

# RYERSON UNIVERSITY

## AGENDA

### ACADEMIC COUNCIL MEETING

**Tuesday, May 1, 2007**

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**5:30 p.m.** Dinner will be served in The Commons, Jorgenson Hall, Room POD-250.

**6:00 p.m.** Meeting in The Commons.

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Pages 1-2	<b>1. President's Report</b> 1.1 President's Update
Pages 3-7	1.2 Ryerson Achievement Report
Pages 8-9	<b>2. Report of the Secretary of Academic Council</b> 2.1 Academic Council Schedule for 2007-2008
Pages 10-16	<b>3. The Good of the University</b>
Pages 17-24	<b>4. Minutes:</b> 4.1 Minutes of the April 4, 2007 meeting
Pages 25-26	<b>5. Business Arising from the Minutes</b> 5.1 Tripartite Curriculum Review 5.1.1 <b>Motion:</b> <i>That Academic Council endorse the May 1, 2007 Tripartite Curriculum Review Report</i>
Pages 27-50	<b>6. Correspondence</b>
	<b>7. Reports of Actions and Recommendations of Departmental and Divisional Councils</b>

7.1 From the G. Raymond Chang School of Continuing Education:  
Course changes in Certificate in Food Security Certificate; and Project Management (Engineering, Architecture and Science)

7.2 School of Graduate Studies:  
7.2.1 Review of status of new Graduate programs for 2008  
7.2.2 Course description changes in Nutrition Communication; Biomedical Physics; Master of Nursing; and Master of Business Administration  
7.2.3 Curriculum changes in Chemical Engineering; Management of Technology and Innovation; Master of Business Administration and Biomedical Physics  
7.2.4 Admissions requirement changes in Nutrition Communication  
7.2.5 Course additions/Deletions in: Computer Science; International Economics and Finance; Biomedical Physics; Chemical Engineering; Master of Nursing (Primary Health Care Nurse Practitioner); Management of Technology and Innovation; and Master of Business Administration

Pages 51-53	<b>8.</b>	<b>Reports of Committees</b>
	8.1	Report #W2007-3 of the Nominating Committee
	8.1.1	<b>Motion:</b> <i>That Academic Council approve the members of the Standing Committees as presented in the report</i>
Pages 54-79	8.2	Report #W2007-2 of the Academic Standards Committee
	8.2.1	<b>Motion #1:</b> <i>That Academic Council approve the Certificate in Enterprise Mainframe Computing for IBM Z Series Computers.</i>
	8.2.2	<b>Motion #2:</b> <i>That Academic Council approve the Certificate in Environmental Public Health Leadership</i>
	8.2.3	<b>Motion #3:</b> <i>That Academic Council approve the revisions in Certificate in Computer Applications.</i>
	8.2.4	<b>Motion #4:</b> <i>That Academic Council approve the discontinuation of the Certificates in Computer Programming (Computer Systems) and Computer Programming (Engineering)</i>
	8.2.5	<b>Motion #5:</b> <i>That Academic Council approve the revisions in Certificate in Family Supports</i>
	8.2.6	<b>Motion #6:</b> <i>That Academic Council approve the revision in Certificate in Project Management.</i>
	8.2.7	<b>Motion #7:</b> <i>That Academic Council approve the program in Mathematics and Its Applications leading to the Bachelor of Science (Mathematics) degree</i>
	8.2.8	<b>Motion #8:</b> <i>That Academic Council approve a reduction in the Liberal Studies requirement for engineering programs to a minimum of four one-semester courses</i>
	8.2.9	<b>Motion #9:</b> <i>That Academic Council approve the program in Biomedical Engineering leading to the Bachelor of Engineering (Biomedical Engineering) degree</i>
Pages 80-104	<b>9.</b>	<b>New Business</b>
	9.1	Academic Plan Update
Pages 105-125	9.2	Report to Academic Council on SRC for the period April 2006 March 2007
	<b>10.</b>	<b>Adjournment</b>

**Ryerson University  
Academic Council**

**President's Update  
April 17, 2007**

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**Thank you** – In the last President's Update to Academic Council of the 2006-07 year, I would like to extend my sincere thanks and compliments to every member of Academic Council for your dedication to the university's academic progress and strength. Your voice and your input provide guidance and direction from those most directly involved in the way Ryerson develops, sees itself, and is seen by others. Your contribution is greatly valued and appreciated.

I would also like to acknowledge the transition in our Provost and Vice President Academic, as our key colleague in Academic Council. It is a privilege to pay special tribute to Dr. Errol Aspevig, for his help, support, and service to Academic Council over many years; and to welcome Dr. Alan Shepard in the Fall.

Also anticipated in the Fall is the name change from Academic Council to Senate, following the amendments to the Ryerson Act which will be enacted by the legislature this Spring.

**Master Plan** – The process continues to engage members of the community in a number of ways, most recently a discussion with students in the Urban and Regional Planning program, and a presentation to the Board of Directors of Covenant House.

We have also made progress on establishing a dynamic 'Friends of the Gallery' contact list comprising a group of potential supporters for the Ryerson Photography Gallery and Research Centre. We are continuing to develop the strategic case for fundraising and public involvement to share this cultural gift, and to benefit the programs of the university.

**University Budget** – We are in the final stages of preparing the 2007-08 Budget for the Board of Governors meeting of April 30<sup>th</sup>. In developing the budget, we are continuing the four themes of the Quality Agenda – undergraduate improvement, graduate growth, SRC expansion, and enhanced reputation. With the leveling of undergraduate enrolment at approximately current numbers, and with government support, this year's budget emphasizes graduate education as an overarching theme connected to all of our goals.

