner activities, and from their observation of ELI instructors who welcome APPLS students as observers in their classrooms. In the recent past, APPLS students have also observed professors in French and Russian Studies, and we hope to build on these relationships in the future.

Action: In February 2015, the APPLS Coordinator collaborated with French Studies and Social Development Studies to promote the APPLS Minor during the ARTS Choose Your Major Event. This collaboration will continue in the future. The APPLS Coordinator will continue to work with the language departments to find classroom observation placements for APPLS students. Other opportunities for collaboration will be explored as they arise.

Responsible: The APPLS Coordinator.

Resources: No additional resources required.

Timelines: Already in process and continuing.

Recommendation 2:

The reviewers recommend that students gain earlier enrolment in the program to ensure an adequate timeline for completion of the requirements. This may be achieved through marketing the course more deliberately in 100-level courses.

Response:

We plan to promote the APPLS program more systematically to students in first year language programs and relevant disciplines. This will be done through improved communication with undergraduate advisors. In addition, Renison plans to create a comprehensive on-campus recruiting strategy for several of its programs, APPLS amongst them. It is hoped that with additional marketing resources, APPLS will be featured more prominently to students in their
first two years of study. This will allow more students to learn about the APPLS minor before it is too late for them to complete the required courses for the minor.

**Action:** Undergraduate Advisors will be contacted during the advising period prior to fall and winter terms (when APPLS core courses are offered). They will be sent copies of the APPLS promotional brochure. Also, an enhanced Renison marketing unit will be in place in the 2015-2016 academic year. This unit will develop an on-campus recruiting strategy for APPLS to be implemented the following year.

**Responsibility:** The APPLS Coordinator will work with Undergraduate Advisors. Renison marketing unit will develop on-campus recruiting strategy.

**Resources:** Renison has committed to strengthening its marketing unit.

**Timelines:** Work with Undergraduate Advisors will begin during the advising period for fall 2015. The on-campus recruiting plan will be implemented in 2016.

**Recommendation 3:**

The Reviewers recommend that the APPLS program be promoted in a more systematic way. Recruitment and program promotion are mostly concentrated internally, focusing mainly on students already in an APPLS course. Most students first hear about APPLS in a language course but there are students in other programs (particularly Psychology) and other Faculties who are pursuing the Minor. Ensuring that the program is well promoted at uWaterloo should raise the profile of the program and make the program available to students from any discipline. The beautiful brochure, recently developed by the College, is a first step in that direction.

**Response:**

At the moment, most APPLS students come to the program through word of mouth. While we are pleased that students in the courses enthusiastically recommend the program to their friends, a more systematic approach to marketing would enhance the profile of the program and increase enrolment. As the Reviewers noted, Renison has recently committed resources to the development of a promotional brochure. As well, the APPLS minor was represented in two sessions in the “Declare Your Major” week in ARTS in the winter 2015 term. The APPLS Coordinator shared information sessions with the undergraduate advisors in both French Studies and Social Development Studies. It is hoped that these sessions will continue to attract students to the program.

As Renison builds its marketing team, we know that the APPLS program will be more prominently featured in comprehensive on-campus recruiting efforts.

**Action:** An enhanced Renison marketing unit will be in place in the 2015-2016 academic year. This unit will develop an on-campus recruiting strategy for APPLS to be implemented the following year.

**Responsibility:** Renison marketing unit.

**Resources:** Renison has committed to strengthening its marketing unit.

**Timelines:** The on-campus recruiting plan will be implemented in 2016.
**Recommendation 4:**

The Reviewers recommend that the Renison administration and the APPLS Co-ordinator review staffing needs for the APPLS program and consider establishing a dedicated part-time position to handle administrative tasks.

**Response:**

Renison has committed resources to create an administrative assistant position to support the APPLS plan beginning in the spring of 2015. Thank you to the reviewers for making this very necessary support explicit.

**Action:** Hire an administrative assistant to support the APPLS program.

**Responsibility:** APPLS Coordinator in conjunction with Renison’s Director of Human Resources.

**Resources:** Renison has included the cost of this position in its budget.

**Timeline:** An administrative assistant will be hired by July 2015.

**Recommendation 5:**

The reviewers recommend that the APPLS program connect more systematically with existing Renison language programs and other Renison programs (e.g., Social Work, Social Development Studies) and collaborate more closely with other uWaterloo departments, especially Germanic and Slavic Studies, French and Spanish.

**Response:**

This is a very useful recommendation. As noted above, APPLS has a stable connection with Germanic and Slavic Studies, and we seek to strengthen this connection and similar links to French Studies, Spanish and Latin American Studies, as well as Arabic (Studies in Islam), Chinese, Japanese, and Korean language departments. By participating in the 2015 ‘Declare Your Major’ initiative in the Faculty of Arts, APPLS has begun the task of working more closely with French Studies and Social Development Studies. We will continue to search for ways in which programs with similar interests (e.g. the French Teaching Specialization Stream and the Global Experience Certificate) can be aligned with our program goals.

**Action:** In February 2015, the APPLS Coordinator collaborated with French Studies and Social Development Studies to promote the APPLS Minor during the ARTS Choose Your Major Event. This collaboration will continue in the future. The APPLS Coordinator will continue to work with the language departments to find classroom observation placements for APPLS students. Other opportunities for collaboration will be explored as they arise.

**Responsibility:** APPLS Coordinator

**Resources:** No additional resources required.

**Timelines:** Already in process and continuing.
**Recommendation 6:**

The reviewers recommend that the APPLS Co-ordinator continue to discuss a Major program with Renison administration, Faculty of Arts administration, and Language departments (especially Germanic and Slavic Studies, French and Spanish). Under the existing funding formula, it is unlikely that the College would be able to resource the program. More tenured and tenure-track faculty would be needed for the increased teaching and administrative load. There are two factors to consider that might make the Major more viable: 1) the reduction of Arts Honours BA requirements to a 16-course minimum and the interdisciplinary nature of APPLS may make the degree more achievable; 2) if the BIUs for Honours APPLS majors could be transferred to Renison, it would make the program more cost-effective.

**Response:**

The possibility of creating a major in APPLS is an appealing one. Securing adequate funding for a major will be foundational to its realization. The current funding formula which folds the APPLS program into the Affiliated and Federated Institutions of Waterloo (AFIW) agreement constrains the College’s ability to expand the program further. As the Reviewers note, it may be possible to find innovative ways to grow the plan through interdisciplinary collaboration. Renison will continue to look for opportunities to grow the program in the future.

**Action:** Revisit the possibility of creating a major in APPLS in two years.

**Responsibility:** APPLS Coordinator and Renison’s Administrative team.

**Resources:** None required (other than time).

**Timeline:** Spring term 2017

The program response further notes that many of the reviewers’ recommendations (1, 2, 3, and 5) relate to more systematic promotion of the program through marketing and relationship building. This work is anticipated to be accomplished in conjunction with Renison’s planned new marketing team. This new unit will promote APPLS more broadly and consistently, increasing awareness of the program in both student and instructor populations. The addition of an administrative support position within the APPLS unit will free up the Coordinator’s time to strengthen relationships across departments and seek opportunities for collaboration that might allow the program to grow.
Final Assessment Report
Legal Studies (BA)

March 2015

Introduction
In accordance with uWaterloo’s Institutional Quality Assurance Process (IQAP), this final assessment report provides a summary and synthesis of (i) the external review of the BA program in Legal Studies, (ii) the program response to the external review, and (iii) an implementation plan for improvements that list specific actions, timelines, required resources and responsibility.

St. Jerome’s University (SJU) administered the Legal Studies degree program from 2005/06 to 2009/10. In November 2009, SJU and the Arts Faculty at the University of Waterloo entered into a Protocol agreement to jointly administer the Legal Studies program. The intent of the partnership agreement was to support the progress of the Legal Studies program in view of the recommendations from the 2008 program review. The new joint-program would be administered by the two universities through their respective (and newly designated) departments of Sociology and Legal Studies. A Legal Studies Academic Advisory Committee was established to provide academic oversight and direction for the Legal Studies program. The external reviewers expressed the view that the “student experience as between SJU and UW appears to be ‘seamless’, even if for faculty members, there remains some divide ‘across the creek’.”

In addition to the administrative change described by the Protocol agreement, most of the recommendations from the 2008 review have been realized completely or partially, resulting in significant curricular improvements, availability of co-op for Legal Studies students through Arts and Business and key faculty appointments. Suggestions for establishing a Legal Studies Research Centre and a new graduate area in “Law, Crime, and Security”, for the Sociology graduate program, did not materialize.

Self-Study Process and Site Visit
Legal Studies submitted their self-study to the Office of the Associate Vice President, Academic on September 2, 2014. The report was prepared by the uWaterloo Associate Chair of Legal Studies in consultation with the chairs of the departments of Sociology and Legal Studies at uWaterloo, SJU, and the Academic Advisory Committee of Legal Studies. The self-study closely followed the standard template based on uWaterloo’s IQAP and also included survey information on employment from alumni who have graduated since 2010.
The site visit was conducted October 30-31, 2014. The external members of review team were Dr. Susan Boyd, Faculty of Law, University of British Columbia and Dr. Diana Majury, Department of Law and Legal Studies, Carleton University. The internal member was Dr. Brendon Larson from the Department of Environment and Resource Studies at University of Waterloo. During the site visit, the review team met with administrators, faculty and staff from both departments of Sociology and Legal Studies in Faculty of Arts and SJU, undergraduate students, and the Associate Vice President, Academic.

The external reviewers’ report was received on November 18, 2014 and the department’s response and implementation strategy, with timelines, responsibilities and resource needs assessment, was received on February 3, 2015. Endorsement of the plan was received on February 3, 2015 from the Dean of Arts and from the Vice-President, Academic and Dean (Interim) at SJU.

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

Program characteristics
Legal Studies is an inter/multidisciplinary program with requirements representing an array of disciplinary contents and approaches. To achieve this, Legal Studies is delivered through a distributed model by which students are required to complete core and elective courses from a broad selection of disciplines taught by the respective departments in these areas, as well as several core courses that also include an interdisciplinary focus.

The Legal Studies Program currently offers seven academic plans:
  • Four-Year General Legal Studies
  • Honours Legal Studies
  • Honours Legal Studies/Arts and Business Co-op (joint honours plan)
  • Honours Legal Studies/Arts and Business Regular (joint-honours plan)
  • Joint Honours Legal Studies
  • Honours Legal Studies/Sociology, Criminology Specialization (joint honours plan – to be inactivated in 2015)
  • Legal Studies Minor

The self-study identifies and differentiates, in a preliminary way, the learning outcomes unique to each Legal Studies academic plan and for each of the required courses within the Legal Studies curriculum map. The self-study indicates that more work needs to be done to integrate specific plan-level learning outcomes with the more general UDLEs developed by both OCAV and the University of Waterloo.

The Legal Studies program currently has 314 majors (2013/14), and rose steadily from an enrolment of 68 in 2005/06. The external reviewers commented that “In the current climate of declining BA enrollments, the LS figures are very impressive. The program has the potential to be a central pillar of the UW BA.” The academic plans contributing to this growth are mainly the four-year General plan and the Honours Co-op plan.
Legal Studies students are overwhelmingly Canadian, though over the past 4 years (since 2010) the proportion of international students has been increasing. Legal Studies students are also predominantly female, with the proportion of female Legal Studies students averaging 65.5% over the period of self-study.

The overall average retention rate for each class of Legal Studies major over the self-study period is approximately 60%, a number that varies from a low of 45% in the Four-Year General Legal Studies program to 67% in the Honours Legal Studies program. Since 2007, Legal Studies has produced 445 graduates. About 20 percent of Legal Studies graduates from 2010 onward have found employment in the justice sector and related legal assistant work. The education sector remains the largest employer of Legal Studies graduates.

In 2012, the Legal Studies Academic Advisory Committee initiated an extensive curriculum review of the Legal Studies program. In 2014, the Academic Advisory Committee approved significant changes to the Legal Studies plans and courses in order to: reduce the overall complexity of the Legal Studies plans; enhance the logical progression of students through the program; increase the range of courses available especially at 3rd and 4th year; increase the identity of legal studies courses though cross-listing agreements with partner programs and departments; and redesign program requirements in accordance with plan standardization initiatives in the Arts.

The departments of Sociology and Legal Studies at uWaterloo (with 17 regular faculty) and SJU (with 3 regular faculty) supply almost 60% of the teaching resources for Legal Studies majors each year. The remaining 40% of the teaching is done by faculty from 15 other departments and programs at uWaterloo and its affiliated institutions.

Summary of Program Strengths and Weaknesses

Strengths

- The wide-ranging curriculum offers a variety of lenses through which to learn about law’s role in society.
- Significant curricular improvements will roll out in 2015 involving both streamlined program structure (consistent with the current Arts Faculty plan standardization initiative) as well as course offerings.
- The program has attracted engaged, committed and active students.
- Research active faculty are a significant asset – in 2014, the Department of Sociology and Legal Studies at uWaterloo ranked among the top 101 to 150 Sociology programs in the world (of 700 programs according to QS).
- Teaching evaluations are above the Faculty of Arts average.

Challenges/Weaknesses

- Specific plan-level learning outcomes have only been identified in a preliminary way – more work is needed to map these to UDLEs to better describe the learning indicators for the program.
• The external reviewers found the “learning outcomes and objectives either somewhat
generic, lacking a specific LS focus, or seeming to focus on a somewhat narrow approach
to law/legal studies.”

• Course availability is identified as an issue, including offerings in the Spring term.

• The reviewers suggested that the “requirement to take Statistics alongside two other
research methods courses in Sociology is onerous and perhaps excessive.”

• The nature of available TA assistance (senior undergraduate students) discourages a
broader range of types of assessments in LS courses.

• For some key courses (namely LS 101, LS 401, LS 402), there is a lack of consistency
between different sections of the same course, prompting the reviewers to state that
students “will emerge with a different knowledge base depending on which section of
the course they are enrolled in.”

• The reviewers commented on the absence of a Legal Studies community of scholars at
uWaterloo and SJU that would naturally “foster an active research culture” that would,
besides benefitting researchers, “enhance the intellectual quality of the student
experience and would provide a solid foundation for building a strong graduate program
in LS.”

**External Reviewers Recommendations for Program Improvement and
Program Response**

Overall, the external reviewers were impressed with the quality of the program, its students and
its faculty who were seen as strongly qualified and productive. They saw the Legal Studies
program as being “a clear success for the university and a definite draw for students as well as
for LS scholars”; and as being innovative in that “the multidisciplinary and interdisciplinary
approach to legal subjects provided in this program brings new questions, new analyses, and
new responses to the study of law, regulation, and legal issues.” They noted “the program is
strongly rooted in a sociological approach” and recognized that this should not be surprising
given that the program’s departmental homes. The reviewers suggested that “the program
faculty would want to ensure that this influence reflects a conscious decision and a chosen focus
for the program rather than largely being a function of its location.”

The departments provided a detailed implementation plan that responds to each of the
reviewers’ recommendations and lists specific actions, timelines, required resources and
responsibility.
<table>
<thead>
<tr>
<th>Action Items</th>
<th>Who is Responsible</th>
<th>Timeline</th>
<th>Resources</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Enhance the experiential learning opportunities for LS students through the expansion of LS focused co-op opportunities, community based learning opportunities, and exchange opportunities.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• New LS plans facilitate access to SOC co-op opportunities in addition to existing ARBUS opportunities</td>
<td>UW Chair</td>
<td>F15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Departmental Co-op Officer integrated with UG committee and designated to act as liaison with Cooperative Education and Career Action</td>
<td>UW Chair</td>
<td>Done</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Fourth-year seminar (LS 434 Sociology of at-Risk Youth) includes experiential learning component.</td>
<td>UW Chair</td>
<td>Done</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Exchange opportunities explored with Warwick University UK</td>
<td>UW Chair</td>
<td>Ongoing negotiations for F16 implementation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Co-curricular programs offered via SJU (Beyond Borders)</td>
<td>SJU Chair</td>
<td>Done</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. In the revision of plan and course learning outcomes attention should be paid to the articulation and inclusion of components that are specific to the field of Legal Studies.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Curriculum sub-committee to review learning outcomes, consult with LS faculty, and integrate LS courses with learning outcomes.</td>
<td>LS Curriculum Committee</td>
<td>S16 - Learning outcomes to be included in year-two follow-up report.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Institute a mechanism for regular and formal review of all Legal Studies course offerings with the aim of deleting courses that have no expectation of being offered in the next three years. Consult further with partner departments to ensure that Legal Studies cross-listed courses have sufficient legal content and that sufficient places in courses are available and guaranteed for Legal Studies students. Make some Legal Studies courses, especially required courses, available during the summer term.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• New UW Legal Studies DTL position scheduled to teach two Legal Studies courses in the spring semester.</td>
<td>UW Chair</td>
<td>S16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Curriculum sub-committee constituted to review LS curriculum and provide annual report to LS Committee</td>
<td>LS Curriculum Committee</td>
<td>Done</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Survey LS students to identify program strengths, weaknesses, opportunities, and challenges.</td>
<td>LS Curriculum Committee</td>
<td>W16</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4. **Plan a Legal Studies faculty retreat devoted to discussing the focus and direction of the program.**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>LS Committee Chair</th>
<th>S16</th>
<th>Meeting facilities and facilitator</th>
<th>Arts Dean; CTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>Retreat Planned for Spring 2016 once proposed LS plans and new budget model implemented.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. **Consider removal of the statistical methods course as a program requirement and make it an optional course in the program.** *(wml:d -- done)*

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>LS Committee, UW and SJU Departments</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1</td>
<td>LS 280 (Social Statistics) removed from 2016/17 academic plans (maintained as option for LS degree)</td>
<td></td>
<td></td>
<td>Done (UGAG approval pending)</td>
<td></td>
</tr>
</tbody>
</table>

6. **Develop a plan to ensure that TAs who are adequately qualified and trained to grade a full range of types of assessments are available as needed to the Legal Studies program.** *(wml: e)*

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Chirs (SJU and UW)</th>
<th>F15</th>
<th>Additional TA resources</th>
<th>VPAD SJU / Arts Dean</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1</td>
<td>Develop TA coordination plan to ensure Legal Studies 101 receives sufficient TA resources</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7. The Legal Studies program faculty members should develop a policy on the issue of consistency among the different sections of Legal Studies 101 and of Legal Studies 401 and Legal Studies 402 and guidance as to basic course expectations. *(wml:f)*

