

University of Waterloo
SENATE
Notice of Meeting

Date: Monday, October 17, 2005

Time: 4:30 p.m.

Place: Needles Hall, Room 3001

		<i>Page</i>	<i>Action</i>
	OPEN SESSION		
4:30	<u>Consent Agenda</u>		
	Motion: That items 1-4 [below] be approved or received for information, as indicated, by consent.		
	1. Approval of the September 19, 2005 Minutes [enclosed]		Decision
	2. Report of the Chair		
	a. Recognition and Commendation	2, A1	Information
	3. Reports from the Faculties and St. Jerome's University	2, A2-A21	information
	4. Other Business		
	a. Approval of Degrees, Diplomas and Certificates [lists of graduands available at Senate]	2, A22	Decision
	b. Capital Projects Update	2, A23	Information
	<u>Regular Agenda</u>		
	5. Presentations		
4:35	a. Faculty Recruitment Standards	2	Information
5:05	b. Living-Learning Project Report [previously distributed]	2	Information
	6. Reports from Councils		
5:25	a. Graduate & Research	2, A24-A25	Information
5:30	b. Undergraduate	2, A26-A31	Decision / Information
	7. Business Arising from the Minutes		
5:35	8. Report of the Chair		
	a. Environmental Scan	2	Information
5:50	9. Report of the Vice-President, Academic & Provost	2	Information
	10. Other Business		
	CONFIDENTIAL SESSION		
6:00	11. Approval of the September 19, 2005 Minutes [enclosed]		Decision
6:05	12. Report of the Dean of Science Nominating Committee	3	Decision

The Executive Committee met on October 3, 2005 and wishes to report as follows:

OPEN SESSION

Consent Agenda

2. REPORT OF THE CHAIR

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

3. REPORTS FROM THE FACULTIES AND ST. JEROME'S UNIVERSITY

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

4. OTHER BUSINESS

a. Approval of Degrees, Diplomas and Certificates. The Committee agreed to recommend that Senate adopt the proposed motion.

b. Capital Projects Update. The Committee agreed to forward this report to Senate for information.

Regular Agenda

5. PRESENTATIONS

a. Faculty Recruitment Standards. The Provost will ask two Deans and two Chairs to comment on best practices.

b. Living-Learning Project Report. The project team will report.

6. REPORTS FROM COUNCILS

a. Graduate & Research. The Committee agreed to forward this report to Senate for information.

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

8. REPORT OF THE CHAIR

The Chair will provide a brief "Environmental Scan."

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

The Vice-President will report as appropriate.

University of Waterloo

SENATE

October 17, 2005

Report of the Chair

For Information

1. RECOGNITION AND COMMENDATION

Professor **Raymond Laflamme** (Director of the Institute for Quantum Computing) has been named the Ivey Foundation Fellow of the Canadian Institute for Advanced Research (CIAR). In supporting his research, the Ivey Foundation has become one of the founding supporters of CIAR's Quantum Information Processing (QIP) program. Laflamme has been the Director of QIP since 2002. The Ivey Foundation, a private charitable foundation located in Toronto, has supported a variety of CIAR programs since 1986. CIAR is a pan-Canadian and international research institute committed to "identifying significant intellectual questions in the natural and human sciences, as well as bringing together top researchers to collaborate closely on them."

The **Midnight Sun Solar Race Car Team** recently received the official certificate ratifying the team for the Guinness World Record for the longest distance travelled by a solar-powered vehicle. The ratification has come almost a year after Midnight Sun VII crossed the finish line outside Carl Pollock Hall on the Waterloo campus, ending its 40-day tour across North America. The team's record currently stands at 15,079 km.

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

Monday, October 17, 2005

For Information:

A. APPOINTMENTS

New Probationary Term

TYAS, Suzanne, Associate Professor, joint with the department of Health Studies and Gerontology (75%) and the department of Psychology (25%) in the Faculty of Applied Health Sciences and the Faculty of Arts, January 1, 2006 to June 30, 2009. [Ph.D., University of Western Ontario, Epidemiology and Biostatistics, 1998; M.Sc., University of Western Ontario, Pathology, 1987; B.Sc., University of Guelph, Human Biology, 1985]. Dr. Tyas received her Postdoctoral training at the Centre on Aging at the University of Manitoba, and subsequently held a position as Assistant Professor in the Graduate Center for Gerontology and Dept. of Epidemiology within the College of Public Health at the University of Kentucky.

As an epidemiologist with strong interests in neuropathology, her recent research interests have focused on determining the environmental and individual risk factors for Alzheimer's Disease, Parkinson's Disease, and other neurodegenerative disorders of aging, as well as the broader determinants of healthy aging and illness in elderly populations.

Dr. Tyas' appointment will include contributions towards teaching of a variety of public health and epidemiology topics within UW's upcoming Master of Public Health (MPH) program, plus an additional graduate course teaching and graduate thesis advisement for the Behavioural Neurosciences (BNS) PhD graduate program in Psychology. She will also contribute substantially to the teaching and research activities of the Gerontology/aging sector of the Health Studies and Gerontology department's undergraduate and graduate degree programs, including possible teaching contributions to the AHS Faculty's new Collaborative PhD in Aging, Health, and Well-being. It is also anticipated that she will also become an affiliated researcher within the new Research Institute on Aging (RIA) at Waterloo.

Adjunct Appointments

GASTALDI, Brian and FLYNN, Janice (S.O.S. Physiotherapy), Lecturer, Kinesiology, September 1, 2005 to December 31, 2005.

MARTIN, Lynn, Assistant Professor, Health Studies and Gerontology, October 1, 2005 to September 30, 2007.

RAWSON, Nigel, Professor, Health Studies and Gerontology, July 1, 2005 to June 30, 2007.

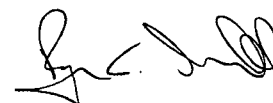
Graduate Students Appointed as Part-time Lecturers

CINELLI, Mike, Lecturer, Kinesiology, September 1, 2005 to December 31, 2005.

HALPENNY, Elizabeth, Recreation and Leisure Studies, September 1, 2005 to December 31, 2005.

B. ADMINISTRATIVE APPOINTMENTS

JESSUP, Linda, Associate Chair, Undergraduate Studies, Health Studies and Gerontology, July 1, 2005 to indefinite.



Roger C. Mannell, Dean
Applied Health Sciences

UNIVERSITY OF WATERLOO

REPORT OF THE DEAN OF THE FACULTY OF ARTS TO SENATE

OCTOBER 17, 2005

For information:

A. *APPOINTMENTS**New Tenured Appointment*

HELLEINER, Eric, BA (Toronto), MSC, PhD (London School of Economics 1991), Associate Professor, Department of Political Science, September 1, 2005. Dr. Helleiner has served as Assistant and Associate Professor at Trent University. In 2003, he was awarded the Canada Research Chair in International Political Economy at Trent University. His research addresses international monetary and financial policies, including economic nationalism and environmental politics. International experts have praised Professor Helleiner as a “path-breaker”, a dynamic speaker, and as a rising star in the field of international political economy. He won two awards for outstanding teaching.

Adjunct Appointments

ABRAHAMSON, Kirsten, Lecturer, Department of Fine Arts, September 1, 2005 to December 31, 2005.

ASLETT, Gary, Lecturer, School of Accountancy, September 1, 2005 to December 31, 2005.

AYOO, Collins, Lecturer, Department of Economics, September 1, 2005 to December 31, 2005.

COPP, Trevor, Lecturer, Department of Drama and Speech Communication, September 1, 2005 to December 31, 2005.

CUSHMAN, Robert, Lecturer, Department of Drama and Speech Communication, September 1, 2005 to December 31, 2005.

