

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

**Date:** Monday, April 17, 2006

**Time:** 4:30 p.m.

**Place:** Needles Hall, Room 3001

	<b>OPEN SESSION</b>	<b>Page</b>	<b>Action</b>
4:30	<b><u>Consent Agenda</u></b> <i>Motion:</i> That Senate approve or receive for information by consent items 1-4 [below].		
	1. Approval of the March 27, 2006 Minutes [enclosed]		Decision
	2. Report of the Chair a. Recognition and Commendation	2, A1	Information
	3. Reports from the Faculties	2, A2-A10	Information
	4. Report of the Executive Committee	A11	Information
	<b><u>Regular Agenda</u></b>		
4:35	5. Elections to Senate Committees/Councils and to the Board of Governors [updated membership matrix will be distributed along with the ballots]	2, A12	Decision
4:45	6. Business Arising from the Minutes a. Sixth Decade Plan	Oral	Discussion/Information
5:05	7. Presentations a. Sixth Decade Plans: Environmental Studies and Science	Oral	Information
5:55	b. Federation of Students	Oral	Information
6:05	c. Graduate Student Association	Oral	Information
6:15	8. Report of the Chair a. Honorary Degrees at Spring Convocation b. Environmental Scan	Oral Oral	Information Information
6:30	9. Report of the Vice-President, Academic & Provost	Oral	Information
6:40	10. Reports from Councils a. Graduate & Research	2, A13	Decision
6:45	b. Undergraduate	2, A14-A17	Decision/Information
6:50	11. Other Business a. COU Academic Colleague Election [ballot to be distributed]	2	Decision
	<b>CONFIDENTIAL SESSION</b>		
6:55	12. Approval of the March 27, 2006 Minutes [enclosed]		Decision
7:00	13. Report of the Honorary Degrees Committee	3, CS1-CS5	Decision

The Executive Committee met on April 3, 2006 and wishes to report as follows:

**OPEN SESSION**

**Consent Agenda**

**2. REPORT OF THE CHAIR**

**a. Recognition and Commendation.** The Committee agreed to forward this report to Senate for information.

**3. REPORTS FROM THE FACULTIES**

The Committee agreed to forward these reports to Senate for information.

**4. REPORT OF THE EXECUTIVE COMMITTEE**

The Committee agreed to forward this report to Senate for information.

**Regular Agenda**

**5. ELECTIONS TO SENATE COMMITTEES/COUNCILS AND TO THE BOARD OF GOVERNORS**

The Committee understood that the process would be the same as in past years.

**6. BUSINESS ARISING FROM THE MINUTES**

**a. Sixth Decade Plan.** The Committee understood that the Provost would continue discussion of the plan's main recommendations.

**7. PRESENTATIONS**

**a. Sixth Decade Plans: Environmental Studies and Science.** The Deans of Environmental Studies and Science will present their respective plans.

**b. Federation of Students.** The presentation will focus on the Federation of Students' lobbying efforts and priorities.

**c. Graduate Student Association.** The presentation will focus on sixth decade plans, given the proposed increase to graduate student enrolment.

**8. REPORT OF THE CHAIR**

The Chair will provide a brief "Environmental Scan." Names of the recipients of honorary degrees and other honours, to be conferred at spring convocation, will be announced.

**9. REPORT OF THE VICE-PRESIDENT, ACADEMIC & PROVOST**

The Vice-President will report as appropriate.

**10. REPORTS FROM COUNCILS**

**a. Graduate & Research.** The report is recommended to Senate for approval.

**b. Undergraduate.** The Committee agreed to forward this report to Senate for approval and information.

**11. OTHER BUSINESS**

**a. COU Academic Colleague Election.** Senate will be asked to elect, by secret ballot, Paul Schellenberg's successor; Mariela Gutiérrez has indicated her willingness to serve.

*University of Waterloo*

*SENATE*

*April 17, 2006*

*Report of the Chair*

**For Information**

**RECOGNITION AND COMMENDATION**

Professor **Jim Geelen** (Combinatorics & Optimizat0n) is the recipient of the prestigious Coxeter-James Prize for 2006 awarded by the Canadian Mathematical Society. Geelen, who is the holder of the Canada Research Chair in Combinatorial Optimization, will present the 2006 Coxeter-James Prize Lecture at the CMS summer meeting hosted by the University of Calgary in June. The prize is awarded to young mathematicians who have made outstanding contributions to mathematical research.

The Director of Academic Student Services (Graduate Studies Office), **Lynn Judge**, has been honoured by the Ontario University Registrars' Association with its Award of Achievement and status of Member Emeritus. Say the colleagues who nominated her: "Lynn has made a substantial contribution, not only to OURA, but also to the enhancement and development of academic administration within the Ontario university system with her work on the Ontario Universities' Application Centre graduate studies on-line application, the establishment of electronic thesis submissions, and as a member of the Ontario Council on Graduate Studies Task Force to Define Macroindicators for Graduate Studies."