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>SJU Chair</th>
<th>F15</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7.1</td>
<td>Coordinate content of LS 101 and LS 401/402</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8. **New tenure track positions in Legal Studies should be made a funding priority for SJU. Every effort should be made to create two new tenure track positions in Legal Studies over the next two years.**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>SJU Chair</th>
<th>LS TT appointment approved for F15</th>
<th>TT appointment</th>
<th>VPAD SJU</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.1</td>
<td>Proposed two new LS TT hires; one in 2015; one in 2016</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9. **To the extent possible, make Legal Studies as an area of expertise a priority in filling any new tenure track positions in the Sociology Department at UW, with a goal of at least two new hires with expertise in Legal Studies in the near future. Ensure that all future faculty advertisements for positions in Sociology note that scholars with expertise in Legal Studies are encouraged to apply.**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>UW Chair</th>
<th>2 TT positions in process with LS as possible secondary area; 1 DTL in process with LS as primary area.</th>
<th></th>
<th>Arts Dean</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.1</td>
<td>Prioritize Legal Studies for new hires at UW</td>
<td></td>
<td>2 TT and 1 DTL appointments approved for 2015</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
10. Take steps to build a stronger Legal Studies research community and to enhance communication between the SJU and UW faculty who teach and research in the field of Legal Studies. This communication would ensure that the curriculum is coordinated. It would also importantly enhance a sense of research community, which is particularly crucial for the smaller number of Legal Studies faculty at SJU, in order that they not feel isolated.(wml: g)

<table>
<thead>
<tr>
<th>Action</th>
<th>Responsible Party</th>
<th>Target Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Develop Legal Studies Speaker Series and/or brown-bag workshops.</td>
<td>LS Committee</td>
<td>F15</td>
</tr>
<tr>
<td>• Retreat will also serve as a mechanism for this.</td>
<td>LS Committee Chair</td>
<td>S16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>See #4 above</td>
</tr>
</tbody>
</table>

11. Develop and implement a marketing strategy for the Legal Studies program.

<table>
<thead>
<tr>
<th>Action</th>
<th>Responsible Party</th>
<th>Target Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Participate March Break open house</td>
<td>LS Advisors (UW and SJU)</td>
<td>Done</td>
</tr>
<tr>
<td>• Participate in “declare your major” event</td>
<td>LS Advisors (UW and SJU)</td>
<td>Done</td>
</tr>
<tr>
<td>• Develop LS 102 in-class speaker series</td>
<td>LS 102 Instructors</td>
<td>Done in W15 and ongoing</td>
</tr>
<tr>
<td>• Promote co-op opportunities through joint majors</td>
<td>LS Committee Chair</td>
<td>F15</td>
</tr>
<tr>
<td>• LEARN site developed to communicate opportunities and events to existing LS students</td>
<td>LS Advisor</td>
<td>Done</td>
</tr>
</tbody>
</table>

12. Conduct a comprehensive survey of Legal Studies students, with one of the goals being to improve retention rates.

<table>
<thead>
<tr>
<th>Action</th>
<th>Responsible Party</th>
<th>Target Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>• In conjunction with curriculum review, develop survey questions to identify program strengths, weaknesses, opportunities, and challenges.</td>
<td>LS Curriculum Committee</td>
<td>W16</td>
</tr>
</tbody>
</table>

13. The Legal Studies program should work with the Alumni Office to develop a better tracking system for its graduates and work with the Development office to develop fund raising opportunities.

<table>
<thead>
<tr>
<th>Action</th>
<th>Responsible Party</th>
<th>Target Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Establish Departmental Alumni Officer to liaise with Development Office, coordinate Alumni Affairs, and communicate with Alumni.</td>
<td>UW Chair</td>
<td>S15</td>
</tr>
</tbody>
</table>

14. Develop a graduate program for Legal Studies students, which would attract students and also ensure retention of Legal Studies faculty. Consider a graduate program or stream that does not require them to complete all of the Sociology requirements.

<table>
<thead>
<tr>
<th>Action</th>
<th>Responsible Party</th>
<th>Target Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Develop “Socio-legal” specialization for SOC MA program with MRP and Co-op option.</td>
<td>UW SOC Grad Affairs Committee</td>
<td>F16</td>
</tr>
<tr>
<td>• Promote Crime, Law, and Security stream within SOC MA.</td>
<td>UW SOC Grad Affairs Committee</td>
<td>F15</td>
</tr>
</tbody>
</table>
Two-Year Progress Report: Human Resources Management Minor Program
(April 2015)

Introduction

The self-study prefatory to the review of the Human Resources Management (HRM) Minor program, a program hosted by the Department of Psychology, was submitted November 8, 2010. The site visit by the review team was conducted March 2, 2011. The review team submitted its report on May 10, 2011. The Department’s initial response to correct factual errors was submitted in April 2011; the final response was submitted on June 24, 2011. The academic program review report was presented to Senate on November 11, 2011. The present report is being submitted in April 2015 and describes changes in the HRM Minor undergraduate program since the review process was completed.

The HRM Minor Program

The HRM Minor program, administered by the Department of Psychology, is a large and highly successful undergraduate program with a set of 10 courses leading to designation as a Certified Human Resources Professional (CHRP). When Psychology took on hosting this program in 2003, there were 65 students; at present, roughly 400 students are enrolled in the program, in addition to 36 students currently doing an HRM Diploma.

Responses to Recommendations

There was a set of 7 main recommendations made by the review committee and listed in the final paragraph of their executive summary. Each of these is outlined below, and the progress made since the time of the review is sketched. [Note that, for emphasis, Recommendation 0 was unnumbered and stated separately prior to the others in the report.]

**Recommendation 0.** Appoint an Executive Director, who would be charged with developing and implementing a strategic plan for the program.

It was argued that a champion was needed for the program “to provide direction for strategic growth and development.” Although we did request creation of such a staff position, given no additional funds, we have not been able to appoint an Executive Director. Rather, the instructor most heavily involved in and committed to the program serves as head of the program/plan although this remains a contract position and most recently was reduced to a year-at-a-time contractual appointment. With regard to a strategic plan, we have during the current academic year explored the possibility of a Master’s program in this realm, and have a proposal for how our MASc in Psychology in the area of Industrial/Organization (I/O) psychology could be revamped to provide a valuable experience for top HRM students and people in the field. This has been forwarded to the Office of the Dean, Faculty of Arts.
**Recommendation 1.** Provide appropriate compensation for and regularization of part-time faculty at the core of the program.

Compensation for sessional instructors in this program—almost all instruction is by sessional instructors from the business world—was increased in the 2011-2012 academic year beyond the standard sessional stipend, which HRM instructors had formerly received, but remains lower than what was requested by the reviewers. Contracts, which then were for 1-3 years, now are for one term at a time, except for the instructor most heavily involved in the program, who has an annual contract. This is far from ideal; without longer-term contracts, we risk losing the excellent sessional instructors who currently are the backbone of the program. One key goal will be to convert the principal sessional instructor to a continuing Lecturer; this discussion has begun with the Dean of the Faculty of Arts with the intention of making the change within two years. This program is vulnerable, given its reliance on one instructor without a regular UW appointment, plus several sessional instructors.

**Recommendation 2.** Appoint a managing director to handle ongoing operations and administration.

Although we did request creation of such a full-time staff position, given no additional funds, we have not been able to appoint a managing director. In addition to the principal sessional instructor, there is currently a staff person in charge of the HRM program whose duties are about 2/3 HRM and 1/3 Psychology.

**Recommendation 3.** Appoint academic faculty with industry experience to enhance the scholarly reputation of the program.

In the past two years, we have been able to hire two faculty members on the Personnel (Industrial) side of our Industrial/Organizational Area. These hires strengthen our I/O Area and will also contribute to the HRM program development. These two new colleagues have already been instrumental in helping to develop the proposal for a revamped Master’s program—recently forwarded to the Dean of the Faculty of Arts—that should appeal to HRM students and professionals. What we need now is the continuing Lecturer appointment for the current champion of the program (referred to in Recommendation #1 above), who is so pivotal to its success.

**Recommendation 4.** Expand course offerings and course delivery options to create an HRM Major plan while building on the synergy between academic and practitioner perspectives.

We find it impossible to imagine creating a Major program without any full-time regular faculty associated with that Major, and so have not pursued this recommendation. Indeed, the HRM minor program runs on a very limited budget and, likely because it is a minor program, does not seem to have the necessary features to attract additional support, the 400 students in the program notwithstanding. Due to the demands of the large number of students in the program, we need to increase sections and frequency of course offerings in the HRM Minor, but this will depend on an infusion of funds to support expansion and the hiring of additional
instructors. We also have to carefully monitor changes in the HR profession that will influence our HRM minor. The guiding body in all of this is the HRM Advisory Committee made up of one or two of the I/O Psychology tenure-stream faculty, the head of the program, and the staff person in charge of HRM, with the Chair of Psychology ex officio.

**Recommendation 5.** Explore continuing education initiatives including the possibility of developing a Master’s program, most probably with online components.

The goal this year, with the addition of the two new Assistant Professors in I/O, was to consider possible models for a Master’s program that would be academically rigorous and also appealing both to UW graduates with the HRM Minor and ideally to HR professionals. We examined other such programs and considered possible versions that could work here at UW, considering likely enrollment and also need for funding. The result is the proposal for a revived MASc in I/O Psychology that would offer a research focus different from other HRM Master’s programs in existence. This is where our strength lies, and it would also differentiate us from the other programs. As mentioned, this proposal is in the hands of the Dean of the Faculty of Arts.

**Recommendation 6.** Develop an HRM Club to strengthen the sense of community among students and prepare them for professional life.

An HRM club was created last year and is already a success. Again, this has been very much at the initiative of the current head of the program, whose devotion to this program is exemplary.
Recognition and Commendation
The Government of Canada named eight professors from the University of Waterloo as Canada Research Chairs (CRC). The following Canada Research Chairs from the University of Waterloo were included in the announcement: Clark Dickerson (Applied Health Sciences), Canada Research Chair in Shoulder Mechanics — new Tier 2; Roxane Itier (Arts), Canada Research Chair in Cognitive and Social Neuroscience of Face Perception — Tier 2 renewal; Zhongwei Chen (Engineering), Canada Research Chair in Advanced Materials for Clean Energy — new Tier 2; Lukasz Golab (cross-appointed Mathematics and Engineering), Canada Research Chair in Data Analytics for Sustainability — new Tier 2; Maria Strack (Environment), Canada Research Chair in Ecosystem and Climate — new Tier 2; Derek Schipper (Science), Canada Research Chair in Organic Material Synthesis — new Tier 2; David Blowes (Science), Canada Research Chair in Groundwater Remediation — Tier 1 renewal; Alberto (Germán) Sciaini (Science), Canada Research Chair in Atomically Resolved Dynamics and Ultrafast High-Resolution Imaging — new Tier 2. The Tier 1 Canada Research Chair is for $200,000 per year for seven years. Tier 2 is for $100,000 per year for five years. (Daily Bulletin, 13 April 2015)

The University of Waterloo consistently performs well in the William Lowell Putnam Mathematics Competition and the most recent fourth-place finish behind Harvard, MIT and the Rensselaer Polytechnic Institute means Waterloo has won 19 Top Five titles - more than any other Canadian university. The Putnam competition is regarded as the most prestigious one in North America. It draws more than 400 teams from universities across the US and Canada, with the biggest winners typically coming from Ivy League institutions like Harvard and MIT. This year’s team - Daniel Spivak, Sam Eisenstat and Kangning (Colin) Chen was coached by Stephen New, a professor in the Faculty of Mathematics. The top University of Waterloo student was Daniel Spivak, who ended up in the Top 25 of 4,320 contestants. (Waterloo Stories, 19 April 2015)

Congratulations to Volodymyr Lyubinets, Deon Nicholas, Geoffry Song, and coach Troy Vasiga of the Waterloo Black ACM team on their 13th place finish at this year’s Association for Computing Machinery International Collegiate Programming Contest World Finals in Morocco. The Waterloo Black ACM team competed against 127 other teams, solving nine of 13 problems. Only two universities from Canada qualified for the event, the other being the University of Calgary. The Waterloo Black ACM team won their spot at the world finals by finishing first at the East Central North America Association for Computing Machinery Regional Programming Contest in Windsor this past November. Waterloo’s junior ACM teams, Red and Gold, placed 7th and 8th respectively, at the regional contest. The ACM International Collegiate Programming Contest is a worldwide competition held annually with student teams from universities and colleges all over the globe. Competitors race to solve complex math problems that challenge their problem-solving, programming, and teamwork skills. Teams must qualify in a regional event before competing in the World Finals with the chance to win $16,500 and the title of “World Champion”. (Daily Bulletin, 22 May 2015)

The University of Waterloo’s Formula Hybrid race car took first place overall and set a new record at the annual Formula Hybrid International Competition this year. Unique design elements that included lighter materials and a more powerful battery system helped the Waterloo car edge out vehicles from other top universities. “The team worked incredibly hard over the past four months to get the car ready,” says faculty co-advisor Andrew Trivett, a mechanical and mechatronics engineering professor. “It’s one thing to design a car, but the students have shown they can turn innovative ideas into practical hardware.” More than 27 teams, from as far away as Turkey and India, competed at the New Hampshire Motor Speedway. The annual competition, part of the Institute of Electrical and Electronics Engineers
(IEEE) and Society of Automotive Engineers (SAE) Collegiate Design Series, challenges university students to design an open-wheel, single-seat, electric or hybrid-electric race car. (Waterloo Stories, 12 May 2015)

Popular Science has chosen an invention created at the University of Waterloo to be one of the Top 10 innovations for 2015. “Popular Science has been a leading publisher of the latest and greatest science and technology news for over 140 years. Being honoured by them in this way is something that we could have only dreamed about as children,” says Alroy Almeida, co-founder of Voltera, a Waterloo startup that has developed a custom circuit board 3D printer. “This recognition would never have occurred if it wasn’t for the professional support and educational foundation we gained through our time enrolled in the prestigious Waterloo mechatronics and nanotechnology programs and through our valuable experiences at various co-op jobs”, says Almeida. The project began as a Capstone Design project in Waterloo’s Faculty of Engineering. Upon graduation in 2013, Alroy Almeida, Katarina Ilic, James Pickard, and Jesús Zozaya moved into the Velocity Foundry and set aggressive fundraising goals to enable manufacturing. (Waterloo Stories, 28 April 2015)

Solder Otter, a safe, easy-to-use soldering iron with built-in fume extraction, was one of six major winners at the second annual Norman Esch Capstone Design Awards competition for engineering students held on Thursday, April 2. The company’s five founders are mechanical engineering and systems design engineering students. Their impressive pitch won them $10,000 to help cover startup and other costs. During the event, 15 teams had 90 seconds to pitch their businesses to a panel of judges who included engineering professors and faculty members of the Conrad Entrepreneurship, Business and Technology Centre. Judges weighed the overall pitch, and product innovation, market potential and viability. Funded by The Esch Foundation, the Norman Esch Capstone Design Awards support creative and entrepreneurial students in the pursuit of research and development and its commercialization for the benefit of Canada. Previous Capstone projects have given rise to groundbreaking ideas leading to the creation of companies such as Athos, BufferBox, Thalmic Labs and Pebble. (Daily Bulletin, 10 April 2015)

Each year, the Faculty of Science recognizes the teaching quality and impact of its faculty through the Excellence in Science Teaching Awards (ESTA). The 2015 ESTA were awarded to Dr. Andrea Edginton and Chemistry Department Chair Bill Power for their sustained, high quality teaching in their undergraduate or graduate courses. Edginton, an Associate Professor in the School of Pharmacy, has taken a highly innovative approach in teaching pharmacokinetics. She was a pioneer at the University of Waterloo in using the “flipped classroom” model. This approach places most of the core instructional material online allowing classroom time to be used to address questions and provide supplementary explanations of difficult concepts. Despite the challenges in teaching such a difficult subject, Edginton has consistently been one of the most highly rated teachers in the School of Pharmacy. Power has taught at every level of the chemistry curriculum. He’s consistently praised by students for his ability to take complicated concepts and explain them in a way that makes them seem intuitive and almost simple. Students cite his love of teaching as one of his most outstanding qualities. Power is well known and admired by students and colleagues for his innovative approaches to engage students and maximize their learning experience. The annual ESTA award was established to recognize and reward excellence in teaching and outstanding instructors within the Faculty of Science at the University of Waterloo. (Daily Bulletin, 21 April 2015)

Second-year Global Business and Digital Arts (GBDA) student Ariana Cuvin has won the Government of Canada’s Canada 150 logo competition. Cuvin’s logo design depicts a series of diamonds arranged in the shape of a maple leaf, and it will become a unifying symbol of the Canada 150 movement. Her logo will be featured in all Government of Canada activities and material related to Canada 150. Cuvin, 19, entered the nationwide design competition, which was open to Canadian students aged 18 and older who were enrolled in a post-secondary program in Canada. Students were asked to submit a design that evoked pride, unity and celebration that reflected Canada as a diverse nation with “a rich past and a promising future.” (Daily Bulletin, 28 April 2015)
Continuing Lecturer Rohan Jayasudera, from the Department of Physics and Astronomy, received the 2015 Federation of Students Excellence in Undergraduate Teaching Award. Jayasundera has dedicated many years to teaching undergraduate students – most of which are first-year physics students. His enthusiasm for the job has repeatedly sparked interest in his students and encouraged them to explore their interest outside of class. His commitment to teaching extends outside of the lecture halls. Jayasundera is routinely available outside of class time and encourages students who come to seek help. Jayasundera is also the Senior Teaching Fellow in the Faculty of Science. The Teaching Fellows enhance student learning by providing teaching leadership to their colleagues and the Faculty. (Daily Bulletin, 1 May 2015)

Fourth-year Pharmacy student Holly Meginnis has been recognized with the Ontario Pharmacists Association (OPA) Student of Distinction Award for leadership and commitment to advancing the profession. The University of Waterloo’s School of Pharmacy, in the Faculty of Science, prides itself on developing and supporting pharmacy student leaders. This is the fourth consecutive year that a Waterloo student has received the Student of Distinction Award. Sarah Johnson (Rx2014) won the Student of Distinction Award last year. “Holly has worked tirelessly on behalf of students at the School of Pharmacy as well as pharmacy students across the country though her work with the Canadian Association of Pharmacy Students and Interns (CAPSI). The future of pharmacy in Canada is in good hands with leaders like Holly entering the profession,” said Prof. David Edwards, Hallman Director, School of Pharmacy and Associate Dean, Faculty of Science. During her time at the School of Pharmacy, Meginnis has shown outstanding devotion to committees and causes within and beyond the walls of the Kitchener campus. Meginnis is the current Class Representative for her year, Rx2015, the UWaterloo CAPSI Senior Representative, and an active member of the Graduation Committee. She has also volunteered her time to special events with Canadian Society of Hospital Pharmacists and Community Action Now, an organization that runs community service projects supporting health and well-being. (Daily Bulletin, 15 May 2015)
FOR INFORMATION

A. APPOINTMENTS/REAPPOINTMENTS

Probationary Term
SKINNER, Kelly, Assistant Professor, School of Public Health and Health Systems, September 1, 2015 – June 30, 2018. [Ph.D. University of Waterloo (2013); M.P.H. Karolinska Institute (2006); M.Sc. University of Waterloo (2005); B.Sc. (Honours) University of Waterloo (2002)]. Kelly’s research is in the area of health evaluation, northern food systems and food securities in fields of Indigenous health, and public health complement. Dr. Skinner’s research skills and teaching interests support key areas and complement the School.