DAGG, Anne, Associate Professor, Independent Studies Program, September 1, 2005 to April 30, 2006.

DOWLER, Ken, Assistant Professor, Department of Sociology, January 1, 2006 to April 30, 2006.

DUCHARME, Robert, Lecturer, School of Accountancy, September 1, 2005 to December 31, 2005.

ELMITT, Mike, Associate Professor, Independent Studies Program, September 1, 2005 to April 30, 2006.

EULER, Dieter, Lecturer, Department of French Studies, September 1, 2005 to December 31, 2005.

GARCIA, Donna, Lecturer, Department of Psychology, September 1, 2005 to December 31, 2005.

GOFF, Patti, Assistant Professor, Department of Political Science, September 1, 2005 to December 31, 2005.

GRAHAM, Philip, Associate Professor, Department of English Language and Literature, September 1, 2005 to December 31, 2005.

HEIMPEL, Sara, Assistant Professor, Department of Psychology, September 1, 2005 to August 31, 2006.

HENDLEY, Brian, (Professor Emeritus), Professor, Department of Philosophy, January 1, 2006 to December 31, 2009.

JUTZI, Alison, Lecturer, Department of Drama and Speech Communication, September 1, 2005 to December 31, 2005.

KARDASZ, Stan (Professor Emeritus), Associate Professor, Department of Economics, January 1, 2006 to April 30, 2006.

KEEPING, Lisa, Assistant Professor, Department of Psychology, September 1, 2005 to August 31, 2006.

MACKAY, Don (Professor Emeritus), Professor, Department of Fine Arts, September 1, 2005 to December 31, 2005.

MCCABE, Matthew, Lecturer, Department of English Language and Literature, September 1, 2005 to December 31, 2005.

PICARD, Derek, Lecturer, Department of Economics, January 1, 2006 to April 30, 2006.

PRIES, Fred, Lecturer, School of Accountancy, September 1, 2005 to December 31, 2005.

STORRING, Dwight, Journalist-in-Residence, Department of Drama and Speech Communication, September 1, 2005 to December 31, 2005.

WALDECK, Rob, Lecturer, Department of Fine Arts, September 1, 2005 to December 31, 2005.

WHITE, Rebecca, Assistant Professor, Department of Psychology, September 1, 2005 to August 31, 2006.

WILKINSON, Lesley, Lecturer, Department of Drama and Speech Communication, September 1, 2005 to December 31, 2005.

Adjunct Reappointments

ANTONY, Martin, Professor, Department of Psychology, September 1, 2005 to August 31, 2006.

BÉDUNEAU, Fabienne, Lecturer, Department of French Studies, September 1, 2005 to December 31, 2005.

BIELING, Peter, Assistant Professor, Department of Psychology, September 1, 2005 to August 31, 2006.

CHAPUT, Louise, Lecturer, Department of French Studies, September 1, 2005 to December 31, 2005.

DAVIDSON, Tina, Lecturer, Women's Studies, September 1, 2005 to December 31, 2005.

DUCATEL, Eugénie, Lecturer, Department of French Studies, September 1, 2005 to December 31, 2005.

GINGRICH, Nadine, Assistant Professor, Department of English Language and Literature, September 1, 2005 to December 31, 2005.

HILL, Heather, Lecturer, Department of Drama and Speech Communication, September 1, 2005 to December 31, 2005.

LANGILL, Judith, Lecturer, Department of English Language and Literature, September 1, 2005 to December 31, 2005.

MACLEOD, Karen, Assistant Professor, Department of Psychology, September 1, 2005 to August 31, 2006.

MCARTHUR, Kathryn, Department of English Language and Literature, September 1, 2005 to December 31, 2005.

MCCAULEY, Eva, Lecturer, Department of Fine Arts, September 1, 2005 to December 31, 2005.

SEIM, Robert (Professor Emeritus), Associate Professor, Department of Psychology, September 1, 2005 to December 31, 2005.

STEFFY, Richard, (Professor Emeritus), Professor, Department of Psychology, September 1, 2005 to August 31, 2006.

TOMAN, Philip, Assistant Professor, Department of Psychology, September 1, 2005 to August 31, 2006.

TRIMARCHI, Angela, Lecturer, Department of Economics, January 1, 2006 to April 30, 2006.

TRUSCELLO, Mike, Lecturer, Department of English Language and Literature, September 1, 2005 to December 31, 2005.

VAUGHAN, Mary Ann, Lecturer, Department of Economics, September 1, 2005 to December 31, 2005 and January 1, 2006 to April 30, 2006.

VERT, Dave, Lecturer, School of Accountancy, September 1, 2005 to December 31, 2005.

Staff Appointments to Faculty

HAYDEN, Jayne (Cooperative and Career Services), Lecturer, Faculty of Arts, September 1, 2005 to December 31, 2005 and January 1, 2006 to April 30, 2006.

MAHONEY, Kerry (Cooperative and Career Services), Lecturer, Faculty of Arts, September 1, 2005 to December 31, 2005 and January 1, 2006 to April 30, 2006.

RUTTAN, Tom (Counselling Services), Assistant Professor, Department of Psychology, September 1, 2005 to December 31, 2005.

SYKES, Susan (Office of Research), Assistant Professor, Department of Psychology, September 1, 2005 to December 31, 2005.

Graduate Students Appointed as Adjunct Lecturers

AMARIA, Khushnuma, Department of Psychology, September 1, 2005 to December 31, 2005.

CLEMENTS, Koreen, Department of Psychology, September 1, 2005 to December 31, 2005.

DAVIDSON-HARDEN, Jennifer, Department of Psychology, September 1, 2005 to December 31, 2005.

DAVIES, Nancy, Department of Philosophy, September 1, 2005 to December 31, 2005.

DESMARAIS, Genevieve, Department of Psychology, September 1, 2005 to December 31, 2005.

ISERMAN, Emma, Department of Psychology, September 1, 2005 to December 31, 2005.

LAW, Ada, Department of Psychology, September 1, 2005 to December 31, 2005.

MARKOWITZ, Lee, Department of Psychology, September 1, 2005 to December 31, 2005.

STRIEMER, Christopher, Department of Psychology, September 1, 2005 to December 31, 2005.

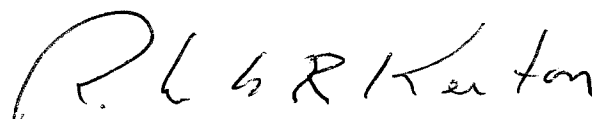
Graduate Students Reappointed as Adjunct Lecturers

LEE, Sharon, Department of Philosophy, September 1, 2005 to December 31, 2005.

B. ADMINISTRATIVE APPOINTMENTS

CLUETT, Cora, Associate Chair, Graduate Studies, Department of Fine Arts, September 1, 2005 to December 31, 2005.

HUNT, Andrew, Chair, Department of History, May 1, 2006 to April 30, 2009.



Robert R. Kerton
Dean, Faculty of Arts

UNIVERSITY OF WATERLOO
REPORT OF THE DEAN OF ENGINEERING TO SENATE

October 17, 2005

For information:

A. APPOINTMENTS

New Probationary Term

BAN, Dayan, Assistant Professor, Department of Electrical & Computer Engineering, November 1, 2005 – June 30, 2009. PhD University of Toronto 2003; Master in Physics University of Science and Technology of China 1995; Bachelor in Physics, University of Science and Technology of China 1993. Dr. Ban is currently an Assistant Research Officer at the Institute for Microstructural Science of National Research Council of Canada (since 2002). Dr. Ban is a nanotechnology expert.