Two co-op students have been awarded prestigious national and provincial awards: **Jit Seng Chen** (Actuarial Science) has received the 2005 Canadian Association for Co-operative Education Co-op Student of the Year Award, while **Kayley Ma** (Systems Design Engineering) was given the 2005 Education at Work in Ontario Co-op Student of the Year Award. Both awards are based on the students' contributions to one or more of their 2005 work term employers, academic achievements, contributions to co-operative education and commitment to the community as demonstrated through volunteer and extracurricular activities.

UNIVERSITY OF WATERLOO  
REPORT OF THE DEAN OF APPLIED HEALTH SCIENCES TO SENATE

Monday, April 17, 2006

For Information:

A. *APPOINTMENTS*

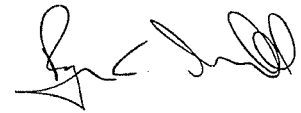
*Adjunct- Appointments*

**BONEN, Arend**, Professor, Department of Kinesiology, July 1, 2006 to June 30, 2009.

**BRYDEN, Pamela**, Associate Professor, Department of Kinesiology, July 1, 2006 to June 30, 2009.

**COLE, Donald**, Associate Professor, Department of Kinesiology, July 1, 2006 to June 30, 2009.

**LEWIS, Anthony**, Assistant Professor, Department of Kinesiology, July 1, 2006 to June 30, 2009.



Roger C. Mannell, Dean  
Applied Health Sciences

**UNIVERSITY OF WATERLOO  
REPORT OF THE DEAN OF THE FACULTY OF ARTS TO SENATE  
APRIL 17, 2006**

For information:

A. ***APPOINTMENTS***

***Tenure***

**WIEDMAN, Christine**, BA, MAcc (Waterloo), PhD (Cornell), Associate Professor, School of Accountancy, July 1, 2006. Since receiving her PhD in 1994, Christine Wiedman has held the following positions: Assistant Professor (1993-1999, and Associate Professor (1999), School of Business Administration, The College of William and Mary, Williamsburg, Virginia; Associate Professor (1999 to date), Richard Ivey School of Business, University of Western Ontario. Her research addresses earnings quality, earnings management and pension accounting principles. Colleagues praise Professor Wiedman as an “active and productive scholar” with a “wonderfully balanced portfolio of research and teaching skills, presentation skills and mature judgement.”

***Probationary Term Appointments***

**ADAIR, Wendi**, Bachelor’s Russian Language and Business, Georgetown University, 1991, Master’s and Ph.D., Organization Behaviour, Kellogg Graduate School of Management, Northwestern University, 2000, Assistant Professor, Department of Psychology, August 1, 2006 to June 30, 2009. Dr. Adair is a specialist in Industrial/Organizational Psychology. Currently she is an Assistant Professor of Management and Organizations at the S.C. Johnson School of Management and Organizations at Cornell University. Her research program investigates how a person’s culture can influence their management styles and actions. She is particularly interested in how one’s culture influences exchanges in business negotiations. She is a dedicated, award winning, teacher. Her work has appeared in leading journals. Dr. Adair will contribute to the department’s undergraduate and graduate programs in Industrial/Organizational Psychology by strengthening our expertise in management and organization and especially in the science of negotiation.

**MOSCOVITCH, David**, B.A., University of Toronto, 1999, Master’s 2001 and Ph.D., Clinical Psychology Boston University. 2006 (pending completion of his clinical residency) at St. Joseph’s Hospital, Hamilton, Ontario, Assistant Professor, Department of Psychology, September 1, 2006 to June 30, 2009. His research program specializes in the cause and treatment of anxiety disorders, particularly social phobia (in excessive fear of social situations). David Moscovitch is a skilled researcher whose work has already contributed to our understanding of the causes of social phobia, how it is maintained, and what factors cause it to be resistant to treatment. His work has appeared in leading journals in Clinical Psychology. He adds capacity to the department’s undergraduate and graduate programs in Clinical Psychology. His research program synergistically complements those of other faculty in Clinical Psychology.

***Probationary Term - Reappointments***

**BRUCE, Gary**, BA Honours (Queen’s) 1991, MA (New Brunswick) 1993, PhD (McGill), 1998, Assistant Professor, Department of History, July 1, 2006 to June 30, 2009.

**LA GUARDIA, Jennifer**, BA (Rochester) 1993, MA (Rochester) 1999, PhD (Rochester) 2001, Assistant Professor, Department of Psychology, July 1, 2006 to June 30, 2009.