Definite term Appointment – full time
NEITERMAN, Elena, Lecturer, School of Public Health and Health Systems, July 1, 2015 – June 30, 2018. [PhD, McMaster University (2010); MA, McMaster University, (2006); MA (Sociology of Education), Hebrew University (2004); BA (Education), Hebrew University (2002)]. Dr. Neiterman’s teaching expertise is in population health, social determinants of health, health human resources, aging and health, global health, health ethics, health inequalities, state and health policy, program planning, health evaluation, health promotion, and maternal health and wellbeing, and aging and wellbeing. Dr. Neiterman will provide essential teaching support to the undergraduate and master’s degree programs.

LAMBRAKI, Irene, Research Assistant Professor, School of Public Health and Health Systems, May 1, 2015 – April 30, 2018. [PhD, University of Waterloo (2012); MSc, University of Guelph (2002); BASc., University of Guelph (1998)]. Dr. Lambraki will provide scientific and technical leadership for the Program Training and Consultation Centre (PTCC) partnership between the Propel Centre for Population Health, and Cancer Care Ontario. Her research will focus on tobacco control and other aspects of chronic disease prevention.

Adjunct Appointments
ROBERTSON-WILSON, Jennifer, Associate Professor, School of Public Health and Health Systems, April 15, 2015 – April 30, 2016.

Visiting Appointments

Cross appointment
AZAGBA, Sunday, Assistant Research Professor, Faculty of Applied Health Sciences, Propel Centre for Population Health Impact to School of Public Health and Health Systems, October 1, 2015 – September 30, 2018.

Postdoctoral Fellows reappointed as research
ZUJ, Kathryn, Department of Kinesiology, June 1, 2015 – November 30, 2015.
YAZDANI, Amin, Department of Kinesiology, May 1, 2015 – December 31, 2015.

B. ADMINISTRATIVE APPOINTMENTS
HANNING, Rhona, Associate Dean, Graduate Studies, Faculty of Applied Health Sciences, July 1, 2015 – June 30, 2018.

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

A. APPOINTMENTS

Probationary Term Appointments

FEKE, Jacqueline (BA 2003 Brown University MA 2004 PhD 2009 University of Toronto), Assistant Professor, Department of Philosophy, July 1, 2015 to June 30, 2018. Dr. Feke comes to Waterloo from a position as a Harper-Schmidt Research Fellow in the Department of Classics at the University of Chicago, after postdoctoral appointments at Stanford University and the Max Planck Institute for the History of Science. Her research focuses on the philosophy and rhetoric of Greco-Roman mathematicians, and she has a book forthcoming about Ptolomy’s views on the relationship between physics, mathematics and philosophy. Her appointment ensures the philosophy department’s continued ability to teach core courses in the history of ancient philosophy, reinforces its research strengths in philosophy of mathematics and philosophy of science, and creates opportunities for interdisciplinary collaboration with several other academic units on campus.

KELLY, Ashley (BA 2008 MA 2010 University of Waterloo PhD 2014 North Carolina State University), Assistant Professor, Department of English Language & Literature, July 1, 2015 to June 30, 2018. Dr. Kelly is an expert in technical and professional communication, the rhetoric of science and technology, and in genre theory. Previously an Assistant Professor at Purdue University, she is the author or co-author of numerous articles and book chapters on these and other topics. She brings expertise in research and pedagogy to the department and strengthens its writing studies group, and she will provide invaluable support to the department’s programs in technical writing, professional writing, and communication design.

Continuing Lecturer Appointments

KLIASHCHUK, Mikalai, (BA 2003 MA 2004 Minsk State Linguistic University Belarus, MA 2005 University of Western Ontario), Department of French Studies, January 1, 2015. Mikalai Kliashchuk’s area of expertise is beginner and false-beginner French as a Second Language teaching, and large-class language learning. He developed the Department of French Studies beginner French course, FR101, and will be responsible for preparing the online version of this course. In addition, he teaches FR151 and coordinates the oral and lab sections of this course, run by graduate student TAs. He also organizes workshops on second language pedagogy designed to prepare graduate student instructors for placement in the classroom.

Definite Term Appointments

ETTINGER, Aaron (BA 2006 University of Waterloo, MA 2007 PhD 2014 Queen’s University), Assistant Professor, Department of Political Science, September 1, 2015 to August 31, 2018. Dr. Ettinger’s areas of scholarly interest include international relations and political economy as well as American and Canadian foreign policy. His specific research interests focus on military privatization. Recently, he has written articles and book chapters on military contracting. He will contribute to the department through his teaching and research in areas such as American foreign policy which are complementary to existing departmental strengths as well as through his contribution to developing and promoting the department’s International Studies minor.

REDMOND, Leslie (BA 2007 Memorial University, MA 2008 Université de Nantes, PhD expected 2015 Université du Québec à Montréal/Université Bordeaux Montaigne), Lecturer, Department of French Studies, September 1, 2015 to August 31, 2017. Leslie Redmond works in the field of Applied Linguistics with a specialization in French as a Second Language pedagogy. Her Ph.D. thesis examines "Processes of French
Acquisition in Anglophone Canadian Language Learners". She brings to the department expertise in the area of FSL teaching, and will be primarily responsible for the department’s oral French courses.

**Definite Term Reappointments**

ABD-elrazak, Loula, Assistant Professor, Department of French Studies, September 1, 2015 to August 31, 2016.

PENATE, Rocky, Lecturer, Department of French Studies, September 1, 2015 to August 31, 2017.

SEEDS, Pamela, Lecturer, Department of Psychology, September 1, 2015 to August 31, 2018.

**Visiting Reappointment**

LO, Adrienne, Visiting Associate Professor, Department of Anthropology, June 1, 2015 to August 31, 2016.

**Adjunct Appointments – Instruction**

BRIDGEWATER, Paula, Lecturer, School of Accounting and Finance, May 1, 2015 to August 31, 2015.

BUSCHE, Karen, Lecturer, Department of Germanic and Slavic Studies, August 15, 2015 to August 15, 2016.

JOVICIC, Peter, Lecturer, School of Accounting and Finance, May 1, 2015 to August 31, 2015.

SMITH, Alex, Lecturer, School of Accounting and Finance, May 1, 2015 to August 31, 2015.

**Adjunct Appointments – Graduate Supervision**

WORTMANN, Thomas, Professor, Department of Germanic and Slavic Studies, May 1, 2015 to April 30, 2017.

**Adjunct Reappointments – Instruction**

AL ETHARI, Lamees, Lecturer, Department of English Language and Literature, May 1, 2015 to August 31, 2015.

ARNASON, Mark, Lecturer, School of Accounting and Finance, May 1, 2015 to August 31, 2015.

BRIGGS, Catherine, Lecturer, Department of History, May 1, 2015 to August 31, 2015.

BULLOCH, Dean, Lecturer, Department of Psychology, May 1, 2015 to August 31, 2015.

FEUER, Matthew, Lecturer, Department of Religious Studies, May 1, 2015 to August 31, 2015.

HARRIGAN, Patrick, Professor, Distinguished Professor Emeritus, Department of History, May 1, 2015 to August 31, 2015.

HAYES, Nicole, Lecturer, Department of Anthropology, May 1, 2015 to August 31, 2015.

LEVINSON, Daniel, Lecturer, Department of Drama and Speech Communication, May 1, 2015 to August 31, 2015.

MALONE, Toby, Lecturer, Department of Drama and Speech Communication, May 1, 2015 to August 31, 2015.

MURRAY, Neil, Lecturer, Department of Psychology, May 1, 2015 to August 31, 2015.
NEEDHAM, Brent, Lecturer, Department of Political Science, May 1, 2015 to August 31, 2015.

NUNEZ, Camelia, Lecturer, Department of Economics, May 1, 2015 to August 31, 2015.

OLDHAM, Andrew, Lecturer, School of Accounting and Finance, May 1, to August 31, 2015.

SCHWEITZER, David, Lecturer, Department of History, May 1, 2015 to August 31, 2015.

SHARMA, Ajay, Lecturer, Department of Political Science, May 1, 2015 to August 31, 2015.

THARMALINGAM, Pirapa, Lecturer, Department of Economics, May 1, 2015 to August 31, 2015.

WOOLSTENCROFT, Peter, Associate Professor, (Associate Professor Emeritus), Department of Political Science, May 1, 2015 to August 31, 2015.

Graduate Students Appointed as Part-Time Lecturers
ATEGOMO YMELE, Martial, Department of French Studies, May 1, 2015 to August 31, 2015.

DEHGNANI, Morteza, Department of French Studies, May 1, 2015 to August 31, 2015.

DRECUN, Darlene, Department of Philosophy, May 1, 2015 to August 31, 2015.

EVEN, Coleen, Department of French Studies, May 1, 2015 to August 31, 2015.

EVITT, Ryan, Department of English Language and Literature, May 1, 2015 to August 31, 2015.

MATSINHE, Daniel, Department of French Studies, May 1, 2015 to August 31, 2015.

NELSON, Benjamin, Department of Philosophy, May 1, 2015 to August 31, 2015.

PENDER, John, Department of English Language and Literature, May 1, 2015 to August 31, 2015.

PIRIE, Nathan, Department of French Studies, May 1, 2015 to August 31, 2015.

RATELLE, Frances, Department of French Studies, May 1, 2015 to August 31, 2015.

Staff Appointments to Faculty
DI GRAVIO, Katrina, Lecturer, Department of Psychology, May 1, 2015 to August 31, 2015.

SECORD, Sharon, Lecturer, Department of Drama and Speech Communication, May 1, 2015 to August 31, 2015.

B. ADMINISTRATIVE APPOINTMENTS

AURINI, Janice, Associate Chair, Undergraduate Studies (Sociology), Department of Sociology and Legal Studies, July 1, 2015 to June 30, 2017.

COOKE, Martin, Associate Chair, Graduate Studies, Department of Sociology and Legal Studies, July 1, 2015 to June 30, 2017.
LIU, Jennifer, Associate Chair, Graduate Studies, Department of Anthropology, July 1, 2015 to June 30, 2016.

SCHULENBERG, Jennifer, Associate Chair, Undergraduate Studies (Legal Studies), Department of Sociology and Legal Studies, July 1, 2015 to June 30, 2017.

SILLATO, Maria del Carmen, Associate Chair, Undergraduate Studies, Department of Spanish and Latin American Studies, May 1, 2015 to April 30, 2016.

Administrative Reappointment
BLATHERWICK, David, Associate Chair, Graduate Studies, Department of Fine Arts, July 1, 2015 to June 30, 2016.

CLUETT, Cora, Associate Chair, Undergraduate Studies, Department of Fine Arts, July 1, 2015 to June 30, 2016.

EIBACH, Richard, Associate Chair, Undergraduate Studies, Department of Psychology, July 1, 2015 to June 30, 2016.

NILSEN, Elizabeth, Associate Chair, Graduate Studies, Department of Psychology, January 1, 2016 to June 30, 2016.

C. SABBATICAL LEAVES

For approval by the Board of Governors:

BLOOM, Kathleen, Associate Professor, Department of Psychology, January 1, 2016 – June 30, 2016, 85% salary.

BOBOCEL, Ramona, Professor, Department of Psychology, September 1, 2015 – August 31, 2016, 85% salary.

CHEN, Changling, Associate Professor, School of Accounting and Finance, September 1, 2015 – February 29, 2016, 85% salary.

COLEMAN, Beth, Assistant Professor, Department of English Language and Literature, July 1, 2015 – December 31, 2015, 100% salary.

GORMAN, Daniel, Associate Professor, Department of History, November 1, 2015 – April 30, 2016, 100% salary.

ILCAN, Suzan, Professor, Department of Sociology and Legal Studies, September 1, 2015 – August 31, 2016, 85% salary.

MACLEOD, Colin, Professor, Department of Psychology, July 1, 2015 – June 30, 2016, 100% salary.

MUIRHEAD, Bruce, Professor, Department of History, January 1, 2016 – June 30, 2016, 100% salary.

NELSON, Edna, Associate Professor, Department of Sociology and Legal Studies, September 1, 2015 – August 31, 2016, 93.3% salary.

RANDALL, Neil, Associate Professor, Department of English Language and Literature, September 1, 2015 – February 29, 2016, 100% salary.
Cancellation
LAM, Jean-Paul, Associate Professor, Department of Economics, July 1, 2015 – December 31, 2015
(originally approved by Board of Governors in April 2015 and reported to Senate in May 2015).

D. ADMINISTRATIVE LEAVES

For Approval by the Board of Governors:

EASTON, Fraser, Associate Professor, Department of English Language and Literature, September 1, 2015 – December 31, 2015, 100% salary.

MUIRHEAD, Bruce, Professor, Department of History, September 1, 2015 – December 31, 2015, 100% salary.

Douglas M. Peers
Dean, Faculty of Arts
For information:

A. APPOINTMENTS

Probationary Term Appointments

**BASIR, Nada,** Assistant Professor, Conrad Business, Entrepreneurship & Technology Centre, September 5, 2015 – June 30, 2019. PhD candidate York University expected 2015; MSc McGill University 2007; BSc University of Waterloo 2005. Nada Basir will join the faculty of the Conrad Business, Entrepreneurship and Technology Centre as a tenure-stream Assistant Professor. Nada brings academic expertise in the areas of strategy, organization theory, and social enterprise to Conrad. She will also be drawing on her own professional business world experience in supporting UW students’ entrepreneurial and professional aspirations. Nada will contribute her teaching energies to both the MBET program and Conrad’s new cross-campus undergraduate minor offering.

**SAARI, Rebecca,** Assistant Professor, Department of Civil & Environmental Engineering, September 1, 2015 – June 30, 2018. PhD Candidate Massachusetts Institute of Technology expected 2015; MASc University of Toronto 2007; BASc University of Toronto 2005. Rebecca Saari will join the Environmental and Water Resources Engineering Research Group in the Department of Civil and Environmental Engineering after completing her PhD at the Massachusetts Institute of Technology. Her research focuses on connecting advanced air quality models and engineering methods to models of energy, the economy, and human health to view air quality not as an isolated issue but as a broader component of sustainable engineering and policy. Rebecca will allow the Department of Civil and Environmental Engineering to expand their teaching and research capacities into the area of air quality.

**ZHU, Kejia,** Assistant Professor, Department of Management Sciences, August 1, 2015 – June 30, 2018. PhD University of British Columbia 2014; MA Hong Kong University of Science & Technology 2006; BA Law Peking University 2003. Kejia Zhu is joining the Management of Technology (MOT) area in the department of Management Sciences. She holds a PhD degree in Organizational Behaviour and Human Resources from the Sauder School of Business, UBC.

New Definite Term Appointments – full-time

**MILNE, Andrew,** Lecturer, Department of Mechanical & Mechatronics Engineering, July 13, 2015 – July 12, 2018. PhD University of Alberta 2013; MSc University of Alberta 2008; BSc University of Waterloo 2005. Dr. Andrew Milne will join the MME dept. as a definite term lecturer in support of the CEAB Outcome Based Assessment and the Engineering Clinic initiatives. Dr. Milne is presently a Postdoctoral Fellow in Mechanical Engineering at MIT, and will be primarily associated with the Thermal research group in our department.

**PIRNIA, Mehrdad,** Lecturer, Department of Management Sciences, July 1, 2015 – June 30, 2018. PhD University of Waterloo 2014; MASc University of Waterloo 2009; BS Avicenna University, Iran 2003. Dr. Mehrdad Pirnia is joining Management Sciences as a Graduate Attributes Lecturer. He spent the last years working in energy planning.

Definite Term Reappointment – full-time

**KASHEF, Rasha,** Lecturer, Department of Management Sciences, September 1, 2015 – August 31, 2016.
NORMANI, Stefano, Research Assistant Professor, Department of Civil & Environmental Engineering, May 1, 2015 – April 30, 2016.

YIN, Yong, Research Engineer, Department of Civil & Environmental Engineering, May 1, 2015 – April 30, 2016.

Continuing Lecturer Appointments
TEERTSTRA, Peter, Lecturer, Department of Mechanical & Mechatronics Engineering, May 1, 2015. PhD University of Waterloo 2003; MASc University of Waterloo 1992; BSE Calvin College, Michigan USA 1990. Dr. Peter Teertstra has been appointed as Continuing Lecturer in MME. He has been associated with the MME department for many years, most recently as a definite term lecturer, and is also the director of the Sedra Student Design Centre. He has been active with the Clean Snowmobile student team, and will continue to be associated with the Thermal research group.

Visiting Appointments

GROSS, Tobias, Scholar, Department of Electrical & Computer Engineering, April 1, 2015 – September 30, 2105.

ESFAHANI NASR, Azam, Scholar, Department of Chemical Engineering, May 1, 2015 – April 30, 2016.

ERGIN, Mert, Scholar, Department of Mechanical & Mechatronics Engineering, June 24, 2015 – September 29, 2015.

ISMayilov, Vugar, Scholar, Department of Chemical Engineering, April 15, 2015 – April 14, 2016.

LEE, Duu-Jong, Professor, Department of Chemical Engineering, August 20, 2016 – December 20, 2016.

NUNES, Lidiane Silva do Espirit Santo, Researcher, Department of Mechanical & Mechatronics Engineering, April 5, 2015 – March 31, 2016.

QUI, Lina, Scholar, Department of Chemical Engineering, August 15, 2015 – August 14, 2016.

WU, Zhao, Scholar, Department of Mechanical & Mechatronics Engineering, September 1, 2015 – February 29, 2016.


Special Appointments – Undergraduate Instruction
ALEMOHAMMAD, Hamid, Lecturer, Department of Mechanical & Mechatronics Engineering, May 1, 2015 – August 31, 2015.
FARKHONDEH, Mohammad, Lecturer, Department of Chemical Engineering, May 1, 2015 – August 31, 2015.

HASSEL, Katharina, Lecturer, Department of Chemical Engineering, May 1, 2015 – August 31, 2015.

KARIMI, Majid, Lecturer, Department of Management Sciences, May 1, 2015 – August 31, 2015.

KHAMIS Alaa, Lecturer, Department of Electrical & Computer Engineering, May 1, 2015 – August 31, 2015.

NGUYEN, Tam, Lecturer, Department of Mechanical & Mechatronics Engineering, May 1, 2015 – August 31, 2015.

ROGHANIZAD, Mohammad Mahdi, Lecturer, Department of Management Sciences, May 1, 2015 – August 31, 2015.

SAIF, Ahmed, Lecturer, Department of Management Sciences, May 1, 2015 – August 31, 2015.

SOKOLENKO, Stanislav, Lecturer, Department of Chemical Engineering, May 1, 2015 – August 31, 2015.