HESJEDAL, Thorsten, Associate Professor, Department of Electrical & Computer Engineering, January 1, 2006 – June 30, 2009. PhD Humboldt University, Berlin, Germany 1997; MS Eberhard-Karls University, Tubingen, Germany 1993; BS University of Stuttgart, Germany 1991. Dr. Hesjedal is currently a Senior Research Scientist at the Paul-Drude Institute for Solid-State Electronics, Berlin Germany (since 2002). Dr. Hesjedal is a nanotechnology expert.

NARASIMHAN, Sriram, Assistant Professor, Department of Civil Engineering, May 1, 2006 – June 30, 2009. PhD Rice University 2004; MS Louisiana State University 1999; MS Asian Institute of Technology, Thailand 1996; BEng Osmania University, India 1993. Dr. Narasimhan's research focuses on risk and reliability of engineering structures. He has considerable professional experience in structural risk assessment and health monitoring of off shore structures. Dr. Narasimhan's research will compliment activities of the Industrial Research Chair in Risk-Based Life Cycle Management of Engineering Systems.

XIE, Liang-Liang, Associate Professor, Department of Electrical & Computer Engineering, November 1, 2005 – June 30, 2009. PhD Chinese Academy of Sciences, China 1999; BS Shandong University, China 1995. Dr. Xie is currently an Associate Professor in the Institute of Systems Science, Chinese Academy of Sciences (since 2003). Dr. Xie is an expert in network information theory.

Probationary Term

ELKAMEL, Ali, Assistant Professor, Department of Chemical Engineering, July 1, 2006 – June 30, 2009. PhD Purdue University 1993; MS University of Colorado-Boulder 1989; BS Chemical Engineering and Petroleum Refining, Colorado School of Mines 1987; BS Mathematics, Colorado School of Mines 1987.

Visiting Appointments

BISSON, Barry, Assistant Professor, Centre for Business, Entrepreneurship & Technology, September 1, 2005 – December 31, 2005.

BULSARI, Mercy, Scholar, Department of Chemical Engineering, September 1, 2005 – December 31, 2005.

BUNMARK, Natthawoot, Scholar, Department of Chemical Engineering, September 16, 2005 – October 1, 2006.

GUOLIANG, Tao, Scholar, Department of Chemical Engineering, January 1, 2006 – June 30, 2006.

HSU, Hung-Liang, Scholar, Department of Chemical Engineering, September 6, 2005 – September 5, 2006.

KAEWCHADA, Amaraporn, Scholar, Department of Chemical Engineering September 16, 2005 – September 16, 2006.

PIERA, Francisco, Scholar, Department of Electrical & Computer Engineering, February 14, 2005 – February 13, 2006.

TASANATANACHAI, Patchara, Scholar, Department of Chemical Engineering, December 1, 2005 – April 30, 2006.

TORBATIAN, Mehdi, Scholar, Department of Electrical & Computer Engineering, September 1, 2005 – August 31, 2006.

VIVALDO-LIMA, Eduardo, Scholar, Department of Chemical Engineering, September 1, 2005 – August 31, 2006.

XIMENES, Juliana, Scholar, Department of Chemical Engineering, October 1, 2005 – February 1, 2006.

Adjunct Appointments

ACKEN, James, Assistant Professor, School of Architecture, September 1, 2005 – December 31, 2005.

AL-BAHRI, Tareq A., Assistant Professor, Department of Chemical Engineering, August 1, 2005 – August 31, 2009

AL-MAYAH, Adil, Assistant Professor, School of Architecture, September 1, 2005 – December 31, 2005.

DOWLING, Catherine, Assistant Professor, School of Architecture, September 1, 2005 – December 31, 2005.

GAO, Jianying, Lecturer, Department of Chemical Engineering, September 1, 2005 – December 31, 2005.

HUI, Vince, Assistant Professor, School of Architecture, September 1, 2005 – December 31, 2005.

HUNT, Brian, Associate Professor, School of Architecture, September 1, 2005 – December 31, 2005.

ISHII, Margaret, Assistant Professor, School of Architecture, September 1, 2005 – December 31, 2005.

JANCOSO, Yvette, Assistant Professor, School of Architecture, September 1, 2005 – December 31, 2005.

KALTCHENKO, Alexei, Assistant Professor, Department of Electrical & Computer Engineering, September 1, 2005 - August 31, 2008.

KOLBASENKO, Tom, Assistant Professor, School of Architecture, September 1, 2005 – December 31, 2005.

LEAMEN, Michael, Lecturer, Department of Chemical Engineering, September 1, 2005 – August 31, 2006.

LI, Dongqing, Professor, Department of Mechanical Engineering, September 1, 2005 – August 31, 2008.

LIEBERMAN, David, Associate Professor, School of Architecture, September 1, 2005 – December 31, 2005.

LUZAR, Brigitte, Assistant Professor, School of Architecture, September 1, 2005 – December 31, 2005.

MCCARTNEY, Shelagh, Assistant Professor, School of Architecture, September 1, 2005 – December 31, 2005.

MOLL, Jennifer, Lecturer, Department of Chemical Engineering, September 1, 2005 – December 31, 2005.

SAIN, Mohini, Professor, Department of Chemical Engineering, September 1, 2005 – August 31, 2007.

SCINOCCA, Paul, Assistant Professor, School of Architecture, September 1, 2005 – December 31, 2005.

WEISS, Kevin, Assistant Professor, School of Architecture, September 1, 2005 – December 31, 2005.

WATT, Michael M., Professor, Department of Electrical & Computer Engineering, September 1, 2005 – August 31, 2008.

WENSLEY, Anthony, Associate Professor, Department of Management Sciences, September 1, 2005 – August 31, 2007.

Adjunct Reappointments

AREIBI, Shawki, Associate Professor, Department of Electrical & Computer Engineering, September 1, 2005 – August 31, 2007.

BARTINIKAS, Ray, Professor, Department of Electrical & Computer Engineering, September 1, 2005 – August 31, 2007.

BURNETT, Eric, Professor, Department of Civil Engineering, September 1, 2005 – August 31, 2008.

DOWLING, Paul, Assistant Professor, School of Architecture, September 1, 2005 – December 31, 2005.

FAHIDY, Thomas, Professor, (Professor Emeritus), Department of Chemical Engineering, December 1, 2005 – November 30, 2009.

FANG, Liping, Associate Professor, Department of Systems Design Engineering, September 1, 2005 – August 31, 2008.

GERCHAK, Yigal, Professor, Department of Management Sciences, September 1, 2005 – August 31, 2007.

KESAVAN, Hiremaglur, Professor, Department of Systems Design Engineering, October 1, 2005 – September 30, 2008.

LEVITT, Andrew, Associate Professor, School of Architecture, September 1, 2005 – December 31, 2005.

LIEBERMANN, George, Professor, Department of Chemical Engineering, July 1, 2005 – June 30, 2007.

MCLEOD, Ian, Professor, Department of Systems Design Engineering, October 1, 2005 – September 30, 2008.

ROE, Peter, Director of Exchange Program, Engineering Undergraduate Office, October 1, 2005 – September 30, 2006.

SOULIS, George, Professor, Department of Systems Design Engineering, September 1, 2005 – August 31, 2008.

SRIVASTAVA, Narendra, Professor, Department of Civil Engineering, June 1, 2005 – May 31, 2007.

TESFAYOHANNES, Mengsteab, Assistant Professor, Department of Management Sciences, September 1, 2005 – August 31, 2006.

THE, Jesse, Assistant Professor, Department of Management Sciences, September 1, 2005 – August 31, 2007.

THUN, Geoffrey, Assistant Professor, School of Architecture, September 1, 2005 – December 31, 2005.

Cross Appointments

LAMBERT, Stephan, Professor, Department of Mechanical Engineering to Department of Systems Design Engineering, November 1, 2005 – October 31, 2008.