*New Definite Term Appointment*

**KROEKER, Ronald**, Assistant Professor, Department of Classical Studies, July 1, 2006 to June 30, 2008.

*Adjunct Reappointment*

**TRUSCELLO, Michael**, Assistant Professor, Department of English Language and Literature, May 1, 2006 to August 31, 2006.

**B. ADMINISTRATIVE APPOINTMENTS**

**FAMA, Antonio**, Associate Chair, Undergraduate Studies, Department of Spanish and Latin American Studies, September 1, 2005 to July 31, 2006.

**HAYES, Geoffrey**, Associate Chair, Graduate Studies, Department of History, May 1, 2006 to April 30, 2007.

**TAYLOR, Lynne**, Associate Chair, Undergraduate Studies, Department of History, May 1, 2006 to December 31, 2006.

**ADMINISTRATIVE REAPPOINTMENT**

**HUNT, Andrew**, Associate Chair, Undergraduate Studies, Department of History, January 1, 2006 to April 30, 2006.

*Cancellation of Appointment*

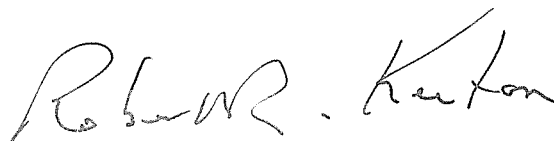
**TAYLOR, Bruce**, Acting Chair, Department of Fine Arts, July 1, 2006 to June 30, 2007.

**C. RESIGNATION**

**CARNAGHAN, Carla**, Assistant Professor, School of Accountancy, August 11, 2006.

**D. SABBATICAL**

**LA GUARDIA, Jennifer**, Assistant Professor, Department of Psychology, January 1, 2007 to June 30, 2007, six months at 100% salary.



Robert R. Kerton  
Dean, Faculty of Arts

**UNIVERSITY OF WATERLOO**  
**REPORT OF THE DEAN OF ENGINEERING TO SENATE**  
April 17, 2006

For information:

**A. *APPOINTMENTS***

**Tenured**

**ANANTRAM, Manjeri**, Professor, Department of Electrical & Computer Engineering, May 1, 2006. PhD Purdue University 1995; MSc University of Poona, India 1989; BSc P.S.G. College of Technology, Coimbatore, India 1986. Dr. Anantram's area of expertise is theory and computational modeling of transport in nanodevices, which include semiconductor-, molecular- and bio-nanostructures. The main applications are nanoelectronics (nanotransistors & nanowires), nonsensors, electromechanical response and bio-inspired devices.

**Visiting Appointments**

**AKINNIYI, Funso**, Researcher, Department of Systems Design Engineering, March 1, 2006 – August 31, 2006.

**HEIDEN, Patricia**, Scientist, Department of Chemical Engineering, January 1, 2007 – December 31, 2007.

**MY, Helene**, Scholar, Department of Chemical Engineering, May 22, 2006 – August 31, 2006.

**Adjunct Appointments**

**CASTILLO, Ignacio**, Assistant Professor, Department of Management Sciences, March 1, 2006 – August 31, 2008.

**JOHNSON, James**, Associate Professor, Department of Mechanical Engineering, March 1, 2004 – February 28, 2007.

**Adjunct Reappointments**

**BEDI, R. B. Lall**, Professor, Department of Mechanical Engineering, January 1, 2006 – April 30, 2006.

**KENNEPOHL, Gerhard**, Professor, Department of Civil Engineering, January 1, 2006 – December 21, 2006.

**LI, Wu (Kevin)**, Assistant Professor, Department of Systems Design Engineering, January 1, 2006 – December 31, 2008.

**STRONG, Allan**, Professor, Professor Emeritus, Department of Mechanical Engineering, September 20, 2005 – September 19, 2008.

**Changes in Appointments**

**GUOQIN, Gao**, Visiting Scholar, Department of Mechanical Engineering was September 1, 2005- August 31, 2006 should be September 20, 2005 – March 18, 2006.

**JAMSAK, Wasana**, Visiting Scholar not Adjunct Reappointment, Department of Chemical Engineering, April 15, 2005 – April 14, 2007.

**LEE, Jin-Sik**, Visiting Scholar not Adjunct Reappointment, Department of Chemical Engineering, May 1, 2006 – April 30, 2007.

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

**IMBERT, Jose**, Department of Mechanical Engineering, January 1, 2006 – December 31, 2006.

**B. ADMINISTRATIVE APPOINTMENTS**

**APLEVICH, Dwight**, Associate Dean, Co-operative Education and Professional Affairs, Faculty of Engineering, March 1, 2006 – April 30, 2007.