WANG, Biao, Lecturer, Department of Management Sciences, May 1, 2015 – August 31, 2015.

Special Reappointments – Undergraduate Instruction
GHAVAM, Kamyar, Lecturer, Department of Mechanical & Mechatronics Engineering, May 1, 2015 – August 31, 2015.

MOSTAFA, Haytham, Lecturer, Department of Electrical & Computer Engineering, May 1, 2015 – August 31, 2015.

Adjunct Appointments – Graduate Supervision
SOLIMAN, Mostafa, Assistant Professor, Department of Systems Design Engineering, March 1, 2015 – February 28, 2018.

Adjunct Appointments – Graduate Supervision and Research
ABDELGALIL, Tarek, Assistant Professor, Department of Electrical & Computer Engineering, March 1, 2014 – February 29, 2016.

Adjunct Appointments – Research
NISHIJIMA, Kazuyoshi, Associate Professor, Department of Mechanical & Mechatronics Engineering, May 1, 2015 – April 30, 2016.

Adjunct Appointments – Instruction
ZARNETT, Jeffrey, Lecturer, Department of Electrical & Computer Engineering, May 1, 2015 – April 30, 2016.

Cross Appointments
LEE, Joon, Assistant Professor, School of Public Health and Health Systems, Faculty of Applied
Health Sciences to Department of Electrical & Computer Engineering, April 15, 2015 – March 31, 2018.

**ADMINISTRATIVE APPOINTMENTS**

**DOUGLAS, Peter,** Associate Dean of Engineering, Undergraduate Studies, July 1, 2015 – June 30, 2018.

**RUDOLPH, David,** Director of Geological Engineering, Department of Civil & Environmental Engineering, July 1, 2015 – June 30, 2018.

**ADMINISTRATIVE REAPPOINTMENTS**

**OPAL, Ajoy,** Director of First Year Engineering, Engineering Undergraduate Office, May 1, 2015 – April 30, 2017.

**STUBLEY, Gordon,** Associate Dean, Teaching, Dean of Engineering Office, May 1, 2015 – April 30, 2018.

**B. SABBATICAL LEAVES**

*For Approval by the Board of Governors*

**CASCANTE, Giovanni,** Professor, Department of Civil & Environmental Engineering, September 1, 2015 – February 29, 2016, six months at 100% salary.

**CRAIG, James,** Associate Professor, Department of Civil & Environmental Engineering, March 1, 2016 – August 31, 2016, six months at 100% salary.

**JOHNSON, David A.,** Assistant Professor, Department of Mechanical & Mechatronics Engineering, January 1, 2016 – June 30, 2016, six months at 100% salary.

**KARRAY, Fakhri,** Professor, Department of Electrical & Computer Engineering, September 1, 2015 – February 29, 2016, six months at 85% salary.

**MANSOUR, Raafat,** Professor, Department of Electrical & Computer Engineering, September 1, 2015 – February 29, 2016, six months at 100% salary.

**SOULIS, Eric,** Professor, Department of Civil & Environmental Engineering, January 1, 2016 – December 31, 2016, twelve months at 100% salary.

**YU, Aiping,** Associate Professor, Department of Chemical Engineering, July 1, 2015 – December 31, 2015, six months at 100% salary.

---

Pearl Sullivan  
Dean, Faculty of Engineering
A. APPOINTMENTS

Adjunct Appointments

Graduate Supervision

BAILEY, Robert, Professor, Department of Environment and Resource Studies, February 1, 2015 to December 31, 2017.

CAREY, Sean, Associate Professor, Department of Geography and Environmental Management, June 1, 2015 to May 31, 2018.

DUDYCHA, Douglas, (Professor Emeritus), Associate Professor, Department of Geography and Environmental Management, May 1, 2015 to April 30, 2018.

FARMER, James, Assistant Professor, School of Planning, May 1, 2015 to April 30, 2016.

WHITELAW, Graham, Professor, Faculty of Environment, March 1, 2015 to December 31, 2018.

Graduate Supervision and Research

POLLOCK, Rebecca, Assistant Professor, Department of Environment and Resource Studies, March 1, 2015 to February 28, 2017.

Special Appointments

Instruction

BRAUNSTEIN, Martina, Lecturer, School of Planning, May 1, 2015 to August 31, 2015.

CASTON, Wayne, Lecturer, School of Planning, September 1, 2015 to December 31, 2015.

EDGE, Sara, Lecturer, Department of Environment and Resource Studies, May 1, 2015 to August 31, 2015.

HOOYKAAS, Amanda, Lecturer, Department of Geography and Environmental Management, May 1, 2015 to August 31, 2015.

MacDONALD, Patricia, Lecturer, School of Environment, Enterprise and Development, September 1, 2015 to April 30, 2016.

SCOULAR, Matthew, Lecturer, Department of Environment and Resource Studies, May 1, 2015 to August 31, 2015.

Change in Appointment

LEWIS, Geoffrey, Associate Professor, School of Planning (60%) and School of Environment, Enterprise and Development (40%), transferred to the School of Planning (100%), effective May 1, 2015.

Graduate Student Appointed as Part-Time Lecturer

GROULX, Mark, Department of Environment and Resource Studies, May 1, 2015 to August 31, 2015.
Postdoctoral Fellow Appointed as Part-Time Lecturer

KIRCHHOFF, Dennis, Department of Environment and Resource Studies, September 1, 2015 to December 31, 2015.

B. ADMINISTRATIVE APPOINTMENT

MACRAE, Merrin, Associate Chair, Undergraduate Studies (Geography Program), Department of Geography and Environmental Management, July 1, 2015 to June 30, 2018.

ADMINISTRATIVE REAPPOINTMENTS

CRAIK, Neil, Director, School of Environment, Enterprise and Development, July 1, 2015 to June 30, 2017.

DEADMAN, Peter, Chair, Department of Geography and Environmental Management, July 1, 2015 to December 31, 2015.

DOBERSTEIN, Brent, Associate Chair, Graduate Studies (Geography Program), Department of Geography and Environmental Management, July 1, 2015 to June 30, 2018.

PARKER, Paul, Associate Dean, Graduate Studies, Faculty of Environment, July 1, 2015 to June 30, 2017.

C. SABBATICAL LEAVES

For Approval by the Board of Governors (at its meeting on June 2, 2015)

DIAS, Goretty, Assistant Professor, School of Environment, Enterprise and Development, July 1, 2015 to December 31, 2015, at 100% salary.

KELLY, Richard, Professor, Department of Geography and Environmental Management, January 1, 2016 to December 31, 2016, at 100% salary.

PARKER, Dawn, Associate Professor, School of Planning, September 1, 2015 to August 31, 2016, at 85% salary.

ROBINSON, Derek, Assistant Professor, Department of Geography and Environmental Management, July 1 2015 to December 31, 2015, at 100% salary.

Jean Andrey
Interim Dean
FOR INFORMATION

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

**Definite Term - Appointments**

**KATSURAGAWA, Keiko** (BA, 2001; MSc, 2003; PhD, 2009 all from Shizuoka University), Research Assistant Professor, May 1, 2015 – April 30, 2016.

**LIQUN, Diao** (B Econ, 2007, Renmin University of China; MMath, 2009; PhD, 2013, both from the University of Waterloo), Research Assistant Professor, Dept. of Statistics and Actuarial Science, July 1, 2015 – June 30, 2018.

**Visiting Appointments**

**KETTLEWELL, Brian**, Research Associate, Dept. of Applied Mathematics, May 1, 2015 – August 31, 2015.

**Adjunct Appointments**

**Instructor**

**BEDAWI, SAFAA**, David R. Cheriton School of Computer Science, May 1, 2015 – August 31, 2015.

**Grad Committee**

**ILIE, Silvana** (Ryerson University), Associate Professor, Dept. of Applied Mathematics, June 1, 2015 – May 30, 2018.

**Adjunct Reappointments**

**Instructor**

**KHARAL, Rosin**, Lecturer, David R. Cheriton School of Computer Science, May 1, 2015 – August 31, 2015.


**Graduate Students appointed as Part-time Lecturers**


**Postdoctoral Fellows appointed as Part-time Lecturers**


FAGERSTROM, Emily, Dept. of Applied Mathematics, August 17, 2015 – August 31, 2016.


GUO, Krystal, Dept. of Combinatorics and Optimization, September 1, 2015 – August 31, 2017.


B. ADMINISTRATIVE APPOINTMENTS

KESHAV, Srinivasan, Associate Dean, Graduate Studies, Office of the Dean, July 1, 2015 – June 30, 2017.

C. RETIREMENT

MAVADDAT, Farhad, Professor, David R. Cheriton School of Computer Science, effective April 30, 2015.

D. SABBATICALS (already approved by the Board of Governors)

MARCOUX, Laurent, Professor, Dept. of Pure Mathematics, July 1, 2015 – December 31, 2015, with 85% salary. This is an early sabbatical.

Ian P. Goulden
Dean
A. **APPOINTMENTS**

**Probationary Term**

**MacIVER, Sarah,** Associate Clinical Professor, School of Optometry and Vision Science, July 1, 2015 to June 30, 2018. [B.Sc., University of Waterloo (2010); O.D., University of Waterloo (2010).] (This appointment is a transition from Continuing Lecturer to Clinical Faculty.)

**STEEENBAKKERS, Michelle,** Associate Clinical Professor, School of Optometry and Vision Science, July 1, 2015 to June 30, 2018.  [B.Sc., Queen’s University (2000); O.D., University of Waterloo (2004).]  (This appointment is a transition from Continuing Lecturer to Clinical Faculty.)

**New Definite Term – Full-Time**

**BOHLOULI-ZANJANI, Parissa,** Lecturer, Department of Physics and Astronomy, May 1, 2015 to April 30, 2016. [B.Sc., Tabriz University, Iran (1996); M.Sc., University of Waterloo (2003); Ph.D., University of Waterloo (2010).] Parissa is a seasoned lecturer, who has taught several Physics courses in the past as a sessional lecturer. Her solid physics and mathematical background, together with her enthusiasm in helping undergraduate students, makes her an ideal choice for this term-lecturer position.

**RICHARDSON, Jean,** Lecturer, Dean of Science Office, July 1, 2015 to June 30, 2018.  [B.Sc., University of Waterloo (1979); M.Sc., University of Toronto (1983); Ph.D., Carleton University (1987).] Following three years at the Geoscience Laboratory of the Ontario Ministry of Northern Development and Mines in Sudbury, Dr. Richardson began a career in the private sector in the resource industry. During this time, in an international company, she served in many roles, primarily involving marketing. She is appointed as a Lecturer in the Science and Business program to provide courses in the program linking Science to Business.

**Definite Term Reappointment – Full-Time**

**COUTURE, Raoul-Marie,** Research Assistant Professor, Department of Earth and Environmental Sciences, June 1, 2015 to May 31, 2016.

**SRINIVASAN, Sruthi,** Research Assistant Professor, School of Optometry and Vision Science, March 1, 2016 to February 28, 2018.

**Adjunct Appointments**

**Graduate Supervision**

**GAUTHIER, Michelle,** Assistant Professor, Department of Earth and Environmental Sciences, May 1, 2015 to April 30, 2018.

**Other**

**WARD, Owen,** (Professor Emeritus), Professor, Department of Biology, May 1, 2015 to April 30, 2018.
Graduate Supervision and Research

BRANCZYK, Agata M., Assistant Professor, Department of Physics and Astronomy, April 1, 2015 to March 31, 2020.

FLEMING, Ian, Professor, Department of Biology, April 1, 2015 to March 31, 2018.

JIANG, Runqing, Associate Professor, Department of Biology, May 1, 2015 to April 30, 2018.

XU, Heping, Assistant Professor, Department of Biology, April 1, 2015 to March 31, 2018.

Adjunct Reappointments

Graduate Supervision

KROM, Michael D., Professor, Department of Earth and Environmental Sciences, April 1, 2015 to March 31, 2018.

Research

SEMPLE, John C., (Professor Emeritus), Professor, Department of Biology, September 1, 2015 to August 31, 2018.

Graduate Supervision and Research

DeWITTE-ORR, Stephanie J., Assistant Professor, Department of Biology, July 1, 2015 to June 30, 2018.

GRAPENTINE, Lee C., Assistant Professor, Department of Biology, May 1, 2015 to April 30, 2018.

SCHUSTER, Philip C., Associate Professor, Department of Physics and Astronomy, April 1, 2015 to March 31, 2020.

Graduate Instruction/Graduate Supervision/Research

GOTTESMAN, Daniel, Professor, Department of Physics and Astronomy, May 1, 2015 to April 30, 2020.

Cross Appointments

REIMER, Michael, Assistant Professor, Department of Electrical and Computer Engineering, cross appointed to Department of Physics and Astronomy, March 1, 2015 to February 28, 2018.

Cross Reappointments

VAN CAPPELLEN, Phillippe, Professor, Department of Earth and Environmental Sciences, cross appointed to Department of Biology, April 1, 2015 to March 31, 2018.
B. **ADMINISTRATIVE APPOINTMENTS**

**RICHARDSON, Jean**, Director, Science and Business Program, Faculty of Science, July 1, 2015 to June 30, 2018.


**ADMINISTRATIVE REAPPOINTMENT**

**EDWARDS, David**, Director, School of Pharmacy, June 1, 2015 to May 31, 2018.

**FOR APPROVAL BY THE BOARD OF GOVERNORS**

C. **SABBATICAL LEAVE**

**CHARLES, Trevor**, Professor, Department of Biology, January 1, 2016 to December 31, 2016, 100% salary arrangement.

T.B. McMahon  
Dean

TBM:lw
The Academic Colleagues met on April 9th 2015 at Laurier University. The Colleagues heard and discussed reports on the following matters that were also addressed at the Executive Heads round table:

**Funding Review.** MTCU has launched a review of the funding formula; Sue Herbert has been brought on to lead the consultation process. The policy goals of the review are:

- To support differentiation;
- To support excellence in student experience;
- To support accountability and improve transparency; and
- To support financial sustainability.

The mandate for the review is very explicit: it will be public facing, include broad engagement (students, faculty, employers, and universities). The review will not include the tuition framework. A Task Force (including Executive Heads, an OCAV member and a CSAO member) has formed. A technical advisory will also form, with members who have experience and expertise with the current model. The consultation phase is set to finish early in 2016. COU will develop a briefing to describe how the current funding model supports differentiation.

**Financial sustainability and demographic trends.** The Council of Ontario Finance Officers (COFO) developed a paper about 3 years ago that provides some metrics for measuring sustainability. Executive Heads will discuss the possibility of bringing this paper to the ministry. Demographic trends are likely to put pressure on some institutions; it may be helpful to engage the ministry on this topic.

**Part-Time/Sessional Faculty.** Much of the media attention on this topic has been negative; it may be important to release some messages related to part-time/sessional faculty in the near future. Media coverage has also contributed to ongoing confusion about students and so-called precarious employment. OCAV has a project underway to report on part-time and sessional instructors, and some universities may already be collecting data about instructors. One approach is to look at the data already collected by universities so that we can provide a better description of part-time and sessional faculty. For example, it may be helpful to disaggregate the data to report on different types of instructors: graduate students & post docs; practicing professionals; retired faculty or faculty teaching on overload; adjuncts teaching a full load of courses; faculty in teaching stream appointments with continuing contracts. Different departments define adjuncts differently, and some disciplines use part-time/sessional instructors so that students are learning from those closely connected to professional practice. This kind of information may be useful in crafting more positive messages about teaching and learning experiences for instructors and students.

Further to the above, two topics were included on the Council Meeting agenda: Internationalization and the decline in demand for (and perceived value of) arts and humanities programs. Summary notes from the Colleagues’ preparation meeting are included below:

**Internationalization:** Many universities are engaged in internationalization efforts, including:

- Providing opportunities for domestic students to study abroad;
- Developing curriculum that reflects a global perspective;
 Providing diversity experiences (quasi-international) within the local context;
 Research collaborations;
 Efforts to build capacity in other countries (for example, through programs such a social work, Ontario universities can help build resources where they are needed);
 Developing online courses that can reach many students outside the local context.

The diversity of students enrolled in Ontario universities also results in an overlap between domestic and international students: some students counted as domestic may have been born outside Canada and arrive on university campuses with internationalized perspectives.

As universities continue to work toward internationalization goals, it is helpful to specify what “internationalization” means, as well as why it is important. It is also important to specify strategies for undergraduate versus graduate enrolment and programs. One perception about internationalization efforts is that it is a revenue generator. There are few levers in university budgets; this is one way to generate income. However, internationalization also requires university investments, particularly in the area of supports for international students (for mental health, English language skills, and financial support). Universities may also be considering important ethical issues related to the recruitment of international students, such as the employability of graduate students following completion of their degree, as well as the “brain drain” of international students who stay in Ontario following graduate studies.

**Decline in demand for (and the perceived value of) arts and humanities programs**: Though Academic Colleagues acknowledge the recent declines in enrolment, they note that it may be part of a larger cyclical process; talking about the recent enrolment trends as a “crisis” is not particularly helpful, nor is it necessarily accurate. Enrolments in arts and humanities programs are still large, despite recent dips. It will be important to manage the rhetoric differently. More important might be a discussion about how universities ensure that humanities experiences are part of all students’ undergraduate studies.

Enrolment demands for arts and humanities might be better understood with an examination of course enrolments, rather than majors. Though the numbers of students enrolled in majors might be static or declining, demand for courses still seems robust. However, it is important for universities to consider the implications of funding “following student enrolments”: many departments are offering their own versions of courses like ethics rather than sending students to the philosophy department to complete requirements. Colleagues discussed strategies for shifting the messages about arts and humanities programs, and suggested that universities need to focus on internal as well as public discourses. For example, identifying liberal arts courses as “service courses” in university discourse may serve to diminish the importance of arts and humanities. Universities can also focus on supporting interdisciplinary teaching and research activities, and highlighting arts/humanities research on webpages, media articles, and in public initiatives like Research Matters. It will also be important to help students understand the benefits of a university degree (including arts and humanities degrees). Surveying graduates several years after graduation (beyond 2 years) to learn about their career trajectory would also be helpful; their success stories will be valuable in an effort to change public awareness.

**Reports from Colleagues on Committees**

**Executive Committee**: The main discussion item was the funding formula review, which is currently underway. There will be two tracks to the consultation process. The first is a broad consultation which will include as wide a range of stakeholders as possible. For the second track, Cabinet has informed the minister that he will form a committee that will be transformational and look at the bigger picture. This committee will not include a current executive head, but might include a retired one. MTCU is not
particularly happy with this structure, nor are the executive heads. The health ministry will be involved with the consultation process providing their expertise from a similar reorganization of the health sector. On February 5 there was a joint meeting of the executive heads and the Council of Chairs of Ontario Universities (CCOU). CCOU is made up of the chairs of the boards of governors for the universities. There are two items of interest here. There was a discussion of the roles that the board chairs could play in advancing the universities. Second, Bob Bell from MOHLTC gave a presentation on the transformations in the health sector and how they may apply to post-secondary education. Additional items that were discussed included executive head compensation, sexual violence, international strategy, student association legislation and WISB coverage for students in experiential learning placements.