Cross Reappointments

DUSSEAULT, Maurice, Professor, Faculty of Science, Department of Earth Sciences to Department of Chemical Engineering, September 1, 2005 – August 31, 2007.

GLICK, Bernard, Professor, Faculty of Science, Department of Biology to Department of Chemical Engineering, September 1, 2005 – August 31, 2007.

ROBINSON, James, Associate Professor, Faculty of Environmental Studies, Department of Environment and Resource Studies to Department of Systems Design Engineering, September 1, 2005 – August 31, 2008.

Graduate Students appointed as Part-time Lecturers

ELIAS BISWAS, Mohammad, Department of Chemical Engineering, September 1, 2005 – December 31, 2005.

GROVE, Jason, Department of Chemical Engineering, September 1, 2005 – December 31, 2005.

HORNE, Edward, Department of Electrical & Computer Engineering, July 1, 2005 – August 31, 2005.

MAHMUD, Shohel, Department of Mechanical Engineering, September 1, 2005 – December 31, 2005.

OBEIDI, Amer, Department of Management Sciences, September 1, 2005 – December 31, 2005.

Graduate Students reappointed as Part-time Lecturers

HOYE, Kate, Department of Management Sciences, September 1, 2005 – December 31, 2005.

RAN, Bing, Lecturer, Department of Management Sciences, September 1, 2005 – December 31, 2005.

B. ADMINISTRATIVE APPOINTMENTS

RYNNIMERI, Val, Associate Director, Graduate Studies, School of Architecture, August 1, 2005 – July 31, 2006.

WILSON, William, Director of Software Engineering Program, Department of Computer Science, July 1, 2005 – June 30, 2006.

FOR APPROVAL BY THE BOARD OF GOVERNORS

C. SABBATICAL

POLAK, Maria Anna, Professor, Department of Civil Engineering, January 1, 2006 – December 31, 2006, twelve months at 85% salary.

Adel S. Sedra

Adel S. Sedra
Dean, Faculty of Engineering

UNIVERSITY OF WATERLOO
REPORT OF THE DEAN FACULTY OF ENVIRONMENTAL STUDIES TO SENATE
October 17, 2005

For Information:

A. *APPOINTMENTS*

Tenured Appointment

CLAPP, Jennifer, Associate Professor, appointed to the Faculty of Environmental Studies, September 1, 2005, B.A. (Economics) Michigan, 1986; M.Sc. (Politics of the World Economy) London School of Economics, 1988; Ph.D. (International Relations) London School of Economics, 1992. Dr. Clapp's research expertise is focused on the politics of the interface between the global economy (trade, investment and finance) and the environment, especially in relation to developing countries. Her research has covered the politics of the international trade in hazardous wastes and pesticides, the political economy of agricultural biotechnology, and international agricultural trade issues. Dr. Clapp is co-author (with Peter Dauvergne) of *Paths to a Green World: The Political Economy of the Global Environment* (MIT Press, 2005); *Toxic Exports: The Transfer of Hazardous Wastes from Rich to Poor Countries* (Cornell University Press, 2001); and *Adjustment and Agriculture in Africa: Farmers, the State and the World Bank in Guinea* (MacMillan, 1997). She will teach undergraduate as well as graduate courses that relate to global environmental and food/agriculture issues.

New Probationary Term Appointment

MACRAE, Merrin, Assistant Professor, appointed to the Department of Geography, January 1, 2006 to December 31, 2008, B.E.S. (Environmental Studies) York University, 1996; M.Sc. (Geography) York University, 1998; Ph.D. (Geography) Wilfrid Laurier University, 2003. Dr. Macrae's areas of research expertise include the impacts of climatic and land-use variability on nutrient transport patterns, the annual cycling and storage of organic and inorganic carbon in tundra ponds and the effects of logging practices on nutrient transport. She will teach undergraduate courses in physical geography and geo-chemical hydrology and will advise graduate students in hydrologic and landscape processes that affect nutrient cycling and related watershed management issues.

Adjunct Appointments

GILLESPIE, Adina, Adjunct Lecturer, Department of Geography, September 1, 2005 to December 31, 2005.

TRIGGER, Rosalyn, Adjunct Lecturer, Department of Geography, September 1, 2005 to December 31, 2005.

Adjunct Reappointments

GREEN, Bill, Adjunct Associate Professor, School of Planning, September 1, 2005 to December 31, 2005.

JONES, Brenda, Adjunct Lecturer, Department of Geography, January 1, 2006 to April 30, 2006.

Cross Appointments

GIBSON, Robert, Professor, Department of Environment and Resource Studies, cross-appointed to the Department of Geography, July 1, 2005 to June 30, 2008.

MICHAELS, Sarah, Associate Professor, School of Planning, cross-appointed to the Department of Geography, July 1, 2005 to June 30, 2008.

Graduate Student Reappointed as a Part-time Lecturer (Revised)

LIM, Alan, Adjunct Lecturer, Department of Geography, September 1, 2005 to December 31, 2005.

Staff Reappointment to Faculty

MCKENZIE, Ian, Adjunct Associate Professor, Department of Geography, September 1, 2005 to December 31, 2005



Ellsworth LeDrew
Interim Dean

/jh

UNIVERSITY OF WATERLOO
REPORT OF THE DEAN OF MATHEMATICS TO SENATE
October 17, 2005

For information:

A. APPOINTMENTS

New Probationary Term

SWAMY, Chaitanya (BTech, 1999, Indian Institute of Technology; MS, 2003; PhD, 2004, both from Cornell University), Assistant Professor, Dept. of Combinatorics and Optimization, September 1, 2006 – June 30, 2009. Dr. Swamy is currently a postdoctoral fellow at the Center for the Mathematics of Information at Caltech. His research interests include the design and analysis of algorithms, combinatorial optimization, approximation algorithms, network design, stochastic optimization and planning under uncertainty, scheduling, and algorithmic game theory. This appointment is made to support the Mathematics Faculty's large undergraduate programs that combine the study of mathematics with business and accounting. Dr. Swamy won the Best Student Paper Award at the 15th annual ACM-SIAM Symposium on Discrete Algorithms (SODA) in 2004. He has established an active research program which has resulted in numerous publications in highly regarded conferences and workshops (for example, SODA(4), FOCS(2) and IPCO(1)). His referees consider him to be an exceptionally knowledgeable and talented research mathematician, and speak highly of his research accomplishments.

Definite Term -- Reappointment -- full-time

HARMSWORTH, David, Lecturer, Dept. of Applied Mathematics, September 1, 2006 – August 31, 2009.

KOHANDEL, Mohammad, Research Assistant Professor, Department of Applied Mathematics, January 1, 2006 – August 31, 2006.

Visiting Appointments

LEVECHENKOV, Dmitriy, Scholar, Dept. of Combinatorics and Optimization, September 1, 2005 – June 30, 2006.

Adjunct Appointments

SCOTT, Matthew, Lecturer, Dept. of Pure Mathematics, September 1, 2005 – December 31, 2005.

YOUNGER, Daniel, Professor Emeritus, Dept. of Combinatorics and Optimization, September 1, 2005 – August 31, 2008.

Adjunct Reappointments

RADOCCHIA, Joseph, Lecturer, Office of the Dean, September 1, 2005 – December 31, 2005.

SAFAYENI, Suzanne, Lecturer, School of Computer Science, September 1, 2005 – August 31, 2006.

Changes in Appointments

GOHARI, Mahmood (Tehran Univ. of Medical Sciences), Visiting Scholar, Dept. of Statistics and Actuarial Science, (*ref.* Dean's Report to Senate, Jan, 2005).

FROM: January 1, 2005 – September 30, 2005

TO: January 1, 2005 – November 30, 2005

Graduate Students appointed as Part-time Lecturers

DONELLY, Catherine, Dept. of Statistics and Actuarial Science, September 1, 2005 – December 31, 2005.