**ADMINISTRATIVE REAPPOINTMENTS**

**ROTHENBURG, Leo**, Chair, Department of Civil Engineering, May 1, 2006 – April 30, 2008.

**C. RETIREMENTS**

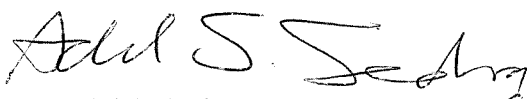
**WILJER, Robert**, Professor, School of Architecture, December 31, 2005.

**FOR APPROVAL BY THE BOARD OF GOVERNORS**

**D. SABBATICAL**

**ELHEDHLI, Samir**, Assistant Professor, Department of Management Sciences, May 1, 2006 – October 31, 2006, six months at 100% salary.

**SCHNEIDER, Gerald E.**, Professor, Department of Mechanical Engineering, September 1, 2006 – August 31, 2007, twelve months at 100% salary.



Adel S. Sedra  
Dean, Faculty of Engineering

**UNIVERSITY OF WATERLOO**  
**REPORT OF THE DEAN OF ENVIRONMENTAL STUDIES TO SENATE**  
**April 17, 2006**

**For Information:**

**A. APPOINTMENTS**

**Adjunct Reappointment**

**SIMPSON, Ray**, Assistant Professor, School of Planning, January 1, 2006 to April 30, 2006.

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

**NEWMAN, Candace**, Department of Geography, May 1, 2006 to August 31, 2006.

**OLSEN, Daniel**, Department of Geography, May 1, 2006 to August 31, 2006.

**YOSHIMURA, Mami**, Department of Geography, September 1, 2006 to December 31, 2006.

**B. ADMINISTRATIVE APPOINTMENT**

**SMITH, STEPHEN**, Director, Tourism Policy & Planning Program, Faculty of Environmental Studies, January 1, 2006 to December 31, 2006.



Deep Saini  
Dean

/aew

**UNIVERSITY OF WATERLOO**  
**REPORT OF THE DEAN OF MATHEMATICS TO SENATE**  
**April 17, 2006**

**For information:**

**A. APPOINTMENTS**

**Probationary Term**

**KAPLAN, Craig** (BMath, 1996, Univ. of Waterloo; MS, 1998; PhD, 2002, both from the Univ. of Washington), Assistant Professor, the David R. Cheriton School of Computer Science, July 1, 2006 – June 30, 2009.

**ORCHARD, Jeffery** (BMath, 1994, Univ. of Waterloo; MSc, 1996, Univ. of British Columbia; PhD, 2003, Simon Fraser Univ.), Assistant Professor, the David R. Cheriton School of Computer Science, July 1, 2006 – June 30, 2009.

**Adjunct Reappointments**

**BULMAN-FLEMING, Sydney** (Wilfrid Laurier Univ.), Professor, Dept. of Pure Mathematics, March 1, 2006 – February 28, 2009.

**MULLIN, Ron**, Professor, Dept. of Combinatorics and Optimization, July 1, 2005 – June 30, 2008.

**Cross Appointments**

**LEUNG, Debbie** (Assistant Professor, Dept. of Combinatorics and Optimization), in the David R. Cheriton School of Computer Science, February 1, 2006 – January 31, 2008.

**B. ADMINISTRATIVE APPOINTMENTS**

**BLACK, James**, Associate Director of Undergraduate Studies, the David R. Cheriton School of Computer Science, March 1, 2006 – February 28, 2007.

**C. RESIGNATION**

**CHUA, Chek Beng**, Assistant Professor, Dept. of Combinatorics and Optimization, effective June 30, 2006.

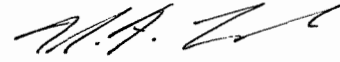
**D. SABBATICAL**

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

**KAPLAN, Craig** Assistant Professor, the David R. Cheriton School of Computer Science, July 1, 2006 – December 31, 2006, with 100% salary. This is an early sabbatical.

**OLDFORD, Wayne**, Professor, Dept. of Statistics and Actuarial Science, July 1, 2006 – June 30, 2007 with 94% salary.

**ORCHARD, Jeffery**, Assistant Professor, the David R. Cheriton School of Computer Science, July 1, 2006 – December 31, 2006, with 100% salary. This is an early sabbatical.

A handwritten signature in black ink, appearing to read 'T.F. Coleman', with a stylized flourish at the end.