Committee on Nominations. The Committee recommended that Council approve the appointments of the nominated Executive Heads to the Executive committee. There was a discussion about the link between Executive Committee membership and the role of co-chairs of the Colleagues. Currently, by tradition and practice, the Colleagues who are appointed to the Executive Committee also serve as co-chairs of the Colleagues. In other words, the co-chairs are appointed as a result of their being recommended to serve on the Executive committee; they are not determined by the Colleagues directly. Colleagues may wish to separate those two roles and had planned a discussion at their meeting in May on that topic. It is the responsibility of the Committee on Nominations to recommend the Executive Committee slate irrespective of the issue of the co-chair role. Further, given several important policy issues in the sector, there should be no delay in proposing an Executive Committee slate to Council. As a result, the Committee determined that it would recommend renewal, on an interim basis, of the two Colleagues currently serving on the Executive Committee. This will give the opportunity for the Colleagues to determine among themselves whether they wish to de-couple the co-chair role from Executive Committee membership. A second Call for Nominations will be issued in early summer for the open positions on other COU Committees, including the two Academic Colleague positions on the Executive Committee. Colleagues may nominate, volunteer, or stand for reappointment with a clear understanding of whether these appointments will also carry the co-chair role.

The next meeting of the Academic Colleagues is scheduled for May 26 & 27, 2015 at the COU offices in Toronto.

Marios Ioannidis
Academic Colleague
Council of Ontario Universities
Senate Graduate & Research Council met on 11 May 2015 and 8 June 2015, 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

NEW REGULATION

Approved Doctoral Dissertation Supervisor (ADDS) Regulations

1. **Motion:** To approve the new university-level regulations governing the granting of approved doctoral dissertation status as described in Attachment #1.

   **Rationale:** At present, the granting of ADDS status is inconsistent across campus and in some situations the status may be granted without significant training and/or related experience in supervising highly-qualified people. A task force was struck to consider and develop a description of the essential requirements for obtaining ADDS status which could be approved at the university level and applicable to all departments/schools in all faculties. The draft regulations were considered and feedback was provided at each of the faculty councils and also at Graduate Student Relations Committee prior to consideration at Senate Graduate & Research Council (SGRC).

With this recommendation, SGRC wishes to convey certain points from its discussion for the consideration of Senate:

- Under “Qualification of ADDS Status” item 5, first bullet, SGRC expressed that there must be considerable attention to ensuring that workshops have relevant content that can be expected to foster improvement in supervisory skills
  - Content of workshop training should be informed by engagement with the associate deans, graduate studies for each faculty
- Under “Qualification of ADDS Status” item 5, second bullet, some members of SGRC expressed reservation at one Master’s thesis supervision being sufficient to obtain ADDS status
- The development of workshops or similar training should consider the content of the Tri-Agency Framework: Responsible Conduct of Research which carries similar parallel requirements
- Best practices in graduate supervision are known to vary between disciplines, and some consideration for this fact would be useful to ensure that supervisory training is congruous with the needs of supervisors within their disciplines

CHANGES TO ACADEMIC PLANS

Faculty of Engineering
Department of Mechanical and Mechatronics Engineering

2. **Motion:** To approve a change to the name of the PhD, MASc and MEng degrees from “[degree] in Mechanical Engineering” to “[degree] in Mechanical and Mechatronics Engineering.”

   **Rationale:** Since 2014, the department has added a new stream of mechatronics engineering into the undergraduate program, and since then the number of intakes in mechanical engineering and mechatronics
engineering programs have come to be equal. The department is also expanding in the number of faculty members to accommodate the recent expansion. Since the graduation of the first mechatronics engineering cohort, a significant number of mechatronics graduates have gone on to join the department’s graduate programs. With these developments, it is sensible to change the name of the degrees to appropriately reflect the nature of the actual research work and activities being undertaken within the department.

APPROVAL OF SUB-CENTRE WITHIN SENATE-APPROVED CENTRE

Sub-Centre Within Interdisciplinary Centre on Climate Change (IC3)

3. **Motion:** To approve the formation of a sub-centre within the Senate-approved Interdisciplinary Centre on Climate Change named the “[Company Name] Centre on Climate Adaptation,” with the company name to be filled upon successful formation of the partnership, as described in Attachment #2.

**Rationale:** The sub-centre would leverage the existing strengths of the centre while serving to provide greater profile and a natural interface to exercise those specific strengths in conjunction with industry partners.

/sg

George Dixon
Vice-President, University Research

Jim Frank
Associate Provost, Graduate Studies
Approved Doctoral Dissertation Supervisor (ADDS) Regulations

Preamble

The Approved Doctoral Dissertation Supervisor (ADDS) status is governed by a series of regulations governing how faculty members gain the privilege of sole-supervising PhD students. As such, they are regulations whose authority is vested in the Senate, and any changes to them are to be discussed at Faculty Relations Committee, Graduate Student Relations Committee and the Faculties, and then approved by Senate Graduate and Research Council and by Senate.

Introduction

This document sets out the qualifications necessary for faculty members to supervise PhD students in the faculty that has granted ADDS status. Faculty members who demonstrate the qualifications set out in this document will receive Approved Doctoral Dissertation Supervisor (ADDS) status, and only they will be:

- permitted to independently supervise PhD students;
- eligible for membership on the Graduate Studies Committee of a Faculty;
- eligible for membership on the University of Waterloo Senate Graduate and Research Council;
- eligible to be Graduate Officers, Faculty Associate Deans, Graduate Studies, or Associate Provost, Graduate Studies;
- eligible to chair PhD Examining Committees.

Qualification for ADDS Status

Faculty members who qualify for ADDS status must:

1. Be a faculty member at the professorial rank at the University of Waterloo (this includes clinical faculty);
2. Normally hold a PhD degree or a terminal degree in their field;
3. Demonstrate continuing competence and achievement in research or scholarship appropriate for the discipline;
4. Demonstrate appropriate familiarity with University of Waterloo policies and procedures on PhD supervision. This is preferably achieved by the faculty member attending a University-provided workshop or receiving training on supervisory procedures at the Faculty level;
5. Demonstrate appropriate supervisory experience: this can be achieved by the faculty member choosing one of the following:
   - Successfully completing a workshop series organized by the office of the Associate Provost, Graduate Studies and facilitated by CTE on graduate supervision, over the course of one year;
   - Supervising to successful completion at least one Master’s thesis;
   - Having co-supervised or supervised a PhD thesis to completion (see Guidelines for Best Practice in Co-Supervision).
The above criteria are meant to ensure that faculty members have acquired the appropriate knowledge to facilitate becoming excellent PhD supervisors at Waterloo. For new faculty, ADDS status is to be awarded on potential excellence since building a proven track record of successful graduate supervision requires many years, numerous students and, depending on the discipline, can extend beyond the granting of tenure.

**Acquiring ADDS Status**

The process of acquiring ADDS status for a faculty member in the tenure-stream at the University of Waterloo is defined as follows:

- Faculty members satisfying all 5 criteria for qualification listed above can request consideration for ADDS status by their Department Chair;
- The Chair must confirm all 5 criteria are met and then pass along the request and any written comments to the Faculty Associate Dean, Graduate Studies for approval;
- If the Chair deems that any of the 5 criteria are not met, s/he will provide the faculty member in writing information as to which criteria are not met and guidance as to how to satisfy those criteria in order to become eligible. Faculty members can appeal the Chair’s negative decision to the Faculty Associate Dean, Graduate Studies and (in the event of a negative decision from the Faculty Associate Dean) to the Associate Provost, Graduate Studies;
- Individual Faculties may opt to constitute an appropriate advisory committee to the Associate Dean, Graduate Studies to adjudicate ADDS status requests;
- After the application is approved by the Faculty Associate Dean, Graduate Studies the recommendation for the granting of ADDS status will be forwarded to the Associate Provost, Graduate Studies for approval;
- If either the Faculty Associate Dean, Graduate Studies or the Associate Provost, Graduate Studies does not approve ADDS status at the present time, s/he will provide in writing guidance as to what is needed for the faculty member to become eligible. Faculty members can appeal denial of ADDS status by the Faculty Associate Dean to the Associate Provost, Graduate Studies.

**Retired Faculty**

Those faculty members who are supervising doctoral students when they retire may continue to sole-supervise these students until these students complete their degrees.

**Adjunct Faculty and Research Professors**

Co-supervision with a regular faculty member with ADDS status is normally a requirement for Adjunct Faculty and Research Professors. The Faculty Associate Deans, Graduate Studies, have the authority to waive the co-supervision requirement for a specific student, on the recommendation of the Department/School.

**Revoking ADDS Status**

When circumstances appear to warrant the revocation of ADDS status of a faculty member; the process for doing so is as follows:

- The Chair/Director of the faculty member’s unit will recommend revocation of ADDS status to the Faculty Associate Dean, Graduate Studies. Justification for the
recommendation should be provided in writing, along with information on efforts that have been made for remediation, and the faculty member in question should be notified in advance of the recommendation and the reasons for it;

- The Faculty Associate Dean, Graduate Studies may reject the recommendation but must provide a written explanation for doing so;
- In some cases information may come to the attention of the Faculty Associate Dean, Graduate Studies, suggesting that revocation of ADDS status should be considered. In such circumstances, s/he should approach the Chair/Director to investigate, and if appropriate initiate the process;
- If the Faculty Associate Dean, Graduate Studies accepts the Chair/Director’s recommendation, the faculty member may appeal the decision to the Associate Provost, Graduate Studies, whose decision is final; the Associate Provost, Graduate Studies shall provide reasons for his/her decision in writing;
- If ADDS status is revoked/ the Faculty Associate Dean, Graduate Studies will notify the Graduate Studies Office to update the University list;
- Faculty members whose ADDS status has been revoked have the opportunity to requalify for ADDS status, if they can demonstrate the appropriate competencies required.

Other

- All faculty members of a Faculty Graduate Studies Committee should hold ADDS status. (Departments/Schools not offering PhD programs would be exempt.)
- Faculty members from departments that do not have a PhD program may acquire ADDS status and supervise graduate students from other departments within their Faculty where departmental regulations permit.
Memo

To: Members of Senate Graduate & Research Council

From: George Dixon, VP Research

Date: May 26, 2015

Subject: Addition of Sub-Centre to Existing Interdisciplinary Centre on Climate Change

Background:

The Interdisciplinary Centre on Climate Change (IC³) received approval for a renewed five-year term from the Senate Graduate and Research Council in May 2014. In the time since, IC³ has worked extensively with the Dean of Environment, UW Advancement, the VP of Research, Dr. Blair Feltmate, and a number of industry organizations to identify opportunities and develop innovative partnerships that will advance research and policy solutions for improving resiliency to extreme weather and climate change-related risk in Canada.

These discussions have come to fruition with two new industry-funded partnerships in early 2015. One of these partnerships has been finalized and it was announced on April 17, 2015 that the Co-operators and Farm Mutual Reinsurance Plan committed $1.1 million to a new applied research network called Partners for Action (P4A) that is based the University of Waterloo's Faculty of Environment and will work extensively with IC³.

A second partnership with a major Canadian insurance company is in final stages of development with a draft gift agreement currently under review by the Secretariat. If approved, the agreement would bring $4.25 million in industry funds to UW over 5 years.

Proposed Sub-Centre Addition:

The subject of this memorandum is to propose the addition of a sub-Centre to IC³ in order to facilitate the establishment of this second industry partnership, subject to final approval by UW and the industry partner (anticipated by end of June 2015). As part of IC³’s overall mission to advance research on climate change through an interdisciplinary approach, the new sub-Centre would be dedicated to advancing climate change adaptation (particularly business-led adaptation) in Canada. This will leverage and strengthen UW’s already deep research strength in the field of climate adaptation. Figure 1 illustrates the significant number of citations of IC³ members climate adaptation focused work in the recent United Nations Intergovernmental Panel on Climate Change assessment report.

Publicly, the sub-Centre will be referred to as the “[Company Name] Centre on Climate Adaptation”. The reporting structure and relationship between IC³ members and the added sub-Centre are outlined in Figure 2. This structure has been developed through close coordination with the Dean of Environment, the VP-Research, and Advancement.
**Figure 1:** Number of citations of IC3 Members’ work in each Working Group of the Intergovernmental Panel on Climate Change (IPCC) 5th Assessment Report (AR5)

**Figure 2:** Reporting Structure of the Interdisciplinary Centre on Climate Change and Sub-Centre on Climate Adaptation

* IC3 was renewed by Senate in June 2014 for a 5-year period ending May 2019
Senate Undergraduate Council met on 5 May 2015, and consider proposals for new plans, changes to academic plans, and plan inactivations. Council agreed to forward the following items to Senate for approval.

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

FOR APPROVAL

NEW ACADEMIC PLANS [effective 1 September 2016]

1. Motion: To approve the new computing technology option as presented.

A Computing Technology Option is available to all students, except those enrolled in Software Engineering, Computing and Financial Management, and other plans involving Computer Science. Certain plans already including substantial computer science content may also be excluded. See the page, “Bachelor of Computer Science and Bachelor of Mathematics Academic Plan Combinations” for more details about excluded plans.

One of
CS 115 Introduction to Computer Science 1
CS 135 Designing Functional Programs
CS 145 Designing Functional Programs (Advanced Level)

One of
CS 116 Introduction to Computer Science 2
CS 136 Elementary Algorithm Design and Data Abstraction
CS 146 Elementary Algorithm Design and Data Abstraction (Advanced Level)

One additional CS course from CS 100-146, 200-299, 300-398, 400-498.

Four additional courses from CS 200-299, 300-398, 400-498, COMM 432

One additional course from CS 300-398, 400-498

The average of all CS courses on the student’s record (including repeated courses) must be at least 60%. Students may not complete both the Computer Science minor and the Computing Technology option.

Notes:

1. Most courses in the range CS 240-299, 340-398, 440-498 are only available to CS majors, so upper-year CS courses taken toward this option will usually be in the range CS 200-239, 300-339, 400-439.

2. A common route into upper-year CS courses is to take all of CS 115, 116 and 136. All three of these courses may count toward this option.

3. Students cannot obtain both the CS minor and the Computing Technology option.

Rationale: This option will be more accessible to students outside the Faculty of Mathematics than the new computer science minor, and will have minimal mathematical requirements.
Renison University College
Certificate in English for Multilingual Speakers

2. **Motion:** To approve the new certificate in English for multilingual speakers as presented.

Students registered in degree programs at the University of Waterloo may pursue the Certificate in English for Multilingual Speakers.

Students must maintain a cumulative average of 70% in 1.5 academic course units (three courses) taken from the following list: EMLS 101R, EMLS 102R, EMLS 103R, EMLS 104R, EMLS 110R, EMLS 129R/ENGL 129R

**Rationale:** The certificate encourages students to pursue English language improvement throughout their degrees and is similar to other language certificate offerings. The requirement of 1.5 units facilitates attainment of the certificate for students studying in plans with few electives available.

English Language Studies, like other language departments, uses a note on each course to restrict advanced-level students from taking first-year courses. Because that restriction is listed in the note for each individual course, there is no need to include that restriction in this text.

**CHANGES TO ACADEMIC PLANS [effective 1 September 2016]**

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

  3. **Motion:** To amend classical studies plans as presented in [Attachment 1](#).

  **Rationale:** The Faculty of Arts has undertaken standardizing plan requirements for all BA academic plans within departments, as well as plan requirements between departments. For the Honours major, the collapsed text aims to simplify the navigation within the undergraduate calendar and to remove redundant text.

- **Faculty of Arts**
  
  **Drama and Speech Communication**

  4. **Motion:** To amend theatre and performance plans as presented in [Attachment 2](#).

  **Rationale:** See rationale for Motion #3.

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

  5. **Motion:** To amend legal studies plans as presented in [Attachment 3](#).

  **Rationale:** See rationale for Motion #3.

- **Faculty of Arts**
  
  **Philosophy**

  6. **Motion:** To amend philosophy plans as presented in [Attachment 4](#).

  **Rationale:** See rationale for Motion #3.
Faculty of Arts

Women’s Studies

7. **Motion:** To amend women’s studies plans as presented in Attachment 5.

**Rationale:** See rationale for Motion #3.

Faculty of Mathematics

Computer Science

8. **Motion:** To approve changes to the computer science minor as presented.

A “Computer Science Minor” is available to all Honours and four-year General students except in combination with Computer Science plans that are offered by the School of Computer Science (including shared Excluded plans include such as Software Engineering, Computing and Financial Management, and any joint plans involving Computer Science).

The Computer Science minor is generally not available to students outside the Faculty of Mathematics because it includes several restricted courses. Students inside the Faculty of Mathematics may need to register as a Computer Science major for one or more terms to complete the Computer Science minor.

Students are encouraged to consider the Computing Technology option as an alternative to the Computer Science minor. Students may not complete both the Computer Science minor and the Computing Technology option.

One of

MATH 103 Introductory Algebra for Arts and Social Science
MATH 106 Applied Linear Algebra 1
MATH 114 Linear Algebra for Science
MATH 115 Linear Algebra for Engineers
MATH 136 Linear Algebra 1 for Honours Mathematics
MATH 146 Linear Algebra 1 (Advanced Level)

One of

MATH 104 Introductory Calculus for Arts and Social Science
MATH 116 Calculus 1 for Engineering
MATH 117 Calculus 1 for Engineering
MATH 127 Calculus 1 for the Sciences
MATH 137 Calculus 1 for Honours Mathematics
MATH 147 Calculus 1 (Advanced Level)

One of

MATH 239 Introduction to Combinatorics
MATH 249 Introduction to Combinatorics (Advanced Level)

A minimum of eight CS courses including:

One of

CS 115 Introduction to Computer Science
CS 135 Designing Functional Programs
CS 145 Designing Functional Programs (Advanced Level)
One of
CS 116 Introduction to Computer Science 2
CS 136 Elementary Algorithm Design and Data Abstraction
CS 146 Elementary Algorithm Design and Data Abstraction (Advanced Level)

One additional course from CS 340-398, 440-498.

Five additional courses from CS 240-299, 340-398, 440-498.

Two of
CS 230 Introduction to Computers and Computer Systems
CS 234 Data Types and Structures
CS 246 Object-Oriented Software Development

Four additional CS courses numbered 200 or higher.
The average of all passed CS courses on the student’s record (including repeated courses) must be at least 60% and at most two CS courses may have failing grades.

Notes
1. Some CS courses are not available to students pursuing a CS minor. Consult individual course requisites for details.
2. CS 241 may be substituted for CS 230, and CS 240 may be substituted for CS 234. CS 240 and CS 241 are ordinarily only available to CS majors.

Rationale: The changes proposed will strengthen the minor by transforming the requirements into a more proper subset of the computer science major.