Graduate Students reappointed as Part-time Lecturers

DICESARE, Joe, Dept. of Statistics and Actuarial Science, September 1, 2005 – December 31, 2005.

METZLER, Adam, Dept. of Statistics and Actuarial Science, September 1, 2005 – December 31, 2005.


MULAYATH VARIYATH, Asokan, Dept. of Statistics and Actuarial Science, September 1, 2005 – December 31, 2005.

Postdoctoral Fellows appointed as Part-time Lecturers

KHANDEKAR, Rohit, Dept. of Combinatorics and Optimization, September 1, 2005 – August 31, 2006.

B. ADMINISTRATIVE APPOINTMENTS

FORREST, Brian, Associate Dean for Co-Op Education, Office of the Dean, September 1, 2005 – August 31, 2009.



Thomas Coleman
Dean

UNIVERSITY OF WATERLOO
REPORT OF THE DEAN OF SCIENCE TO SENATE
October 17, 2005

For information:

A. APPOINTMENTS

New Probationary Term

CHOH, Vivian, Assistant Professor, School of Optometry, January 1, 2006 to June 30, 2009. [B.Sc., University of Toronto (1991); M.Sc., University of Toronto (1996); Ph.D., University of Waterloo (2001).] Dr. Choh is currently doing post-doctoral training at the University of California, Berkeley, School of Optometry, for which she received the prestigious Fight for Sight Fellowship. Vivian's work on ocular development, particularly related to refractive errors, will position her perfectly to compliment the existing research and teaching in this area in the School.

ENGELHARDT, Heidi, Assistant Professor, Department of Biology, July 1, 2006 to June 30, 2009. [B.Sc., University of Guelph (1983); M.Sc., University of Guelph (1986); Ph.D. University of Western Ontario (1992).] Dr. Engelhardt is an expert in the field of Animal Reproductive Physiology. She was previously a Medical Research Council of Canada post-doctoral fellow at the University of Edinburgh in Scotland and then a Research Associate at the University of Guelph. She is currently an Assistant Professor of Zoology at Brandon University in Manitoba. She has published 17 refereed journal articles and book chapters. Dr. Engelhardt is an expert in molecular and cellular mechanisms in animal reproduction. She will teach courses of particular interest to many Biology and Biomedical Science students, in (i) Animal Physiology and (ii) Reproductive Physiology. In addition to her research expertise, Dr. Engelhardt is considered to be an outstanding teacher.

LAKSHMINARAYANAN, Vasudevan, Professor, School of Optometry, August 1, 2006 to June 30, 2009. [B.Sc., University of Madras (1976); M.Sc., University of Madras (1978); Ph.D., University of California, Berkeley (1985).] Dr. Lakshminarayan is currently at the University of Missouri, St. Louis, School of Optometry. He is an internationally recognized authority on the optics of the eye and is an award winning teacher and lecturer in addition to his extensive scientific contribution particularly in the areas of visual optics and spatial vision. In addition to being a Fellow of the American Academy of Optometry and Optical Society of America (on whose Board he has served) he has worked on projects for UNESO and the US National Research Council. His work on optics and vision dovetails perfectly with existing activity in the school and he brings novel theoretical and technical abilities that will enhance the research and training activity in the School..

SPAFFORD, David, Assistant Professor, Department of Biology, October 1, 2005 to June 30, 2009. [B.Sc., Medical Physiology, University of Saskatchewan (1989); B.Sc., Biology, University of Saskatchewan (1992); Ph.D., University of Alberta (1998).] Dr. Spafford is an expert in the field of Animal Physiology with an emphasis on the use of molecular and cellular approaches to neurophysiology and endocrinology. Dr. Spafford was previously a post-doctoral fellow at Vrije Universiteit in the Netherlands and then a Research Associate at the University of Calgary. He has published 15 refereed journal articles. Dr. Spafford will teach courses in (i)Molecular Biology and (ii) Human Anatomy. Dr. Spafford is considered to be a first-rate researcher as well as a highly skilled teacher.

TANG, Xiao-Wu (Shirley), Assistant Professor, Department of Chemistry, February 1, 2006 to June 30, 2009. [B.S., Huazhong University of Science and Technology (1993); Ph.D., Massachusetts Institute of Technology (1999).] Dr. Tang's area of expertise is nanomaterial synthesis, nanoelectronic fabrication, and application-oriented chemical functionalization of nanotubes. She has extensive experience in the development of advanced nanodevices, particularly those employing single-walled carbon nanotubes, for the detection of biological molecules, such as proteins and DNA, in solution, or to serve as cell-penetrating transporters and biomarkers. Dr. Tang will be developing a new generation of single-walled nanotube-field effect transistor-based biosensors, as well as developing nanoprobe for molecular imaging and bio-material patterning. She has not only had industrial experience as a research scientist in the area of integrated circuitry, but also has had postdoctoral experience in nuclear engineering at MIT and in chemistry and oncology at Stanford. The Chemistry Department looks forward to Dr. Tang's arrival in February, 2006, as the first of its nanotechnology appointments, and anticipates the exciting developments that will emerge from her laboratory in future years.

New Definite Term

EPP, Richard J., Lecturer, Department of Physics, September 1, 2005 to August 31, 2008. [B.Sc., University of Manitoba (1986); M.Sc., University of Manitoba (1989); Ph.D., University of Winnipeg (1993).] Dr. Epp's research interests are in classical and quantum gravity, and in physics education. He was an NSERC postdoctoral fellow who spent time at the University of California - Davis, the University of Waterloo, and the Institute for Physics in Bangalore, India. His most recent position was that of Scientific Outreach Director at the Perimeter Institute. With a deep concern for the well-being of students and the quality of instruction, Dr. Epp will further enhance the teaching reputation of the Physics department.

Adjunct Appointments

BROUT, Robert, Professor, Department of Physics, September 1, 2005 to December 31, 2005.

GOMIS, Jaume, Professor, Department of Physics, June 15, 2005 to May 31, 2008.

OBBARD, Martyn E., Professor, Department of Biology, June 1, 2005 to May 31, 2008.

Adjunct Reappointment

DAMASKINOS, Savvas, Lecturer, Department of Physics, September 1, 2005 to December 31, 2005.

GARTNER, John F., Lecturer, Department of Earth Sciences, September 1, 2005 to December 31, 2005.

HUNKELER, Daniel, Professor, Department of Earth Sciences, August 1, 2005 to July 31, 2008.

LEE, David R., Professor, Department of Earth Sciences, July 1, 2005 to June 30, 2008.

RICHARDSON, Neil, Assistant Professor, Faculty of Science, September 1, 2005 to December 31, 2005.

VAN DER KAMP, Garth, Professor, Department of Earth Sciences, July 1, 2005 to June 30, 2008.

WOOD, Larry, Lecturer, Faculty of Science, September 1, 2005 to December 31, 2005.

Cross Reappointments

JONES, Lyndon W.J., Professor, School of Optometry cross appointed to Department of Physics, June 1, 2005 to May 31, 2008.

Staff Appointed to Faculty

PIGGOTT, Scott, Lecturer, Department of Earth Sciences, September 1, 2005 to December 31, 2005.

TAYLOR, Nick J., Professor, Department of Chemistry, September 1, 2005 to August 31, 2006.

Graduate Students Appointed as Part-Time Lecturers

BLAINE, Fred, Lecturer, Department of Earth Sciences, September 1, 2005 to December 31, 2005.

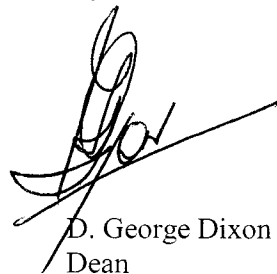
Postdoctoral Fellows Appointed as Part-Time Lecturers

JOHNSTON, John W., Lecturer, Department of Earth Sciences, September 1, 2005 to December 31, 2005.