Thomas F. Coleman  
Dean

UNIVERSITY OF WATERLOO  
REPORT OF THE DEAN OF SCIENCE TO SENATE  
April 17, 2006

**For information:**

**A. APPOINTMENTS**

**Definite Term – Reappointment – Full-time**

**BUTLER, Barbara J.**, Lecturer, Department of Biology, August 1, 2006 to July 31, 2009.

**DUPONT, Christine**, Lecturer, Department of Biology, July 1, 2005 to June 30, 2009.

**GUILDFORD, Stephanie J.**, Research Assistant Professor, Department of Biology, February 1, 2006 to January 31, 2009.

**Adjunct Appointments**

**SLOMOVIC, Allan R.**, Associate Professor, School of Optometry, March 1, 2006 to February 28, 2009.

**Adjunct Reappointments**

**BAUM, Bernard R.**, Professor, Department of Biology, May 1, 2006 to April 30, 2009.

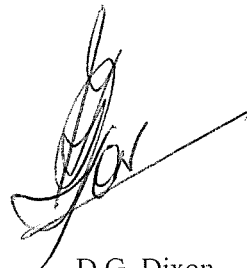
**BURTON, Howard**, Assistant Professor, Department of Physics, January 1, 2006 to December 31, 2009.

**DUMBROFF, Erwin B.**, (Professor Emeritus), Professor, Department of Biology, May 1, 2006 to April 30, 2009.

**TREVORS, Jack T.**, Professor, Department of Biology, October 1, 2005 to September 30, 2008.

**Change in Appointment**

**SORBARA, Luigina (Gina)**, appointment has been changed from Continuing Lecturer, School of Optometry, to Associate Professor, probationary term, March 1, 2006 to June 30, 2009.



D.G. Dixon  
Dean

*University of Waterloo*

*SENATE*

*April 17, 2006*

**For Information**

**1. REPORT OF THE EXECUTIVE COMMITTEE**

The Senate Executive Committee, at its March 21 meeting and acting on the delegated authority of Senate, agreed to recommend to the Board of Governors for approval the appointment of Professor Ken Coates as Dean of Arts for a first term beginning July 1, 2006, and also Professor, with tenure, in the Department of History, effective July 1, 2006,

On behalf of the Board and at its March 23 meeting, the Board Executive Committee approved this recommendation.

David Johnston  
Chair

*Memorandum*

To: Senate

From: Lois Claxton, Secretary of the University

Date: March 24, 2006

Subject: *Elections to Senate Committees/Councils and to the Board of Governors*

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Elections to the Executive, Honorary Degrees and Scholarships & Student Aid Committees, Undergraduate and Graduate & Research Councils, Committee on Student Appeals and the Board of Governors will take place at the beginning of the meeting. Elections to the Long Range Planning and Finance Committees will take place when the results of the Executive election are known. If a Senator's name is on Long Range Planning, but has been elected to the Executive Committee, then that name is deleted from the Long Range Planning ballot. Similarly, if a Senator's name is on Finance, but has been elected to either the Executive or Long Range Planning Committee, then that name is deleted from the Finance ballot. Further nominations to Senate Committees/Councils and to the Board of Governors will be accepted from the floor.

**University of Waterloo**  
**SENATE GRADUATE & RESEARCH COUNCIL**  
**REPORT TO SENATE**  
**April 17, 2006**

Council met on March 30, 2006 and agreed to forward the following item to Senate:

**FOR APPROVAL**

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**Distinguished Teaching by a Registered Student Award**

Motion: That the name of this award be changed to **Exceptional Teaching by a Student**.

Council accepted a recommendation from the Teaching Excellence Council to change the name of this award given its opinion that “Distinguished” implies sustained excellence and students can receive this award having taught only one course. The new name more accurately reflects the criteria for the award (i.e., exceptional teaching).

*/tlc*     Ranjana Bird  
           Dean of Graduate Studies

           Alan George  
           Interim Vice-President, University Research

**UNIVERSITY OF WATERLOO**  
**SENATE UNDERGRADUATE COUNCIL**  
**Report to Senate – April 17, 2006**

Senate Undergraduate Council met on March 7, 2006 and agreed to forward the following items to Senate for approval and information, as indicated below [*further details may be obtained from the Secretary, ext. 3183*].

**FOR APPROVAL**

**ACADEMIC PLAN CHANGES** [*effective September 2007*]  
[additions in **bold**; deletions in ~~strikeout~~; moved items in *italics*]

**Faculty of Arts**

**Concurrent BA Degrees [for students in a Faculty other than Arts]**

It is proposed that the requirements for the Three-Year General Concurrent BA degree be revised with the text in the Undergraduate Calendar for Concurrent BA Degrees to read as follows:

“University of Waterloo students pursuing programs in faculties other than Arts may wish to work **concurrently** toward a Bachelor of Arts. Following consultation with the Arts Academic Counsellor and the academic advisor of the “home” faculty, the student who 1) satisfies all requirements of the Faculty of Arts (i.e., the Group A and B Requirements, the required averages, and for the Non-major plan, either 15 or 25 courses in Arts disciplines or for the Major plan, the number of courses required by the major) and who 2) successfully completes a least ~~five~~ **seven and a half** academic course units (for the Three-Year General degree) or ten academic course units (for the Four-Year General or Honours degree) over and above the minimum number of courses required for the first degree in the home faculty, may be awarded the BA. In some instances, a Joint Honours program or a minor in an Arts discipline, where possible, may be a preferable course to follow, in which case the BA would not be granted. The *Proposal for Concurrent Degree in Arts: BA as Second Degree* form is available in the Arts Undergraduate Office.”