Renison University College
East Asian Studies

9. **Motion:** To approve changes to the East Asian studies minor as presented.
( strikethrough = deleted text; bold = new text)

Students enrolled in any degree program may pursue a minor designation in East Asian Studies.

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

- EASIA 201R
- four East Asian language courses (**2.0 units**) from CHINA, JAPAN, KOREA as follows (not in the student’s first language):
  - two 100-level and two 200-level courses from any one of CHINA, JAPAN or KOREA, or
  - two 100-level courses from any two of CHINA, JAPAN or KOREA
- three courses (**1.5 units**) from the following:
  - Social Sciences: one of EASIA 277R, EASIA 300R, EASIA 301R, GEOG 212, GEOG 215, PSCI 259, PSCI 358
  - one course from the balance of optional courses above or the following courses:
  - any EASIA course(s) (see Note)
  - GEOG 215

92
10. Motion: To approve changes to the diploma in East Asian studies as presented.

Note: Students taking EASIA 250R (1.0 unit) are required to complete only one additional plan elective (0.5 unit) from the last section.

Rationale: These changes regroup courses in a format similar to offerings in other departments and mitigate ambiguity in the existing plan.

Students enrolled in any non- or post-degree academic plan may pursue the Diploma in East Asian Studies.

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

- **EASIA 201R**
- four East Asian language courses (2.0 units) from CHINA, JAPAN, KOREA as follows (not in the student’s first language):
  - two 100-level and two 200-level courses from any one of CHINA, JAPAN or KOREA, or
  - two 100-level courses from any two of CHINA, JAPAN or KOREA
- three courses (1.5 units) from the following:
  - Social Sciences: one of EASIA 277R, EASIA 300R, EASIA 301R, GEOG 212, GEOG 215, PSCI 259, PSCI 358
  - one course from the balance of optional courses above or the following courses: EASIA 210R, EASIA 231R, EASIA 250R, EASIA 260R, EASIA 375R
  - any EASIA course(s) (see note)
  - GEOG 215
  - HIST 239
  - PSCI 259, PSCI 358, PSCI 479
  - RS 100, RS 204
  - SOC 250

Notes:
1. Course selection should be made only after consultation with the Director of East Asian Studies.
2. Students may petition the Director of East Asian Studies for permission to have a course not on the list accepted as an elective (e.g., HI 228 (see Laurier calendar), HI 307 (see Laurier calendar), etc.). This should happen before registration in the course is finalized. Please consult the Director for details.
Note: Students taking EASIA 250R (1.0 unit) are required to complete only one additional plan elective (0.5 unit) from the last section.

Rationale: See rationale from Motion #9.

ACADEMIC PLANS INACTIVATIONS [effective 1 September 2016]

► Faculty of Arts
   Classical Studies

11. Motion: To inactivate the classical studies diploma plan.

   Rationale: The classical studies and classical languages diplomas were originally created to provide recognition to non-degree students often completing their plan via distance education. Neither of the diplomas has been awarded for a minimum of nine years and the department no longer offers any distance education plans.

12. Motion: To inactivate the classical languages diploma plan.

   Rationale: See rationale for Motion 11.

► Faculty of Arts
   Drama and Speech Communication

13. Motion: To inactivate the three-year general drama plan.

   Rationale: In this three-year plan, students are excluded from the major capstone project which is not in keeping with the principle in the curriculum that practice and research are inseparable in the fields of theatre and performance. As well, drama students historically have rarely undertaken this plan.

14. Motion: To inactivate the four-year general drama plan.

   Rationale: The reduction of the honours major average to 70% renders this plan redundant, as all current students will be eligible for the revised honours plan.

Mario Coniglio
Associate Vice-President, Academic
1. PLAN STANDARDIZATION [for approval]

A. Department: Classical Studies

1. Academic Plan Changes [for approval]

Effective date: September 01, 2016

1.1 Three-Year General Classical Studies

Continuation in this academic plan requires a cumulative overall average of 60% and a cumulative Classical Studies major average of 65%.

Eligibility for graduation in the Three-Year General Classical Studies academic plan includes successful fulfillment completion of the following requirements:

1. Appropriate Program-level requirements. See Bachelor of Arts Degree Requirements.
2. Classical Studies Plan-level requirements:
   - a minimum Classical Studies major average of 65%
   - at least five six academic course units (ten 12 courses) in Classical Studies with a minimum cumulative average of 65%, including:
     - CLAS 251, CLAS 252
     - one of CLAS 231, CLAS 232
     - one of CLAS 241, CLAS 242
     - two CLAS, LAT, or GRK courses at the 300-level or above

Note
Knowledge of neither Latin nor Greek is required to obtain a General degree in Classical Studies. However, any LAT or GRK courses taken will be used to complete the Classical Studies plan-level requirements and will be used to calculate the Classical Studies major average.

1.2 Four-Year General Classical Studies

Continuation in this academic plan requires a cumulative overall average of 60% and a cumulative Classical Studies major average of 65%.

Eligibility for graduation in the Four-Year General Classical Studies academic plan includes successful fulfillment completion of the following requirements:

1. Appropriate Program-level requirements. See Bachelor of Arts Degree Requirements.
2. Classical Studies Plan-level requirements:
   - a minimum Classical Studies major average of 65%
   - at least seven eight academic course units (14 16 courses) in Classical Studies, including:
     - CLAS 251, CLAS 252
     - one of CLAS 231, CLAS 232
     - one of CLAS 241, CLAS 242
     - two CLAS, LAT, or GRK courses at the 300-level or above
     - two senior CLAS seminars (see Note 2)

Notes
1. Knowledge of neither Latin nor Greek is required to obtain a General degree in Classical Studies. However, any LAT or GRK courses taken will be used to complete the Classical Studies plan-level requirements and will be used to calculate the Classical Studies major average.

2. The senior seminar requirement is generally met by completing two regular senior seminars (CLAS 486), worth 0.5 unit each. In exceptional circumstances and with the prior approval of the Department, a student may write a Senior Honours Thesis, CLAS 490A/CLAS 490B worth 1.0 unit, or a student may combine one regular senior seminar (CLAS 486) with a directed study (CLAS 492).

1.3 Honours Classical Studies

Honours Classical Studies (Arts and Business Co-op and Regular)

Joint Honours Classical Studies

Honours Classics

Honours Classics (Arts and Business Co-op and Regular)

Joint Honours Classics

Motion: To amend the academic plan requirements for the Honours Classical Studies, the Honours Classical Studies (Arts and Business Co-op and Regular), and the Joint Honours Classical Studies plans, and to collapse the calendar text for each plan as described. To change the title of the Honours Classical Studies – Language Specialization major to Honours Classics, to amend its plan requirements, and to collapse the calendar text for each plan as described.

Honours Classical Studies

Continuation in this academic plan requires a cumulative average of 60% and a cumulative Classical Studies average of 75%.

Eligibility for graduation in the Honours Classical Studies or Honours Classical Studies – Languages Specialization academic plan includes successful fulfillment of the following requirements:

1. Appropriate Program-level requirements. See Bachelor of Arts Degree Requirements.

2. Classical Studies Plan-level requirements:

   In the Classical Studies academic plan, at least ten academic course units (20 courses) in Classical Studies with a minimum cumulative average of 75%, including:

   - CLAS 251, CLAS 252
   - one of CLAS 231, CLAS 232
   - one of CLAS 241, CLAS 242
   - two CLAS courses at the 300-level or above
   - GRK 101, GRK 102
   - LAT 101, LAT 102
   - four other courses in LAT and/or GRK, including one course at the 300-level
   - two senior seminars, or by permission, a senior honours thesis (see Note 2)

   In the Classical Studies – Languages Specialization academic plan, at least ten academic course units (20 courses) in Classical Studies with a minimum cumulative average of 75%, including:

   - CLAS 251, CLAS 252
   - one of CLAS 231, CLAS 232
   - one of CLAS 241, CLAS 242
   - two CLAS courses at the 300-level or above
   - GRK 101, GRK 102, GRK 201, GRK 202
   - LAT 101, LAT 102, LAT 201, LAT 202
• four other courses in LAT and/or GRK, including one course at the 400-level
• two senior seminars, or by permission, a senior honours thesis (see Note 2)

Notes
1. Students considering graduate work are strongly encouraged to pursue more than the minimum number of language courses; the Languages Specialization option is a good choice for those intending to pursue their studies beyond the Bachelor of Arts level. All students in Classical Studies may take more Latin and Greek courses than the prescribed minimums. The decision whether to graduate in Classical Studies or in Classical Studies - Languages Specialization may be left until registration in the final year.
2. A central requirement for all Honours degrees in Classical Studies is that of one unit worth of senior-level work. This senior requirement may be met in one of the following ways, and a grade of 72% or higher must be achieved:
   - Two regular senior seminars (CLAS 486), worth 0.5 unit each.
   - With the prior approval of the Department, a student may write a Senior Honours Thesis, CLAS 490A/CLAS 490B, worth 1.0 unit.
   - Under exceptional circumstances, and only with the prior approval of the Department, a student may combine one regular senior seminar with 0.5 unit worth of Directed Study work (see CLAS 492).

Honours Classical Studies (Arts and Business Co-op and Regular)

Students may combine the Honours Classical Studies academic plan with Arts and Business.

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

Eligibility for graduation in the Honours Classical Studies (Arts and Business Co-op and Regular) or Honours Classical Studies – Languages Specialization (Arts and Business Co-op and Regular) academic plan includes successful fulfillment of the following requirements:

1. Appropriate Program-level requirements. See Bachelor of Arts Degree Requirements.
2. Classical Studies Plan-level requirements:
   - In the Classical Studies academic plan, at least eight academic course units (16 courses) in Classical Studies with a minimum cumulative average of 75%, including:
     • CLAS 251, CLAS 252
     • one of CLAS 231, CLAS 232
     • one of CLAS 241, CLAS 242
     • two CLAS courses at the 300-level or above
     • GRK 101, GRK 102
     • LAT 101, LAT 102
     • two other courses in LAT and/or GRK
     • two senior seminars, or by permission, a senior honours thesis (see Note 2)
   - In the Classical Studies – Languages Specialization academic plan, at least eight academic course units (16 courses) in Classical Studies with a minimum cumulative average of 75%, including:
     • CLAS 251, CLAS 252
     • one of CLAS 231, CLAS 232
     • one of CLAS 241, CLAS 242
     • two CLAS courses at the 300-level or above
     • GRK 101, GRK 102
     • LAT 101, LAT 102
four other courses in LAT and/or GRK, including one course at the 300-level
• two senior seminars, or by permission, a senior honours thesis (see Note 2)

Notes
1.—Students considering graduate work are strongly encouraged to pursue more than the minimum number of language courses; the Languages Specialization option is a good choice for those intending to pursue their studies beyond the Bachelor of Arts level. All students in Classical Studies may take more Latin and Greek courses than the prescribed minimums. The decision whether to graduate in Classical Studies or in Classical Studies - Languages Specialization may be left until registration in the final year.

2.—A central requirement for all Honours degrees in Classical Studies is that of one unit worth of senior-level work. This senior requirement may be met in one of the following ways, and a grade of 72% or higher must be achieved:
   o Two regular senior seminars (CLAS 486), worth 0.5 unit each.
   o With the prior approval of the Department, a student may write a Senior Honours Thesis, CLAS 490A/CLAS 490B, worth 1.0 unit.
   o Under exceptional circumstances, and only with the prior approval of the Department, a student may combine one regular senior seminar with 0.5 unit worth of Directed Study work (see CLAS 492).

Joint Honours Classical Studies
A Joint Honours academic plan with Classical Studies may be taken in combination with most Arts disciplines in which an Honours academic plan is offered or with many Honours majors in other faculties.

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

Eligibility for graduation in the Honours Classical Studies or Honours Classical Studies – Languages academic plan includes successful fulfillment of the following requirements:

1.—Appropriate Program-level requirements for the Home Faculty, including at least 20 academic course units (40 courses). If the Home Faculty is Arts, see Bachelor of Arts Degree Requirements.
2.—Classical Studies Plan-level requirements:
   o In the Classical Studies academic plan, at least eight academic course units (16 courses) in Classical Studies with a minimum cumulative average of 75%, including:
     • CLAS 251, CLAS 252
     • one of CLAS 231, CLAS 232
     • one of CLAS 241, CLAS 242
     • two CLAS courses at the 300-level or above
     • GRK 101, GRK 102
     • LAT 101, LAT 102
     • two other courses in LAT and/or GRK
     • two senior seminars, or by permission, a senior honours thesis (see Note 2), or a senior honours thesis in the other discipline
   o In the Classical Studies – Languages Specialization academic plan, at least eight academic course units (16 courses) in Classical Studies with a minimum cumulative average of 75%, including:
     • CLAS 251, CLAS 252
     • one of CLAS 231, CLAS 232
Notes

1. Students considering graduate work are strongly encouraged to pursue more than the minimum number of language courses; the Languages Specialization option is a good choice for those intending to pursue their studies beyond the Bachelor of Arts level. All students in Classical Studies may take more Latin and Greek courses than the prescribed minimums. The decision whether to graduate in Classical Studies or in Classical Studies - Languages Specialization may be left until registration in the final year.

2. A central requirement for all Honours degrees in Classical Studies is that of one unit worth of senior-level work. This senior requirement may be met in one of the following ways, and a grade of 72% or higher must be achieved:
   - Two regular senior seminars (CLAS 486), worth 0.5 unit each.
   - With the prior approval of the Department, a student may write a Senior Honours Thesis, CLAS 490A/CLAS 490B worth 1.0 unit.
   - Under exceptional circumstances, and only with the prior approval of the Department, a student may combine one regular senior seminar with 0.5 unit worth of Directed Study work (see CLAS 492).

3. Joint Honours students are reminded that whether they choose to do CLAS 486 or an Honours Thesis in the other discipline as their senior requirement, they must still take a total of eight academic course units in the Classical Studies Department.

Honours Classical Studies

Continuation in this academic plan requires a cumulative overall average of 60% and a cumulative Classical Studies major average of 70%.

Eligibility for graduation in the Honours Classical Studies academic plan includes successful completion of the following requirements:

1. Appropriate Program-level requirements. See Bachelor of Arts Degree Requirements.
2. Classical Studies Plan-level requirements:
   - a minimum Classical Studies major average of 70%
   - at least eight academic course units (16 courses) in Classical Studies, including:
     - CLAS 251, CLAS 252
     - one of CLAS 231, CLAS 232
     - one of CLAS 241, CLAS 242
     - two CLAS, LAT, or GRK courses at the 300-level or above
     - two senior CLAS seminars (see Note 2)

Arts and Business (Co-op and Regular)

Students may combine the Honours Classical Studies academic plan with Arts and Business. In addition to the Honours Classical Studies requirements, students must also complete the Arts and Business requirements.
Joint Honours

Honours Classical Studies may be taken in combination with most Arts disciplines in which an Honours academic plan is offered or with many Honours majors in other faculties. For further information, see the Joint Honours section of Available Arts Academic Plans.

Joint Honours students are reminded that whether they choose to do CLAS 486 or an Honours Thesis in the other discipline as their senior requirement, they must still take a total of eight academic course units in the Department of Classical Studies.

Notes

1. Knowledge of neither Latin nor Greek is required to obtain a degree in Classical Studies. However, any LAT or GRK courses taken will be used to complete the Classical Studies plan-level requirements and will be used to calculate the Classical Studies major average.

2. The senior seminar requirement is generally met by completing two regular senior seminars (CLAS 486), worth 0.5 unit each. In exceptional circumstances and with the prior approval of the Department, a student may write a Senior Honours Thesis, CLAS 490A/CLAS 490B worth 1.0 unit, or a student may combine one regular senior seminar (CLAS 486) with a directed study (CLAS 492).

3. Students considering graduate work are strongly encouraged to complete as many language courses as possible. Admittance to and funding for graduate programs is dependent upon competency in Latin and Greek.

Honours Classics

Continuation in this academic plan requires a cumulative overall average of 60% and a cumulative Classics major average of 70%.

Eligibility for graduation in the Honours Classics academic plan includes successful completion of the following requirements:

1. Appropriate Program-level requirements. See Bachelor of Arts Degree Requirements.

2. Classics Plan-level requirements:
   - a minimum Classics major average of 70%
   - at least eight academic course units (16 courses) in CLAS, GRK, and LAT, including:
     - CLAS 251, CLAS 252
     - one of CLAS 231, CLAS 232
     - one of CLAS 241, CLAS 242
     - GRK 101, GRK 102
     - LAT 101, LAT 102
     - four additional LAT and/or GRK courses, including one at the 300-level
     - two CLAS, LAT, or GRK courses at the 300-level or above
     - two senior CLAS seminars (see Note 2)

Arts and Business (Co-op and Regular)

Students may combine the Honours Classics academic plan with Arts and Business. In addition to the Honours Classics requirements, students must also complete the Arts and Business requirements.

Joint Honours

Honours Classics may be taken in combination with most Arts disciplines in which an Honours academic plan is offered or with many Honours majors in other faculties. For further information, see the Joint Honours section of Available Arts Academic Plans.
Joint Honours students are reminded that whether they choose to do CLAS 486 or an Honours Thesis in the other discipline as their senior requirement, they must still take a total of eight academic course units in the Department of Classical Studies.

Notes

1. All LAT or GRK courses taken will be used to calculate the Classics major average.
2. The senior seminar requirement is generally met by completing two regular senior seminars (CLAS 486), worth 0.5 unit each. In exceptional circumstances and with the prior approval of the Department, a student may write a Senior Honours Thesis, CLAS 490A/CLAS 490B worth 1.0 unit, or a student may combine one regular senior seminar (CLAS 486) with a directed study (CLAS 492).
3. Students considering graduate work are strongly encouraged to complete as many Latin and Greek language courses as possible. Admittance to and funding for graduate programs is dependent on competency in Latin and Greek.

Rationale: The Faculty of Arts has undertaken standardizing plan requirements for all BA academic plans within departments, as well as plan requirements between departments. For the Honours major, the collapsed text aims to simplify the navigation within the UG Calendar and to remove redundant text.