SANCHEZ-FORTUN STOKER, Jamie, Lecturer, Department of Chemistry, September 1, 2005 to December 31, 2005.

B. ADMINISTRATIVE APPOINTMENTS

THIESSEN, Jake, Founding Director, School of Pharmacy, October 1, 2004 to September 30, 2007.



D. George Dixon
Dean

UNIVERSITY OF WATERLOO
REPORT OF ST. JEROME'S UNIVERSITY TO SENATE

OCTOBER 17, 2005

For Information:

A. Definite Term Contracts - Part time:

Sonia Amari, Lecturer in French Studies, September 1, 2005 to December 31, 2005.

Kathy Brouwer, Lecturer in Religious Studies, September 1, 2005 to April 30, 2006.

Carmela De Santis, Lecturer in Sexuality, Marriage and Family Studies, September 1, 2005 to April 30, 2006.

Andrew Deman, Lecturer in English, September 1, 2005 to December 31, 2005.

Joe Di Cesare, Lecturer in Mathematics, September 1, 2005 to December 31, 2005.

Franco Gallippi, Lecturer in Italian Studies, September 1, 2005 to April 30, 2006.

Nadine Gingrich, Lecturer in English, September 1, 2005 to December 31, 2005.

John Greenwood, Lecturer in English and Human Sciences, September 1, 2005 to April 30, 2006.

Dorothy Hadfield, Lecturer in English, September 1, 2005 to December 31, 2005.

Shannon Hartling, Lecturer in English, September 1, 2005 to April 30, 2006.

Tinamarie Jones, Lecturer in Religious Studies, September 1, 2005 to April 30, 2006.

Kerry Lappin-Fortin, Assistant Professor of French Studies, September 1, 2005 to April 30, 2006.

Paul Lavigne, Lecturer in History, September 1, 2005 to December 31, 2005.

Eric McCormack, Associate Professor Emeritus of English, September 1, 2005 to April 30, 2006.

Timothy Paci, Lecturer in English, September 1, 2005 to December 31, 2005.

David Schweitzer, Assistant Professor of History, September 1, 2005 to April 30, 2006.

Fred Scinto, C.R., Lecturer in Religious Studies, September 1, 2005 to December 31, 2006.

Toni Serafini, Lecturer in Sexuality, Marriage and Family Studies, September 1, 2005 to April 30, 2006.

Megan Shore, Lecturer in Religious Studies, September 1, 2005 to December 31, 2005.

Julie Stewart, Lecturer in English, September 1, 2005 to December 31, 2005.

Margaret Sweatman, Lecturer in English, September 1, 2005 to December 31, 2005.

Andrew Thompson, Lecturer in History, September 1, 2005 to December 31, 2005.

Fortunato Trione, Lecturer in Italian Studies, September 1, 2005 to December 31, 2005.

Pat Zettel, Assistant Professor of English, September 1, 2005 to April 30, 2006.

A handwritten signature in black ink, appearing to read 'M. W. Higgins', with a large, stylized flourish extending to the right.

MWH:rt

Michael W. Higgins
President and Vice Chancellor

University of Waterloo

SENATE

October 17, 2005

For Approval

1. APPROVAL OF DEGREES, DIPLOMAS AND CERTIFICATES

Motion:

That Senate approve the lists of candidates for degrees, diplomas and certificates as recommended by the Faculty Councils, the Dean of Graduate Studies and the Academic Board for Independent Studies, and that Senate authorize the Chair, the Registrar and the Dean of Graduate Studies to add to or change the lists of candidates for degrees, diplomas and certificates as approved at the meeting on October 17, 2005.

**Capital Projects Update
September 2005**

Project	Physical Location	Gross Square Feet	Construction Costs	Funding Arranged To Date	Funding Still Required	Planned Occupancy Date
				\$ millions		
Optometry Addition & Major Renovations	south of existing building	24,000	\$9.00	\$4.75	\$4.25	Fall 2007
School of Pharmacy	Downtown Kitchener [A]	100,000	\$34.00	\$30.00	\$4.00	Fall 2007(partial)
Physics Addition (Sharcnet)	Physics/E2	16,000	\$3.50	\$3.50	\$0.00	Spring 2006
Centre for Advanced Photovoltaic Devices	south of Parking lot L	12,000	\$3.23	\$3.23	\$0.00	Fall 2006
Quantum-Nano Centre	B2/M&C	225,000	\$70.28	\$35.00	\$35.28	Spring 2008(partial)
School of Accountancy Addition	Add'n to Hagey Hall	40,000	\$10.00	\$5.50	\$4.50	Winter 2008
North Campus						
Research & Technology Park [B]						
	Site infrastructure		\$12.80	\$12.80	\$0.00	Fall 2005
	Environmental Reserve		\$1.70	\$1.70	\$0.00	Fall 2005
	Accelerator Centre		\$4.00	\$4.00	\$0.00	Spring 2006
	UW 100 acres of land via lease		\$18.50	\$18.50	\$0.00	

Notes: [A] includes approx 8 acres of land
[B] excludes capital projects not on UW lands

D. Huber

University of Waterloo
SENATE GRADUATE & RESEARCH COUNCIL (SGRC)
REPORT TO SENATE
October 17, 2005

SGRC met on September 19, 2005 and, in July, conducted an e-vote re: curricular items and an e-survey re: a web-based system to improve the way the Office of Research distributes information about calls for proposals and other funding opportunities [see item 6]. The following is forwarded to Senate for information.

[additional documentation for all items available in the Secretariat]

FOR INFORMATION

Council reviewed and, on behalf of Senate, approved the following:

1. CENTRES & INSTITUTES: REVIEW / RENEWAL

Waterloo Institute for Groundwater Research (WIGR). (Bob Gillham, Earth Sciences, Director)*

The Institute for Groundwater Research (IGR) was created in 1982 for an initial five-year period, and renewed in 1999. While this report / renewal was several years overdue, Council accepted the reason and noted the prominence, nationally and internationally, of groundwater research within the hydrogeology group in Earth Sciences and elsewhere at the University of Waterloo.

The Institute consists of 22 members, has a total of 84 active research and 26 overhead accounts. Key facilities are the Environmental Isotopes Laboratory, the physical hydrogeology laboratory and field facilities, computational laboratories in Earth Sciences and geochemical laboratories related to the study of contaminant hydrogeology and groundwater remediation. Associated with the research projects and facilities are approximately 80 graduate students.

The Faculty Dean and the Department Chair (Earth Sciences) enthusiastically support renewal of the Institute, and recognize the key role that WIGR will play in maintaining and enhancing UW's position as a world leader in groundwater science. Both see opportunities through Biology, Geography and Engineering to expand the membership over the next few years and to provide a focussed structure for pursuit of funding opportunities through industrial partners and government agencies. Graduate and undergraduate student training will also benefit.

*Note: Dr. Gillham will retire from UW in 2006; it remains for the WIGR to name a new Director.

2. CURRICULAR ITEMS

Faculties of Engineering and Mathematics; Renison College—new courses, changes to existing courses (e.g., course title, requisites, description, effective date), addition of courses and new Special Topics courses, and changes to graduate course requirements.

3. THESES REGULATIONS; GRADUATE COURSE COMPONENTS

- a. Theses Regulations: *Microfilming Master's Theses / Submission to the Library and Archives Canada.*** Council accepted the recommendation to re-establish, effective October 1/05, the submission of Master's theses for microfilming and distribution to the Library and Archives Canada (LAC). This includes all students submitting Master's theses to fulfill degree completion requirements for graduation in 2006.