**Rationale:** The requirements are being changed to be consistent with the 50% rule adopted by the Faculty of Arts which requires that at least 50% of a student’s courses must be taken at UW and in Arts.

**Women’s Studies  
Option, and Diploma**

It is proposed that the requirements for these academic plans be revised as follows:

**Requirements:**

1. Successful completion of ~~four~~ **three** academic course units with an overall average of 65% in Women's Studies core courses, Women's Studies cross-listed courses, and Women's Studies approved courses
2. **WS101**
3. ~~Four required courses~~ **Two of:** WS ~~101~~, 102, 201, **202, 205, 207**, ~~301, 302~~
4. ~~Four~~ **Three** other courses from the list of Women's Studies core courses, Women's Studies cross-listed courses and Women's Studies approved courses.

**Rationale:** The number of required courses has been lowered to provide a larger number of students the opportunity to obtain this option or diploma. The format has been revised to more closely match other Women’s Studies plans. In addition, the changes to the course requirements reflect new WS offerings and changes to other WS courses.

## Faculty of Science

### Honours Atmospheric and Planetary Sciences (Regular and Coop)

**Rationale:** The Department of Earth Sciences is committed to develop an Atmospheric Science component to its academic and research interests and strengths. A logical step in this overall process is to now take on academic responsibility for the Honours Atmospheric and Planetary Sciences undergraduate program, which has no home department and is currently administered through the Office of the Dean of Science.

#### Honours Earth Sciences (Atmospheric and Planetary Specialization)

Plan Advisor Professor J.J. Sloan (Chemistry/~~Earth Sciences~~)

~~Students wishing to follow this Academic Plan in the Co-operative system of study should first speak to Ms D. McKelvie of the Department of Co-operative Education and Career Services.~~

~~Continuance~~ **Continuation** in this Academic Plan requires an **overall** cumulative average of 60% **and a cumulative Science average of 60%** in both Science and non-Science courses. In order to graduate, the following requirements must be met:

- ~~1. Successful completion of 20.0 lecture units plus any corequisite lab units. plus the Senior Thesis Research project. At least 12.0 units must be Faculty of Science units. At least 8.0 of the 12.0 must be at or above the 200 level. At least 4.0 of the 8.0 other than any "SCP" labelled units must be at the 300 or 400 level.~~
- ~~2. No more than 1.0 failed unit is allowed. Of the 3.5 elective units, at least 1.5 units (other than any "SCI"-labelled courses) must be Faculty of Science courses at the 200-, 300- or 400-level.~~
- ~~3. No more than 1.0 "SCI" labelled unit may be applied to the degree.~~

#### Year One (Fall)

CHEM 120/120L Physical and Chemical Properties of Matter/Laboratory  
EARTH 121/121L The Planet We Live On/Laboratory  
EARTH 123/123L Introductory Hydrology  
MATH 127 Calculus 1 for the Sciences  
PHYS 121/121L Mechanics and Waves 1/Laboratory

#### Year One (Winter)

CHEM 123/123L Chemical Reactions, Equilibria and Kinetics/Laboratory  
MATH 128 Calculus 2 for the Sciences  
PHYS 122/122L Mechanics and Waves 2/Laboratory  
EARTH 122/122L The Planet We Live Off/Laboratory  
PHYS 139 Scientific Computer Programming

#### Year Two (Fall)

CHEM 220/220L Analytical Chemistry 1/Laboratory  
CHEM 209 Introductory Spectroscopy and Structure  
**CHEM 240 Mathematical Methods in Chemistry**  
EARTH 231 Mineralogy  
**Arts Core (0.5 unit)**

#### Year Two (Winter)

<sup>1</sup>CHEM 254 Introductory Chemical Thermodynamics *CHEM 28/28L Organic Chemistry for Engineering and Bioinformatics Students/Laboratory [moved fr Yr 2 (Fall)]*  
CHEM 224L Analytical Chemistry Laboratory 2  
EARTH 232 Petrography  
**EARTH 221 Geochemistry 1**  
**EARTH 281 Geology and Health**  
Two electives (1.0 unit)