The changes demonstrated in motions 1.1 to 1.3 are a result of applying the previously approved BA templates to the Classical Studies major plans. Changes of particular note:

- **Three-Year General:** Increase of the major course requirements from 10 to 12.
- **Four-Year General:**
  - Increase of the major course requirements from 14 to 16.
  - Changes to the course requirements to be identical to the Honours Classical Studies plan.
- **Honours Classical Studies:**
  - Reduction of the major average from 75% to 70%.
  - Decrease of the major course requirement from 20 to 16.
  - Deletion of Greek and Latin course requirements. The creation of an Honours plan that does not require language study fulfills one of the directions of our recent program review. It likewise aligns our plans with other university plans. It is standard within our discipline to designate majors/plans that do not require language study as Classical Studies.
  - Deletion of the requirement that a 72% average be achieved in the two CLAS 486 courses.
- **Honours Classical Studies – Language Specialization**
  - Renamed to Honours Classics; it is standard within our discipline to designate majors/plans that do require language study as Classics. All existing Language Specialization students will be moved into the plan known as Classics.
  - Reduction of the major average from 75% to 70%.
  - Decrease of the major course requirement from 20 to 16.
  - Reduction in number of the required Latin and Greek courses.
  - Deletion of the requirement that a 72% average be achieved in the two CLAS 486 courses.
B. Department: Drama and Speech Communication (Drama)

1. Academic Plan Changes [for approval]

Effective date: September 01, 2016

1.1 Honours Theatre and Performance

Honours Theatre and Performance (Arts and Business Co-op and Regular)

Joint Honours Theatre and Performance

Motion: To change the name of the Honours Drama plans to Honours Theatre and Performance, to amend the academic plan requirements for the Honours Theatre and Performance, the Honours Theatre and Performance (Arts and Business Co-op and Regular), and the Joint Honours Theatre and Performance plans, and to collapse the calendar text for each plan as described.

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

Eligibility for graduation in the Honours Drama academic plan includes successful fulfillment of the following requirements:
1. Appropriate Program-level requirements. See Bachelor of Arts Degree Requirements.
2. Drama Plan-level requirements:
   - at least eight academic course units (16 courses) in Drama with a minimum cumulative average of 75%, including:
     • DRAMA 100, DRAMA 102/SPCOM 102, DRAMA 200, DRAMA 243, DRAMA 244, DRAMA 300, DRAMA 301
     • one of DRAMA 400 or DRAMA 410

Honours Drama (Arts and Business Co-op and Regular)

Students may combine the Honours Drama academic plan with Arts and Business.

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

Eligibility for graduation in the Honours Drama (Arts and Business Co-op and Regular) academic plan includes successful fulfillment of the following requirements:
1. Appropriate Program-level requirements. See Bachelor of Arts Degree Requirements.
2. Drama Plan-level requirements:
   - at least eight academic course units (16 courses) in Drama with a minimum cumulative average of 75%, including:
     • DRAMA 100, DRAMA 102/SPCOM 102, DRAMA 200, DRAMA 243, DRAMA 244, DRAMA 300, DRAMA 301
     • one of DRAMA 400 or DRAMA 410
3. Arts and Business requirements.

Joint Honours Drama

A Joint Honours academic plan with Drama may be taken in combination with most Arts disciplines in which an Honours academic plan is offered or with many Honours majors in other faculties.
Continuation in this academic plan requires a cumulative overall average of 60% and a cumulative Drama average of 75%.

Eligibility for graduation in the Joint Honours Drama academic plan includes successful fulfillment of the following requirements:

1. Appropriate Program-level requirements for the Home Faculty, including at least 20 academic course units (40 courses). If the Home Faculty is Arts, see Bachelor of Arts Degree Requirements.
2. Drama Plan-level requirements:
   o at least eight academic course units (16 courses) in Drama with a minimum cumulative average of 75%, including:
     • DRAMA 100, DRAMA 102/SPCOM 102, DRAMA 200, DRAMA 243, DRAMA 244, DRAMA 300, DRAMA 301
     • one of DRAMA 400 or DRAMA 410
3. Plan-level requirements for the second major.

Honours Theatre and Performance
Continuation in this academic plan requires a cumulative overall average of 60% and a cumulative Theatre and Performance major average of 70%.

Eligibility for graduation in the Honours Theatre and Performance academic plan includes successful completion of the following requirements:

1. Appropriate Program-level requirements. See Bachelor of Arts Degree Requirements.
2. Theatre and Performance Plan-level requirements:
   o a minimum Theatre and Performance major average of 70%
   o at least eight academic course units (16 courses) in Drama, including:
     • DRAMA 100, DRAMA 102/SPCOM 102, DRAMA 200, DRAMA 243, DRAMA 244, DRAMA 300, DRAMA 301
     • DRAMA 400 or DRAMA 410

Arts and Business (Co-op and Regular)
Students may combine the Honours Theatre and Performance academic plan with Arts and Business. In addition to the Honours Theatre and Performance requirements, students must also complete the Arts and Business requirements.

Joint Honours
Honours Theatre and Performance may be taken in combination with most Arts disciplines in which an Honours academic plan is offered or with many Honours majors in other faculties. For further information, see the Joint Honours section of Available Arts Academic Plans.

1.2 Theatre and Performance Minor
Students enrolled in any degree program may pursue a minor designation in Drama Theatre and Performance.

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

• DRAMA 100, DRAMA 102/SPCOM 102, DRAMA 200, DRAMA 243
Rationale: The Faculty of Arts has undertaken standardizing plan requirements for all BA academic plans within departments, as well as plan requirements between departments. For the Honours major, the collapsed text aims to simplify the navigation within the UG Calendar and to remove redundant text.

The changes demonstrated in motion 1.1 are a result of applying the previously approved BA templates to the former Drama major plans. Changes of particular note:

- Honours: Reduction of the major average from 75% to 70%.

Motions 1.1 and 1.2 are also a result of the plan title change from Drama to Theatre and Performance. All existing Drama students who are still enrolled by the time the plan title change effect will be moved into the new plan and will graduate with a Bachelor of Arts in Theatre and Performance. The last opportunity to graduate with a major in Drama would be the Fall 2016 convocation.

The plan title change from Drama to Theatre and Performance communicates the focus of the program’s new curriculum, which was previously approved and will be implemented in Fall 2015. In particular, the curriculum has moved from a content-based model emphasizing the survey of dramatic literature (which was well represented by the title Drama) to a concepts and competencies-based model that emphasizes theoretical and methodological approaches drawn from performance studies as well as from theatre, including practice as research, critical race theory, critical gender theory, and mediated performance.
**C. Department: Sociology and Legal Studies (Legal Studies)**

1. **Academic Plan Changes [for approval]**
   **Effective date:** September 01, 2016

1.1 **Four-Year General Legal Studies**

Continuation in this academic plan requires a cumulative overall average of 60% and a cumulative Legal Studies major average of 70%.

Eligibility for graduation in the Four-Year General Legal Studies academic plan includes successful fulfillment of the following requirements:

1. Appropriate Program-level requirements. See Bachelor of Arts Degree Requirements.
2. Legal Studies Plan-level requirements:
   - a minimum Legal Studies major average of 65%
   - at least eight academic course units (16 courses) in Legal Studies approved courses with a minimum cumulative average of 70%, including:
     - LS 101, LS 221, LS 300, LS 322
     - SOC 101/SOC 101R
     - LS 280 or LS 322
     - five additional LS courses at the 200-level
     - four additional LS courses at the 300-level
     - four LS courses at the 400-level; or LS 401, LS 402, and two additional LS courses at the 400-level

Notes
1. Three of the courses required to complete the degree must be Legal Studies courses that are cross-listed with other disciplines.
2. The three cross-listed courses must be from different disciplines.

1.2 **Honours Legal Studies**

**Honours Legal Studies (Arts and Business Co-op and Regular)**

Honours Legal Studies

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

Eligibility for graduation in the Honours Legal Studies academic plan includes successful fulfillment of the following requirements:

1. Appropriate Program-level requirements. See Bachelor of Arts Degree Requirements.
2. Legal Studies Plan-level requirements:
   - at least eight academic course units (16 courses) in Legal Studies approved courses with a minimum cumulative average of 75%, including:
     - LS 101, LS 221, LS 280, LS 300, LS 322, LS 401, LS 402
     - SOC 101/SOC 101R
     - three additional LS courses at the 200-level

Motion: To amend the academic plan requirements for the Honours Legal Studies, the Honours Legal Studies (Arts and Business Co-op and Regular), and the Joint Honours Legal Studies plans, and to collapse the calendar text for each plan as described.

**Honours Legal Studies**

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

Eligibility for graduation in the Honours Legal Studies academic plan includes successful fulfillment of the following requirements:

1. Appropriate Program-level requirements. See Bachelor of Arts Degree Requirements.
2. Legal Studies Plan-level requirements:
   - at least eight academic course units (16 courses) in Legal Studies approved courses with a minimum cumulative average of 75%, including:
     - LS 101, LS 221, LS 280, LS 300, LS 322, LS 401, LS 402
     - SOC 101/SOC 101R
     - three additional LS courses at the 200-level
• three additional LS courses at the 300-level
• two additional LS courses at the 400-level.

Notes
1. Three of the courses required to complete the degree must be Legal Studies courses that are cross-listed with other disciplines.
2. The three cross-listed courses must be from different disciplines.

Honours Legal Studies (Arts and Business Co-op and Regular)
Students may combine the Honours Legal Studies academic plan with Arts and Business.

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

Eligibility for graduation in the Honours Legal Studies (Arts and Business Co-op and Regular) academic plan includes successful fulfillment of the following requirements:
1. Appropriate Program-level requirements. See Bachelor of Arts Degree Requirements.
2. Legal Studies Plan-level requirements:
   o at least eight academic course units (16 courses) in Legal Studies approved courses with a minimum cumulative average of 75%, including:
     • LS 101, LS 221, LS 280, LS 300, LS 322, LS 401, LS 402
     • SOC 101/SOC 101R
     • three additional LS courses at the 200-level
     • three additional LS courses at the 300-level
     • two additional LS courses at the 400-level
3. Arts and Business requirements.

Notes
1. Three of the courses required to complete the degree must be Legal Studies courses that are cross-listed with other disciplines.
2. The three cross-listed courses must be from different disciplines.

Joint Honours Legal Studies
A Joint Honours academic plan with Legal Studies may be taken in combination with most Arts disciplines in which an Honours academic plan is offered or with many Honours majors in other faculties.

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

Eligibility for graduation in the Joint Honours Legal Studies academic plan includes successful fulfillment of the following requirements:
1. Appropriate Program-level requirements for the Home Faculty, including at least 20 academic course units (40 courses). If the Home Faculty is Arts, see Bachelor of Arts Degree Requirements.
2. Legal Studies Plan-level requirements:
   o at least eight academic course units (16 courses) in Legal Studies with a minimum cumulative average of 75%, including:
     • LS 101, LS 221, LS 280, LS 300, LS 322, LS 401, LS 402
     • SOC 101/SOC 101R
     • three additional LS courses at the 200-level
     • three additional LS courses at the 300-level
two additional LS courses at the 400-level
3. Plan-level requirements for the second major.

Notes
1. Three of the courses required to complete the degree must be Legal Studies courses that are cross-listed with other disciplines.
2. The three cross-listed courses must be from different disciplines.

Honours Legal Studies
Continuation in this academic plan requires a cumulative overall average of 60% and a cumulative Legal Studies major average of 70%.

Eligibility for graduation in the Honours Legal Studies academic plan includes successful completion of the following requirements:

1. Appropriate Program-level requirements. See Bachelor of Arts Degree Requirements.
2. Legal Studies Plan-level requirements:
   o a minimum Legal Studies major average of 70%
   o at least eight academic course units (16 courses) in Legal Studies courses, including:
     ▪ LS 101, LS 221, LS 300, LS 322
     ▪ SOC 101
     ▪ four additional LS courses at the 200-level
     ▪ three additional LS courses at the 300-level
     ▪ LS 401, LS 402, and two additional LS courses at the 400-level; or four LS courses at the 400-level

Arts and Business (Co-op and Regular)
Students may combine the Honours Legal Studies academic plan with Arts and Business. In addition to the Honours Legal Studies requirements, students must also complete the Arts and Business requirements.

Joint Honours
Honours Legal Studies may be taken in combination with most Arts disciplines in which an Honours academic plan is offered or with many Honours majors in other faculties. For further information, see the Joint Honours section of Available Arts Academic Plans.

Notes
1. Three of the courses required to complete the degree must be Legal Studies courses that are cross-listed with other disciplines.
2. The three cross-listed courses must be from different disciplines.

1.3 Legal Studies Minor
Students enrolled in any degree program may pursue a minor designation in Legal Studies.

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

- LS 101
- SOC 101/SOC 101R
- three LS courses at the 200-level
- three LS courses at the 300-level
Notes

1. Three of the courses required to complete the minor must be Legal Studies courses that are cross-listed with other disciplines.
2. The three cross-listed courses must be from different disciplines.

Rationale: The Faculty of Arts has undertaken standardizing plan requirements for all BA academic plans within departments, as well as plan requirements between departments. For the Honours major, the collapsed text aims to simplify the navigation within the UG Calendar and to remove redundant text.

The changes demonstrated in motions 1.1 to 1.2 are a result of applying the previously approved BA templates to the Legal Studies major plans. Changes of particular note:

- Four-Year General:
  - Reduction of the major average from 70% to 65%
  - Changes to the course requirements to be identical to the Honours plan
- Honours: Reduction of the major average from 75% to 70%.

In addition LS 280/SOC 280 – Social Statistics – has been removed from the major plans as it is no longer a required course. This change is in response to a recommendation from the external reviewers of the program in 2014.

SOC 101R is being removed from the Legal Studies academic plans. Its removal is consistent with the Department of Sociology and Legal Studies’ goal of providing clarity to our students regarding which course they should be taking. Although SOC 101 and 101R are still cross-listed, cross-listings of courses will not be listed in the legal studies plans.
D. Department: Philosophy

1. Academic Plan Changes [for approval]
   Effective date: September 01, 2016

1.1 Three-Year General Philosophy
Continuation in this academic plan requires a cumulative overall average of 60% and a cumulative Philosophy major average of 65%.

Eligibility for graduation in the Three-Year General Philosophy academic plan includes successful fulfillment completion of the following requirements:
1. Appropriate Program-level requirements. See Bachelor of Arts Degree Requirements.
2. Philosophy Plan-level requirements:
   o a minimum Philosophy major average of 65%
   o at least five six academic course units (ten 12 courses) in Philosophy with a minimum cumulative average of 65%, including:
     ▪ PHIL 221, PHIL 240, PHIL 251
       ▪ St. Jerome's students may take PHIL 218J instead of PHIL 221
     ▪ one of PHIL 145, PHIL 216, PHIL 240, PHIL 341, PHIL 342, PHIL 416, PHIL 441
     ▪ St. Jerome's students may take 200J instead of the above
     ▪ two of PHIL 250A, PHIL 250B, PHIL 380, PHIL 382, PHIL 384, PHIL 386, PHIL 403, PHIL 404, PHIL 405, PHIL 407, PHIL 408
     ▪ PHIL 283 or PHIL 284
     ▪ three PHIL courses at the 300- or 400-level

Note: Students may use no more than three PHIL courses at the 100-level to fulfill the Philosophy plan requirements.

1.2 Four-Year General Philosophy
Continuation in this academic plan requires a cumulative overall average of 60% and a cumulative Philosophy major average of 68% 65%.

Eligibility for graduation in the Four-Year General Philosophy academic plan includes successful fulfillment completion of the following requirements:
1. Appropriate Program-level requirements. See Bachelor of Arts Degree Requirements.
2. Philosophy Plan-level requirements:
   o a minimum Philosophy major average of 65%
   o at least seven eight academic course units (14 16 courses) in Philosophy with a minimum cumulative average of 68%, including:
     ▪ PHIL 221, PHIL 240, PHIL 251
       ▪ St. Jerome's students may take PHIL 218J instead of PHIL 221
     ▪ one of PHIL 145, PHIL 216, PHIL 240, PHIL 341, PHIL 342, PHIL 416, PHIL 441
     ▪ St. Jerome's students may take 200J instead of the above
     ▪ two of PHIL 250A, PHIL 250B, PHIL 380, PHIL 382, PHIL 384, PHIL 386, PHIL 403, PHIL 404, PHIL 405, PHIL 407, PHIL 408
     ▪ PHIL 283 or PHIL 284
     ▪ six PHIL courses at the 300- or 400-level, three of which must be at the 400-level
       ▪ St. Jerome’s students must take PHIL 450J if available (consult St. Jerome’s Department Chair for details)

Note: Students may use no more than three PHIL courses at the 100-level to fulfill the Philosophy plan requirements.
1.3 Honours Philosophy  
Honours Philosophy (Arts and Business Co-op and Regular)  
Joint Honours Philosophy

Motion: To amend the academic plan requirements for the Honours Philosophy, the Honours Philosophy (Arts and Business Co-op and Regular), and the Joint Honours Philosophy plans, and to collapse the calendar text for each plan as described.

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

Eligibility for graduation in the Honours Philosophy academic plan includes successful fulfillment of the following requirements:
1. Appropriate Program-level requirements. See Bachelor of Arts Degree Requirements.
2. Philosophy Plan-level requirements:
   — at least nine academic course units (18 courses) in Philosophy with a minimum cumulative average of 75%, including:
     • PHIL 221, PHIL 240, PHIL 250A, PHIL 250B
     • St. Jerome’s students may take PHIL 218J instead of PHIL 221
     • one of PHIL 216, PHIL 341, PHIL 342, PHIL 416, PHIL 441
     • St. Jerome’s students may take PHIL 200J instead of the above
     • one of PHIL 324, PHIL 328, PHIL 329, PHIL 420, PHIL 422
     • three from lists (a) and (b) below with at least one from each of (a) and (b):
       (a) PHIL 255, PHIL 256, PHIL 355, PHIL 359, PHIL 363, PHIL 455, PHIL 463
       (b) PHIL 258, PHIL 350, PHIL 447, PHIL 452, PHIL 458, PHIL 459
     • one of PHIL 380, PHIL 382, PHIL 384, PHIL 386, PHIL 403, PHIL 404, PHIL 405, PHIL 407, PHIL 408
     • six PHIL courses at the 300-level or 400-level, including at least three at the 400-level
     • St. Jerome’s students must take PHIL 450J if available (consult St. Jerome’s Department Chair for details)

Honours Philosophy (Arts and Business Co-op and Regular)
Students may combine the Honours Philosophy academic plan with Arts and Business.

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

Eligibility for graduation in the Honours Philosophy (Arts and Business Co-op and Regular) academic plan includes successful fulfillment of the following requirements:
1. Appropriate Program-level requirements. See Bachelor of Arts Degree Requirements.
2. Philosophy Plan-level requirements:
   — at least eight academic course units (16 courses) in Philosophy with a minimum cumulative average of 75%, including:
     • PHIL 221, PHIL 240, PHIL 250A, PHIL 250B
     • St. Jerome’s students may take PHIL 218J instead of PHIL 221
     • one of PHIL 216, PHIL 341, PHIL 342, PHIL 416, PHIL 441
     • St. Jerome’s students may take PHIL 200J instead of the above
     • one of PHIL 324, PHIL 328, PHIL 329, PHIL 420, PHIL 422
• three from lists (a) and (b) below with at least one from each of (a) and (b):
  (a) PHIL 255, PHIL 256, PHIL 355, PHIL 359, PHIL 363, PHIL 455, PHIL 463
  (b) PHIL 258, PHIL 350, PHIL 447, PHIL 452, PHIL 458, PHIL 459
• one of PHIL 380, PHIL 382, PHIL 384, PHIL 386, PHIL 403, PHIL 404, PHIL 405, PHIL 407, PHIL 408
• six PHIL courses at the 300-level or 400-level, including at least three at the 400-level
  • St. Jerome's students must take PHIL 450J if available (consult St. Jerome's Department Chair for details)

3. Arts and Business requirements.

**Joint Honours Philosophy**

A Joint Honours academic plan with Philosophy may be taken in combination with most Arts disciplines in which an Honours academic plan is offered, or with many Honours majors in other faculties.