Background: In the 1990's, due to budget limitations, the University changed the requirement for all theses to be submitted for microfilming and distribution to the National Library and Archives Canada (formerly named the National Library of Canada) to PhD theses only. Students with Master's theses were given the option of submission for microfilming and distribution to the Library and Archives Canada, for a fee of \$35.

...

The Graduate Studies Office (GSO) raised this with the Graduate Operations Committee and the UW Library, and was advised to resume microfilming and submissions to LAC to recognize all graduate student theses, and to provide a standard form of archival copy for the University. New funds were identified beginning 2005-06.

- b. **Course Components or ‘Meet Types’.** Effective Fall 2005, departments/schools submitting new graduate courses for approval will be asked to indicate all components (i.e., Lecture, Reading, Seminar, optional Lab and Tutorial) and, also, the primary or normal ‘meet type’.

Background: Earlier this term, the GSO was notified that Scheduling would schedule only those courses which had SGRC-approved component or ‘meet type’ information. To comply with Scheduling requirements and to avoid bringing hundreds of already approved courses back to SGRC, the GSO will modify current courses in the Graduate Course Catalogue to reflect all course components. Each term, as courses are scheduled and class sizes are determined, departments/schools may need to change the component (e.g., lecture to seminar, lecture to reading) to reflect space requirements accurately—information which affects reporting by Institutional Analysis & Planning (IA&P).

4. GRADUATE STUDENT SCHOLARSHIPS and AWARDS

a. *Scholarships*

- Keith & Debbie Geddes Graduate Scholarship
- Robert Hartog Graduate Scholarship
- McCall MacBain International Graduate Scholarship
- QNX Graduate Scholarship
- Research In Motion Graduate Scholarship

- b. ***Award of Excellence in Graduate Supervision.*** The announcement re: the first recipients was made to Senate by the Associate Dean, Graduate Studies, on September 19/05. Kudos to four outstanding UW faculty members / supervisors: *Rich Hughson* (Kinesiology); *Arokia Nathan* (E&CE); *Frank Tompa* (Computer Science); *Mark Zanna* (Psychology).

5. HUMAN RESEARCH ETHICS COMMITTEE: Membership (to August 31/08)

- ***Extensions / Reappointments:*** Faculty representatives *Doug Brown* (Arts; Psychology) and *Mark Havitz* (AHS; Recreation & Leisure Studies); Community Member *Herb Spencer*.
[Note: *Barbara Robinson* (Science; Optometry) will continue to December 31/05; Optometry is in the process of naming another representative.]
- ***New Members:*** Faculty representative *Dan Smilek* (Arts; Psychology); graduate student representative *Craig Blatz* (Arts; Psychology).

6. NEW WEB-BASED SYSTEM FOR FUNDING OPPORTUNITIES: Office of Research (ORA)

Over the summer, the ORA employed a graduate student to develop a web-based system to improve the way the office distributes information re: calls for proposals and other funding opportunities. UW researchers are encouraged to test and review the new system, at <http://pole.uwaterloo.ca/cfp/> and provide feedback (pros, cons, questions, concerns). The system has not yet been tested ‘under load’ and, at this stage, users will find only limited content. And to be resolved is the provision of on-going system support.

7. GRADUATE GROWTH WORKING GROUP

Council learned that, in keeping with UW’s vision for the sixth decade and doubling graduate enrolment, the Provost has named a working group to develop, in consultation with the Faculties, a strategic plan for growth in graduate studies. The group will be chaired by the Associate Dean of Graduate Studies (Bill Power), and will include three Graduate/Research Associate Deans (Faculties of Arts, Engineering, Environmental Studies), an IA&P and a GSA representative.

University of Waterloo
SENATE UNDERGRADUATE COUNCIL
Report to Senate – October 17, 2005

Senate Undergraduate Council met on September 6, 2005 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. 5924*].

FOR APPROVAL

FACULTY OF SCIENCE

New Plans

Science and Business/Biotechnology

Motion: To approve the Science and Business/Biotechnology plan as outlined below.

The Biotechnology Specialization has been created to enable students to combine biotechnology with a grounding in business, including the four Science and Business Workshops. The Faculty of Science also offers the Honours Biotechnology/Economics (Co-op) plan for students interested in combining economics and biotechnology.

Requirements

Year 1A (Fall)

CHEM 120/120L	Physical and Chemical Properties of Matter
AFM 131	Management
ECON 101	Introduction to Microeconomics
MATH 109	Mathematics for Accounting
BIOL 130	Introductory Cell Biology

Year 1B (Winter)

CHEM 123/123L	Chemical Reactions, Equilibria and Kinetics
SCI 122	Management of Business Organizations
CS 200	Concepts for Advanced Computer Usage
SCI 123	Science and Business Workshop 1
BIOL 139	Genetics
MTHL 100	Commercial and Business Law for Mathematics Students

Year 2A (Fall)

IOL 140/140L	Fundamentals of Microbiology
CHEM 266/266L	Basic Organic Chemistry 1
AFM 123	Accounting Information for Managers
BIOL 208	Analytical Methods in Molecular Biology
SCI 223	Science and Business Workshop 2

Year 2B (Spring)

BIOL 241	Introduction to Applied Microbiology
BIOL 308	Principles of Molecular Biology
ECON 102	Introduction to Macroeconomics

ECON 221 Statistics for Economists
MSCI 211 Organizational Behaviour

Year 3A (Winter)

BIOL 331 Advanced Cell Biology
BIOL Elective* (0.5 unit)
CHEM 237/237L Introductory Biochemistry
ECON 371 Business Finance 1
Business elective (0.5 unit)

Year 3B (Fall)

BIOL Elective* (0.5 unit)
BIOL 342 Molecular Biotechnology 1
CHEM 333 Metabolism 1
ECON 344 Marketing: Principles of Marketing and Consumer Economics
SCI 323 Technology Development Workshop 3

Year 4A (Fall)

BIOL 443 Fermentation Biotechnology
BIOL Elective* (0.5 unit)
SCI 423 Senior Honours Science and Business Workshop 4
Electives** (1.0 unit)

Year 4B (Winter)

BIOL 432 Molecular Biotechnology 2
BIOL Elective* (1.0 unit)
Electives** (1.0 unit)

*BIOL electives: 345, 431, 433, 434, 441, 442, 444, 474, 476, 483. BIOL 474 is recommended. Note that BIOL 273 is as prerequisite for BIOL 476.

**Electives – Of these four electives, one is a free elective, one must be a business elective, and the remaining two must be either business electives or BIOL electives as listed. Business electives are normally chosen from the following: ACTSC 231, 446, ECON 220, 361, 372, HRM 200, 301, MSCI 311, 432, STAT 231, 333. HRM 200 and MSCI 311 are recommended. Other courses may be used as substitutes on approval of an Undergraduate Advisor.

Changes to Existing Plans

Biotechnology/Chartered Accountancy

Motion: To modify the Biotechnology/Chartered Accountancy plan as outlined below.

The modifications identified below (**additions** in bold, ~~deletions~~ in strikeout) will convert the Biotechnology/Chartered Accountancy Plan to an additional cost-recovery plan similar to the Bachelor of Financial Management (BAFM) plan in the Faculty of Arts. The conversion to an additional cost-recovery plan is in recognition of the high cost of mounting the specialized upper-year AFM courses, will maintain a consistent structure for accounting related programs, and allow for equitable treatment of students. With the exception of the first three AFM courses listed below, students will not be able to access the upper-year specialized AFM courses, mandatory to this program, without this conversion.