#### Years Three and Four

*MATH 228 Differential Equations for Physics and Chemistry or AMATH 250 Introduction to Ordinary Differential Equations [moved from Year Two (Fall)]*  
**EARTH 205 Urban Air Pollution [F]**  
CHEM 305 Atmospheric Chemistry and Physics [W]  
CHEM 305L Atmospheric Modelling Laboratory [W]  
CHEM 221 Analytical Chemistry 2 [W]  
~~CHEM 3XX Climate Studies [F]~~  
CHEM 350 Chemical Kinetics [W]  
~~CHEM 356 Introductory Quantum Mechanics [F]~~  
CHEM 404 Physicochemical Aspects of Natural Water [F]  
EARTH 358 Environmental Geology [W]  
EARTH 359 Flow Through Porous Media [F]  
~~EARTH 360 Earth Physics and Plate Tectonics~~  
**EARTH 361 Introduction to Atmospheric Science [W]**  
EARTH 456 Groundwater Modelling [F]  
EARTH 458 Physical Hydrogeology [F]  
EARTH 436 A/B Honours Thesis [F, W] (1.0 unit) or  
CHEM 494A/B Research Project [F,W]  
**EARTH 390 Methods in Geological Mapping [W]**  
~~Eleven-Seven Electives (\$3.5 units) See the list of recommended electives after the Co-op program requirements.~~

~~Electives must be chosen in consultation with the Academic Plan advisor. See the list of recommended electives.~~

Honours Co-operative ~~Earth Sciences (Atmospheric and Planetary Sciences Specialization)~~

*Year 1A (Fall)*

CHEM 120/120L Physical and Chemical Properties of Matter/Laboratory  
EARTH 121/121L The Planet We Live On/Laboratory  
EARTH 123/123L Introductory Hydrology/Laboratory  
MATH 127 Calculus 1 for the Sciences  
PHYS 121/121L Mechanics and Waves 1/Laboratory

*Year 1B (Winter)*

CHEM 123/123L Chemical Reactions, Equilibria and Kinetics/Laboratory  
EARTH 122/122L The Planet We Live Off/ Introductory Earth Sciences Laboratory 2  
MATH 128 Calculus 2 for the Sciences  
PHYS 122/122L Mechanics and Waves 2/Laboratory  
PHYS 139 Scientific Computer Programming

*Year 2A (Fall)*

CHEM 220/220L Analytical Chemistry 1/Laboratory  
CHEM 209 Introductory Spectroscopy and Structure  
**CHEM 240 Mathematical Methods in Chemistry**  
EARTH 231 Mineralogy

**Arts Core (0.5 unit)**

*Year 2B (Spring)*

<sup>1</sup>CHEM 254 Introductory Chemical Thermodynamics  
CHEM 224L Analytical Chemistry Laboratory 2  
EARTH 232 Petrography  
**EARTH 221 Geochemistry 1**

*MATH 228 Differential Equations for Physics and Chemistry or AMATH 250 Modelling with Ordinary Differential Equations [moved from Year 2A (Fall)]*

~~Two One Electives (4-0 0.5 unit)~~

Recommended Electives: This list is provided for guidance only. Note for students who wish to meet the Association of Professional Geoscientists of Ontario (APGO)'s requirements to practice Geoscience in Ontario: One (0.5 unit) of the 3.5 elective units must be STAT 202 and the remaining six electives must be EARTH labelled courses, including 1.0 unit of the following: EARTH 235 or 333, EARTH 238, EARTH 342 and EARTH 440. Also note that many of these courses have prerequisites and it is the responsibility of the student, in consultation with the program advisor, to ensure that all pre-requisite requirements for selected electives are met. ~~Electives not contained in this list may be taken only with the consent of the program advisor.~~

BIOL 354 Environmental Toxicology 1  
BIOL 439 Environmental and Natural Products Biochemistry  
BIOL 447 Environmental Microbiology  
<sup>2</sup>CH 480d Special Topics (at WLU)  
**CHEM 212 Inorganic Structure and Bonding 1**  
**CHEM 213 Inorganic Structure and Bonding 2**  
CHEM 310/310L Transition Element Compounds and Inorganic Materials/Laboratory

CHEM 323 Analytical Instrumentation  
CHEM 421 Mass Spectrometry

**EARTH 235 Stratigraphy**  
**EARTH 238 Structural Geology**  
~~EARTH 332 Metamorphic Petrology~~  
~~EARTH 421 Geochemistry 2~~

*Year 3A (Winter)*

~~CHEM 28/28L Organic Chemistry for Engineering and Bioinformatics Students/Laboratory [moved fr. Yr 2A (Fall)]~~  
CHEM 221 Analytical Chemistry 2  
~~EARTH 360 Earth Physics and Plate Tectonics~~  
**EARTH 361 Introduction to Atmospheric Science**  
**EARTH 281 Geology and Health**  
**EARTH 390 Methods in Geological Mapping**  
~~Two One Electives (4-0 0.5 unit)~~