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

Eligibility for graduation in the Joint Honours Philosophy academic plan includes successful fulfillment of the following requirements:

1. Appropriate Program-level requirements for the Home Faculty, including at least 20 academic course units (40 courses). If the Home Faculty is Arts, see Bachelor of Arts Degree Requirements. Note: In practice, depending on the number of units required by the second discipline (e.g., overall and for the major) and the number of electives that students choose to take, more than 20 academic course units may be necessary for graduation.

2. Philosophy Plan-level requirements:

   • at least seven academic course units (14 courses) in Philosophy with a minimum cumulative average of 75%, including:
     • PHIL 221, PHIL 240, PHIL 250A, PHIL 250B
     • St. Jerome's students may take PHIL 218J instead of PHIL 221
     • one of PHIL 216, PHIL 341, PHIL 342, PHIL 416, PHIL 441
     • St. Jerome's students may take PHIL 200J instead of the above
     • one of PHIL 324, PHIL 328, PHIL 329, PHIL 420, PHIL 422
     • one course from list (a) and one course from list (b) below:
       (a) PHIL 255, PHIL 256, PHIL 355, PHIL 359, PHIL 363, PHIL 455, PHIL 463
       (b) PHIL 258, PHIL 350, PHIL 447, PHIL 452, PHIL 458, PHIL 459
     • one of PHIL 380, PHIL 382, PHIL 384, PHIL 386, PHIL 403, PHIL 404, PHIL 405, PHIL 407, PHIL 408
     • two PHIL courses at the 400-level
       • St. Jerome's students must take PHIL 450J, if available (consult St. Jerome's Department Chair for details.)

3. Plan-level requirements for the second major.

**Honours Philosophy**

Continuation in this academic plan requires a cumulative overall average of 60% and a cumulative Philosophy major average of 70%.

Eligibility for graduation in the Honours Philosophy academic plan includes successful completion of the following requirements:

1. Appropriate Program-level requirements. See Bachelor of Arts Degree Requirements.
2. Philosophy Plan-level requirements:
   - a minimum Philosophy major average of 70%
   - at least eight academic course units (16 courses) in Philosophy, including:
     - PHIL 221, PHIL 240, PHIL 251
     - St. Jerome’s students may take PHIL 218J instead of PHIL 221
     - PHIL 283 or PHIL 284
     - Six PHIL courses at the 300- or 400-level, three of which must be at the 400-level
       - St. Jerome’s students must take PHIL 450J if available (consult St. Jerome’s Department Chair for details)

   Note: Students may use no more than three PHIL courses at the 100-level to fulfill the Philosophy plan requirements.

   **Arts and Business (Co-op and Regular)**
   Students may combine the Honours Philosophy academic plan with Arts and Business. In addition to the Honours Philosophy requirements, students must also complete the Arts and Business requirements.

   **Joint Honours**
   Honours Philosophy may be taken in combination with most Arts disciplines in which an Honours academic plan is offered or with many Honours majors in other faculties. For further information, see the Joint Honours section of Available Arts Academic Plans.

   **Rationale:** The Faculty of Arts has undertaken standardizing plan requirements for all BA academic plans within departments, as well as plan requirements between departments. For the Honours major, the collapsed text aims to simplify the navigation within the UG Calendar and to remove redundant text.

   The changes demonstrated in motions 1.1 to 1.3 are a result of applying the previously approved BA templates to the Philosophy major plans. The Department of Philosophy has used the plan standardization process to overhaul our major plan requirements. The new plan requirements ensure students acquire a common core of basic philosophical knowledge and skill at the second-year level (with required courses in each of four major areas of the discipline: logic, moral philosophy, metaphysics and epistemology, and the history of philosophy), and that students will satisfy the University Degree Level Expectations. Otherwise, however, our new plan requirements recognize that philosophy is a diverse discipline, and so provide our students with considerably more flexibility in completing their Philosophy major. These changes make it more straightforward for interested students to understand, and complete, the major requirements, while giving the Department greater flexibility in offering classes that satisfy student interest. The small core of required courses also makes it much easier for the department to offer the core courses more frequently, and so makes the combination of Philosophy with Arts and Business Co-op a more viable option for students. Changes of particular note:

   - Three-Year General: Increase of the major course requirements from 10 to 12.
   - Four-Year General:
     - Reduction of the major average from 68% to 65%
     - Changes to the course requirements to be identical to the Honours plan
   - Honours: Reduction of the major average from 75% to 70%.
   - All plans:
     - A required core curriculum of four courses at the 200-level, common to all major plans.
     - The removal of long lists of classes that satisfy distinct requirements.
     - The addition of a new required course (PHIL 251).
     - The renumbering of 2 required courses (PHIL 283 and PHIL 284)
     - Additional level requirements for the Three-Year General plan.
E. Department: Dean of Arts (Women’s Studies)

1. Academic Plan Changes [for approval]
Effective date: September 01, 2016

1.1 Three-Year General Women’s Studies
Continuation in this academic plan requires a cumulative overall average of 60% and a cumulative Women’s Studies major average of 65% in Women’s Studies required and approved courses.

Eligibility for graduation in the Three-Year General Women’s Studies academic plan includes successful fulfillment completion of the following requirements:
1. Appropriate Program-level requirements. See Bachelor of Arts Degree Requirements.
2. Women’s Studies Plan-level requirements:
   o a minimum Women’s Studies major average of 65%
   o at least seven academic course units (12 courses) in WS and Women’s Studies approved courses with a minimum cumulative average of 65%, including:
     ▪ WS 101, WS 102, WS 201, WS 202, WS 302, WS 306/REC 306
     ▪ two of WS 205, WS 206/LS 201, WS 207, WS 222/PHIL 202
     ▪ four of additional courses from the balance of the courses above and the following Women’s Studies approved courses:
     ▪ three additional courses from the balance of the courses above and the following Women’s Studies approved courses:

1.2 Four-Year General Women’s Studies
Continuation in this academic plan requires a cumulative overall average of 60% and a cumulative Women’s Studies major average of 65% in Women’s Studies required and approved courses.

Eligibility for graduation in the Four-Year General Women’s Studies academic plan includes successful fulfillment completion of the following requirements:
1. Appropriate Program-level requirements. See Bachelor of Arts Degree Requirements.
2. Women’s Studies Plan-level requirements:
   o a minimum Women’s Studies major average of 65%
   o at least nine academic course units (16 courses) in WS and Women’s Studies approved courses with a minimum cumulative average of 68%, including:
     ▪ WS 101, WS 102, WS 201, WS 202, WS 302, WS 306/REC 306
     ▪ two of WS 205, WS 206/LS 201, WS 207, WS 222/PHIL 202, WS 365, WS 475
     ▪ one of WS 365, WS 475
- five of eight additional courses from the balance of the courses above and the following Women's Studies approved courses:

- four additional courses from the balance of the courses above and the following Women's Studies approved courses:

1.3 Honours Women's Studies

Honours Women's Studies (Arts and Business Co-op and Regular)

Joint Honours Women's Studies

Motion: To amend the academic plan requirements for the Honours Women's Studies, the Honours Women's Studies (Arts and Business Co-op and Regular), and the Joint Honours Women's Studies plans, and to collapse the calendar text for each plan as described.

Honours Women's Studies

Continuation in this academic plan requires a cumulative overall average of 60% and a cumulative average of 75% in Women's Studies required and approved courses.

Eligibility for graduation in the Honours Women's Studies academic plan includes successful fulfillment of the following requirements:

1. Appropriate Program-level requirements. See Bachelor of Arts Degree Requirements.
2. Women's Studies Plan-level requirements:
   - at least ten academic course units (20 courses) in WS and Women's Studies approved courses with a minimum cumulative average of 75%, including:
     - two of WS 205, WS 206/LS 201, WS 207, WS 365, WS 475
   - four additional courses from the balance of the courses above and the following Women's Studies approved courses:
Honours Women’s Studies (Arts and Business Co-op and Regular)

Students may combine the Honours Women’s Studies academic plan with Arts and Business.

Continuation in this academic plan requires a cumulative overall average of 60% and a cumulative average of 75% in Women’s Studies required and approved courses.

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

1. Appropriate Program-level requirements. See Bachelor of Arts Degree Requirements.

2. Women’s Studies Plan-level requirements:
   - at least seven academic course units (14 courses) in WS and Women’s Studies approved courses with a minimum cumulative average of 75%, including:
     - two of WS 205, WS 206/LS 201, WS 207, WS 365, WS 475
     - WS 499A, WS 499B or two WS electives if the equivalent senior honours thesis is taken in the other discipline

3. Arts and Business requirements.

Joint Honours Women’s Studies

A Joint Honours academic plan with Women’s Studies may be taken in combination with most Arts disciplines in which an Honours academic plan is offered, or with many Honours majors in other faculties.

Continuation in this academic plan requires a cumulative overall average of 60% and a cumulative average of 75% in Women’s Studies required and approved courses.

Eligibility for graduation in the Joint Honours Women’s Studies academic plan includes successful fulfillment of the following requirements:

1. Appropriate Program-level requirements for the Home Faculty, including at least 20 academic course units (40 courses). If the Home Faculty is Arts, see Bachelor of Arts Degree Requirements.

2. Women’s Studies Plan-level requirements:
   - at least seven academic course units (14 courses) in WS and Women’s Studies approved courses with a minimum cumulative average of 75%, including:
     - WS 101, WS 102, WS 201, WS 202, WS 302, WS 306/REC 306
     - two of WS 205, WS 206/LS 201, WS 207, WS 365, WS 475
     - WS 499A, WS 499B or two WS electives if the equivalent senior honours thesis is taken in the other discipline

3. Plan-level requirements for the second major.

Honours Women’s Studies
Continuation in this academic plan requires a cumulative overall average of 60% and a cumulative
Women’s Studies major average of 70%.

Eligibility for graduation in the Honours Women’s Studies academic plan includes successful
completion of the following requirements:

1. Appropriate Program-level requirements. See Bachelor of Arts Degree Requirements.
2. Women’s Studies Plan-level requirements:
   ○ a minimum Women’s Studies major average of 70%
   ○ at least eight academic course units (16 courses) in WS and Women’s Studies approved
courses, including:
     ▪ WS 101, WS 102, WS 201, WS 202, WS 302, WS 306/REC 306
     ▪ two of WS 205, WS 206/LS 201, WS 207, WS 222/PHIL 202, WS 365, WS 475
     ▪ eight additional courses from the balance of the courses above and the following
Women’s Studies approved courses:
       ▪ WS 108E/ENGL 108E, WS 208E/ENGL 208E, WS 209/SOC 206, WS 261/RS 284,
       WS 262/FINE 262, WS 281/REES 281, WS 308/REC 408, WS 320/RS 325, WS
       325/ENGL 325, WS 331/PACS 321, WS 334/MUSIC 334, WS 347/HIST 347, WS
       370/ITAL 370/ITALST 370, WS 409/SOC 401, WS 410F/ENGL 410F, WS 422/PHIL
       402, WS 430/SPAN 430, CLAS 311, ENGL 208L, HIST 209, HIST 214, HIST 351,
       HLTH 220/GERON 220, ITALST 111, ITALST 392/ITAL 392, PHIL 201, PHIL 220,
       PSCI 370, PSCI 421/LS 464, PSCI 472, PSYCH 235, PSYCH 236, PSYCH 318, RS 254,
       SDS 220R, SDS 354R, SMF 204, SMF 206, SOCWK 357R, SPAN 387

**Arts and Business (Co-op and Regular)**
Students may combine the Honours Women’s Studies academic plan with Arts and Business. In
addition to the Honours Women’s Studies requirements, students must also complete the Arts and
Business requirements.

**Joint Honours**
Honours Women’s Studies may be taken in combination with most Arts disciplines in which an
Honours academic plan is offered or with many Honours majors in other faculties. For further
information, see the Joint Honours section of Available Arts Academic Plans.

1.4 Women’s Studies Minor
Students enrolled in any degree program may pursue a minor designation in Women’s Studies.

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

- WS 101, WS 201, WS 302
- two additional WS courses

1.5 Diploma in Women’s Studies
The Diploma in Women’s Studies requires successful completion of a minimum of three academic
course units (six courses) in Women’s Studies WS with a minimum cumulative average of 65%,
including:

- WS 101
Rationale: The Faculty of Arts has undertaken standardizing plan requirements for all BA academic plans within departments, as well as plan requirements between departments. For the Honours major, the collapsed text aims to simplify the navigation within the UG Calendar and to remove redundant text.

The changes demonstrated in motions 1.1 to 1.3 are a result of applying the previously approved BA templates to the Women’s Studies major plans. Changes of particular note:

- Three-Year General: Decrease of the major course requirements from 15 to 12.
- Four-Year General: Changes to the course requirements to be identical to the Honours plan
- Honours:
  - Decrease of the major course requirements from 20 to 16.
  - Reduction of the major average from 75% to 70%.
  - Removal of WS 499 A/B as a requirement
- All plans:
  - Combining several requirement lists into one

The changes demonstrated in motions 1.4 to 1.5 are a result of streamlining both the Women’s Studies Minor and the Diploma by removing specific course requirements.
FOR APPROVAL

DEPARTMENT NAME CHANGE

1. **Motion:** That Senate recommend to the Board of Governors changing the name of the Department of Environment and Resource Studies to the School of Environment, Resources, and Sustainability as described in [Attachment 1](#) and effective 1 January 2016.

**Rationale:** The current name of the department is a reflection of the department’s complement, focus and mandate from a previous era. With the significant expansion that has occurred over time, in conjunction with the evolution of the department foci into new and emerging areas of environmental education and research, this new name signifies the broad transdisciplinary approach that will underpin success in these areas for years to come. Further, changing the name to a school is also consistent with the nomenclature used by our peer universities.

Ian Orchard
Vice-President, Academic & Provost

/mg
The School of Environment, Resources, and Sustainability

Proposal

The Department of Environment and Resource Studies (ERS) has been a part of the Faculty of Environment since 1969. At its creation, ERS (originally known as the Department of Man-Environment Studies) was a small, primarily undergraduate-focused program. ERS now has 14 full-time faculty members, and offers undergraduate and graduate (Master’s and PhD) programs to students who seek the kind of strongly interdisciplinary education and training that is needed to address contemporary environmental challenges and opportunities.

We believe that our current name no longer captures our character and focus accurately. Therefore, the Department seeks to better define itself with a new name: School of Environment, Resources, and Sustainability (SERS). This proposal has been endorsed by the Faculty of Environment’s Faculty Council at its meeting on December 1, 2014.

Context and Rationale

As ERS has expanded over the years, our focus has crystalized. We have transitioned from a very broad “environmental studies” program to a much more focused unit whose members are united around a core mission of achieving sustainability in an increasingly complex world. Interdisciplinary environmental research and education are central to our mission. Faculty members are highly research active, securing funds from traditional academic sources as well as foundations and industry. These resources support a strong and growing cohort of graduate students. Reflecting our shared desire to bridge theory and practice, our faculty and students (graduate and undergraduate) engage deeply with policy makers, resource managers, industry, communities and citizens.

Through a lengthy process of reflection and consultation with internal and external stakeholders during the past two years, we have concluded that our current orientation no longer fits well with the more passive perspective that often is associated with “environmental studies”. Adding to this pressure, the milieu in which we operate has not remained static.

- Our Faculty of Environment has added two new units (School of Environment, Enterprise and Development, and Department of Knowledge Integration), both of which share the interdisciplinary orientation of ERS.
- In Canada, and around the world, the number of universities that offer programs designed to deliver an interdisciplinary perspective on environmental problem solving has grown substantially.

These pressures and changes pointed clearly to the need for change within ERS. In response, we are currently undertaking a lengthy curriculum redesign to focus our undergraduate and graduate programs on our areas of strength, and to ensure that we are well positioned not only to support Faculty strategic objectives, but also to further distinguish our programs from those of our sibling units. Our proposed new name – School of Environment, Resources, and Sustainability – will be the public face of those changes.

The choice of “Environment, Resources, and Sustainability” was deliberate and strategic, and followed extensive research and consultation with faculty and staff, undergraduate and graduate students, alumni, employers and other stakeholders. Importantly, our proposed name was strongly endorsed by the two external reviewers who evaluated our department in April, 2015. The rationale for using these terms in our proposed name is as follows:
• Environment: Leading with the term “environment” clearly signals our fit within the Faculty, and our main subject of concern. We currently specialize in certain aspects within this broad field – e.g., ecosystem restoration, resilience, governance for food, water and energy. However, a broad focus on “environment” is compatible with our integrative orientation.

• Resources: Our use of the term “resources” reflects the real strength of our faculty and students in the field of resource analysis (understanding how the earth’s natural resources – water, land, ecosystems, etc. – can be utilized in a sustainable fashion).

• Sustainability: Many of our faculty and graduate students are engaging with ideas at the cutting edge of environmental thought such as “the Anthropocene” and “resilience”. However, these specialized concepts do not resonate with the wider public, and in particular with a critical audience: prospective undergraduate students. Therefore, we chose to emphasize sustainability – a concept that is widely understood and used in the public sphere, and which has part of the bedrock of our teaching and research for over two decades. To illustrate, our current PhD program is titled “Social and Ecological Sustainability”.

Our use of the term “School” instead of “Department” was equally deliberate. The rationale is twofold:

• We believe that the name “School” supports our core mission of achieving sustainability in an increasingly complex world through interdisciplinary research and education. As noted above, the changes we are making, or proposing to make, to our undergraduate and graduate programs are designed to align with this perspective. We believe that using the term “School” will have a major positive impact on how we perceive ourselves, and on how we are perceived.

• From a practical perspective, most of our main competitors are “Schools”. The term is widely used in the names of interdisciplinary academic units that focus on environmental themes. For example, in Canada alone we compete for students with the programs shown in the accompanying box. For recruitment purposes, we view it as essential that we are on the same playing field as our competitors.

**Our Main Competitors are “Schools”**

- School of Environmental Studies, Queen’s University
- School of Environmental Studies, University of Victoria
- School of the Environment, University of Toronto
- School of Environmental Sciences, University of Guelph
- McGill School of Environment, McGill University
- School of Environment and Sustainability, University of Saskatchewan
- School of Resource and Environmental Management, Simon Fraser University

Ian Rowlands  
Chair (Acting)  
Department of Environment and Resource Studies

Jean Andrey  
Dean  
Faculty of Environment