Admissions

Students normally apply for direct admission from high school into the first year of the co-operative Honours Biotechnology/Chartered Accountancy program. Upon completing a provisional first year (maintaining a 65% average in the Science courses, an average of 70% in the AFM courses and a 70% overall average), students will be allowed to formally proceed into the Co-operative Honours Biotechnology/Chartered Accountancy program in second year. Courses used for admission to Year 2 include: BIOL 130, 139, 140, 140L; CHEM 120, 120L 123, 123L, AFM 101, 131; ECON 101; MATH 109.

Mandatory Courses are listed below:

- BIOL 130, 139, 140, 140L, 208, 241, 330, 331, 342, 432, 443
- CHEM 120, 120L, 123, 123L, 266, 266L, 237, 237L
- ~~2.0 units chosen from BIOL 300 or 400 level; CHEM 333, 432, 433, 434. Excluded courses are BIOL 49X. Note: Students should choose BIOL and CHEM electives to focus on their area(s) of interest. Some advanced level courses may require prerequisites that are not counted in this program.~~
- 1.5 BIOL/CHEM electives from BIOL 345, 431, 434, 441, 442, 444, 474, 483; CHEM 333, 432, 434
- AFM 101, 102, 131, 201, 231, 291, 331, 361, 371, 381, 391, 401, 451, 461, 481, 491
- CS 330*
- ECON 101, 102, (ECON 221 or STAT 202 or ~~STAT 204~~ or STAT 211)
- ENGL 210F
- MATH 109
- MSCI 211**
- PHIL 215
- SPCOM 223
- **0.5 unit Free Elective**

* Before taking CS 330 students must show, to the satisfaction of the Plan Advisor, evidence of adequate prior preparation in basic computing concepts and use of spreadsheets, word-processors, and database management systems. This could also be demonstrated by successfully completing CS 100, either on campus or by distance education, ~~before the 1B term.~~

** MSCI 211 may be taken during the first Co-op work term as a Distance Education course

A schedule outlining the recommended term-by-term sequence of courses is available from the Science Undergraduate Studies office.

Tuition – This is an additional cost-recovery plan as defined by the Ministry of Education and Training. As such, tuition higher than the normal University of Waterloo tuition is required. For details of tuition costs, please see Chapter 3 of the Calendar.

Optometry Changes to Degree Requirements

Motion: To add 1.5 units to the total required to graduate with an OD degree.

The additional credits required are to accommodate the creation of six new labs (each worth .25 units), which have been separated from their respective lectures (i.e., OPT 152L, 155L, 252L, 255L, 347L, 375L).

Plan Reactivations
Biotechnology/Economics

Motion: To reactivate this modified plan, as indicated below (**additions** in bold; ~~deletions~~ in strikeout).

This plan was inactivated several months ago given its similarity to the Science and Business plans in Biotechnology and Economics. The decision was re-examined, resulting in a desire to continue the plan, but with a revised curriculum. The revised curriculum better integrates Science and Economics, updates Science Biotechnology to reflect new developments and courses; introduces students earlier to technology; and gives students access to the Science Workshop courses.

Requirements

1. Successful completion of ~~21.25~~ **21.75** units. Of the ~~21.25~~ **21.75** units required:
 - at least ~~20.0~~ **20.5** units must be lecture units
 - ~~11.25~~ **11.75** Science units
 - ~~8.0~~ **7.0** Economics units (~~including 0.5 units of Statistics~~)
2. Mandatory Courses are listed below:

Year 1A (Fall)

BIOL 130 Introductory Cell Biology
VIOL 140 Fundamentals of Microbiology
BIOL 140L Microbiology Laboratory
CHEM 12/0120L Physical and Chemical Properties of Matter/Laboratory
One Elective (0.5 unit) (~~Note 2~~) (**AFM 123 is recommended**)

Year 1B (Winter)

BIOL 139 Genetics
BIOL 241 Introduction to Applied Microbiology
CHEM 123/123L Chemical Reactions, Equilibria and Kinetics/Laboratory
ECON 102 Introduction to Macroeconomics
One Elective (~~0.5 unit~~) (~~Note 2~~)
CS 200 Concepts of Advanced Computer Usage
SCI 123 Science & Business Workshop 1

Year 2A (Fall)

~~BIOL 0.5 unit of 100- or 200-level unit (Note 1)~~
BIOL 208 Analytical Methods in Molecular Biology
CHEM 266/2666L Basic Organic Chemistry 1/Laboratory
ECON 201 Microeconomic Theory 1
ECON 211 Introduction to Mathematical Economics
ECON 220 The Principles of Entrepreneurship
SCI 223 Science & Business Workshop 2

Year 2B (Spring)

~~BIOL 0.5 unit of 100- or 200-level unit (Note 1)~~

BIOL 308 Principles of Molecular Biology

BIOL 342 Molecular Biotechnology 1

ECON 202 Macroeconomic Theory 1

ECON 220 The Principles of Entrepreneurship

ECON 221 Statistics for Economists

~~ECON 231 Introduction to International Economics~~

~~ENGL 210F Business Writing~~

Year 3A (Winter)

BIOL 331 Advanced Cell Biology

BIOL 361 Biostatistics and Experimental Design

CHEM 237/237L Introductory Biochemistry/Laboratory

ECON 301 Microeconomic Theory 2

ECON 321 Introduction to Econometrics

BIOL 0.5 unit of a 300- or 400-level unit (Note 3)

Year 3B (Fall)

BIOL 0.5 unit * (any level)

~~BIOL 330 Molecular Biology~~

~~BIOL 342 Molecular Biotechnology 1~~

CHEM 333 Metabolism 1

ECON 302 Macroeconomic Theory 2

ECON 371 Business Finance 1

SCI 323 Science & Business Workshop 3

Year 4A (Fall)

BIOL 443 Fermentation Biotechnology

BIOL 0.5 **1.0** unit of a 300- or 400-level course ** (Note 3)

~~ECON 361 Cost Benefit Analysis and Project Evaluation~~

ECON 401 Microeconomic Theory 3

SCI 423 Science & Business Workshop 4

One Elective (0.5 unit) (Note 2)

Year 4B (Winter)

BIOL 432 Molecular Biotechnology 2

BIOL 1.0 unit of a 300- or 400-level course ** (Note 3)

ECON 402 Macroeconomic Theory 3

ECON 403 Topics in Economic Forecasting or **ECON 421 Econometrics**

Notes

~~1. One of BIOL 110, 120*, 211, 221, 250, 273~~

~~2. CS 200 and PHIL 215 (Ethics) are strongly recommended.~~

~~3. 2.0 units chosen from BIOL 300 or 400 level, CHEM 432, 433, 434. Excluded courses are BIOL 49X. Note: Students should choose BIOL and CHEM electives to focus on their area(s) of interest. Some advanced level courses may require prerequisite that are not counted in this program~~

*** Students who wish to take advanced level Plant Biotechnology courses should take BIOL 120 in the 3A Winter term.**

*** BIOL 273 is a prereq. for BIOL 476**

**** BIOL recommended electives: BIOL 345, 354, 431, 433, 434, 441, 442, 444, 474, 476, 483.**

BIOL 474 is strongly recommended.

Plan Inactivations

Science Teaching Option [*effective immediately*]

Motion: To inactivate the Science Teaching Option.

The original agreement between UW and Queen's called for a maximum of 25 students in any one year. Over the last several years, on average, three to four students per year have been participating (this year it will be two or three), which makes the program's continuation not feasible.

FOR INFORMATION

Curricular Modifications

On behalf of Senate, Council approved several changes to academic plans, new courses, course changes and course inactivations for the Faculties of Engineering (Systems Design Engineering, Environmental Engineering) and Science (Biology, Biochemistry, Biomedical Science, Computational Science, Earth Sciences, Optometry, Science, Science & Business), and the Bachelor of Software Engineering.

/tlc
September 22, 2005

Gail Cuthbert Brandt
Chair