*Year 3B (Fall)*

~~CHEM 305 Atmospheric Chemistry and Physics [moved from Year 4B (Winter)]~~  
~~CHEM 305L Atmospheric Modelling Laboratory [moved from Year 4B (Winter)]~~  
~~CHEM 356 Introductory Quantum Mechanics~~  
CHEM 404 Physicochemical Aspects of Natural Water  
~~CHEM 350 Chemical Kinetics [moved from Year 3A (Winter)]~~  
**EARTH 205 Urban Air Pollution**  
EARTH 359 Flow through porous media  
~~One Elective (0.5 unit)~~

*Year 4A (Fall)*

EARTH 456 Groundwater Modelling  
~~EARTH 458 Physical Hydrogeology [moved from Yr 3B (Fall)]~~  
~~CHEM 3XX Climate Studies~~  
EARTH 436A Honours Thesis or CHEM 494A Research Project  
Two Electives (1.0 unit)

*Year 4B (Winter)*

EARTH 358 Environmental Geology [W]  
EARTH 436B Honours Thesis or CHEM 494B Research Project  
~~Four Three Electives (2-0 1.5 units)~~

EARTH 260 Applied Geophysics 1  
**EARTH 331 Igneous Petrography**  
**EARTH 333 Sedimentology**  
**EARTH 342 Geomorphology**  
**EARTH 440 Quaternary Geology**  
EARTH 459 Chemical Hydrogeology  
EARTH 460 Applied Geophysics 2  
EARTH 461 Applied Geophysics 3  
ENVS 201 Introduction to Environmental and Planning Law  
BRS 2319 Approaches to Environmental Decision-Making  
**GEOG 101 Geography and Human Habitat**  
GEOG 102 Geography and Our Planetary Environment  
GEOG 208 ~~Applied Climatology~~ **Human Dimensions of Global Climate Change**  
GEOG 255 Introduction to Geographic Information Systems  
GEOG 309 Physical Climatology  
**GEOG 355 Spatial Databases**  
GEOG 376 Environmental Remote Sensing  
GEOG 409 Energy Balance Climatology  
GEOG 455 Spatial Analysis Using Geographic Information Systems  
GEOG 471 Remote Sensing Project  
STAT 204 Statistics for the Physical Sciences 1

<sup>1</sup>EARTH 421 may be substituted for CHEM 254 but it is offered in Fall term

<sup>2</sup>Students must obtain a letter of permission from the Department of Earth Sciences to bring to the instructor at Wilfrid Laurier University.

**DIPLOMA INACTIVATIONS** *[effective September 2007]*

**Faculty of Arts**

**Sociology**

*Diploma in the Sociology of Business, Industry, and Technology*

*Diploma in the Sociology of Crime, Deviance, and Regulation*

It is proposed that the two diplomas listed above be inactivated.

**Rationale:** There has not been a demand for these diplomas and no students have graduated with these credentials within the last five years.

**CHANGES TO REGULATIONS AND PROCEDURES** *[effective September 2007]*

**Faculty of Science**

**ELPE Milestone**

The addition of ESL 102R to the list of course exemptions allowed by the Faculty of Science, and remove ENGL 210C from the list.

**Rationale:** The first course allows students who have English as their second language a course suited to their needs to aid them in improving their English skills and to act as an ELPE substitute. ENGL 210C has been inactivated.

**CHANGES TO EXAMINATION REGULATIONS** *[effective September 2006]*

**Scheduling of ELPE Examinations**

For many years, the December and April sittings of ELPE have been scheduled between the end of classes and the beginning of examinations. Undergraduate Operations Committee examined this practice in light of the following:

“In the period between the end of the formal lecture period and the beginning of final examinations, no instructor shall be permitted to administer, and no student shall be required to sit for, examinations, tests, or lectures.”

The committee examined scheduling alternatives but concluded that there were no attractive scheduling options. The committee also noted that there was no preparation needed for the ELPE and thus students could handle this obligation while preparing for examinations.

Council therefore recommends that the *Examinations Regulations and Related Matters* be revised as follows:

In the period between the end of the formal lecture period and the beginning of final examinations, **with the exception of the English Language Proficiency Examination**, no instructor shall be permitted to administer, and no student shall be required to sit for, examinations, tests, or lectures.”

**FOR INFORMATION**

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***Curricular Modifications***

On behalf of Senate, Council approved several changes to academic plans, new courses, course changes and course inactivations for the Faculties of Arts (Dean of Arts, Economics, Fine Arts, History, Legal Studies, Peace and Conflict Studies, Political Science, Psychology, Religious Studies, Renison College – China, Sociology, Women’s Studies); Software Engineering; and Science (Biology, Dean of Science, Earth Sciences).

/kjj  
March 24, 2006

Gail Cuthbert Brandt  
Chair