**Government Relations** – Following the release of budgets at both the federal and provincial levels, and in anticipation of a Fall 2007 Ontario election, universities are working together under the auspices of COU to develop a strong pre-election advocacy strategy at the system level. The approach will be worked out over the coming months, and more details will be shared at the first meeting of Senate in the Fall.

**Achievements** – Congratulations and very best wishes are extended to:

- ❖ Professor R. Bruce Elder, one of the recipients of the 2007 Governor General's Awards in Visual and Media Arts announced by the Canada Council for the Arts – in honour of the innovative, influential span of his practice and the demanding nature of his films
- ❖ Sean Nix, Civil Engineering, for being the first Ryerson graduate student to win the Canadian Institute of Transportation Engineers (CITE) Annual Student Presentation Competition for his presentation entitled "Smart Growth and Travel Behaviour in Canada" – in the same category as graduate students from the University of Toronto and University of Waterloo
- ❖ Valerie and Andrew Pringle for their support, and everyone involved in the design and implementation of the Environmental Green Roof on the George Vari Engineering and Computing Centre – for helping Ryerson University become a finalist in the 'Green Roof' category in the 2007 Green Toronto Awards to be decided May 1<sup>st</sup>

- ❖ The Ryerson-Centennial-George Brown Collaborative Nursing Degree Program and the Ryerson Post Diploma Program, for each being awarded a 7-year accreditation, the maximum possible under the national accreditation system
- ❖ The School of Fashion for hosting colleagues from around the world at the 2007 International Foundation of Fashion Technology Institutes (IFFTI) Conference, welcoming delegates from fifteen countries with the outstanding 'Mass Exodus' presentation of student work
- ❖ Professor Bill Whelan, jointly appointed to Ryerson University and the University of Prince Edward Island, for launching the student exchange pilot project called EDGE (Experiences Diversity Growth Exchange) and dubbed the "Maple Leaf Major" by the *Toronto Star* for its national scope and appeal
- ❖ Members of the Ryerson community inducted into the 25-Year Club for long service, for their commitment, support, wonderful stories and spirit
- ❖ The Ryerson Faculty Association and the Ryerson Students' Union for taking the initiative to host the "Racism at Ryerson Forum" to encourage awareness and dialogue on race and diversity
- ❖ All of the students honoured in year-end celebrations of achievement, including:
  - Tri-Mentoring Program Student Recognition Ceremony
  - Office of International Affairs event for international student achievement
  - Sports & Recreation leadership breakfast
  - Interuniversity Athletics Banquet
  - Dennis Mock Leadership Awards
  - ESPY Digital Media Showcase
  - Millennium Scholarship luncheon reception
  - and any other events across campus recognizing excellence and commitment.

Cpl. Brent Poland (Image Arts '98) – The Ryerson University community expressed condolences and a deep sense of loss to the parents and family of Cpl. Brent Poland, one of the six Canadian soldiers killed in Afghanistan on April 8, 2007. His belief in peace and stability, and his resolve to make a difference in access to education and equality for girls and women, inspired his commitment to serve. Flags on campus were flown at half-mast.

April 16, 2007

Dr. Charles W. Steger, President  
 Virginia Tech  
 210 Burruss Hall  
 Blacksburg, VA 24061

Dear Dr. Steger,

All of us in the Ryerson University community are thinking of everyone at Virginia Tech with support and sympathy. We wanted to reach out on this tragic day to say you are in our hearts, with sincere condolences and most fervent hopes for healing.

It is so hard to reconcile the openness of an academic environment founded on tolerance and the willing exchange of ideas with actions that are so impossible to comprehend. In the face of such sadness, we extend our deepest bond of understanding and strength – and the reaffirmation of our shared belief that teaching and learning is the path of hope.

Kindest regards.

Sincerely,

Sheldon Levy

# **RYERSON ACHIEVEMENT REPORT**

A sampling of achievements and appearances in the media by members of the Ryerson Community for the May 2007 meeting of Academic Council.

## **Events**

Ryerson University alumnus **Cpl. Brent Poland**, one of six Canadian soldiers killed by a roadside bomb in Afghanistan in early April, was profiled by the *Montreal Gazette*. He graduated from the School of Image Arts in 1998, specializing in digital graphics.

On April 4<sup>th</sup>, 56 students from across the University received the **Dennis Mock Student Leadership Award**, which honours outstanding graduating students who demonstrate leadership, dedication and commitment to University life.

**The Ryerson Rams celebrated the 2006-07 season at the 59th annual Interuniversity Sports Awards. Senior administration, coaches, athletic therapists and over 180 student-athletes from 14 teams gathered to recognize athletic achievement at Ryerson.**

This year, almost 200 Ryerson Fashion and Theatre students collaborated to make **Mass Exodus 2007**, the annual showcase of 4<sup>th</sup> year fashion students collections, the largest show ever. Fashion student **Chris Benet** appeared on Citytv's *Breakfast Television*, discussing the creations at the show.

The School of Fashion hosted the ninth annual **International Foundation of Fashion Technology Institutes (IFFTI) Conference**. IFFT is a global organization of fashion schools dedicated to the advancement of education, research and development in fashion design, technology, business and related industries. The conference combined research presentations with guest speakers and special events. Research presentations were covered by CBC Radio *Here and Now* and CityTV.

**Professor Avner Levin's** lecture in the Ethics at Ryerson Speaker Series organized by the Faculty of Arts, "Who's Watching the Watchers? Workplace Privacy" was telecast on TVOntario's "Big Ideas".

## **Media Appearances**

**President Sheldon Levy** published an op-ed piece in the *Toronto Star* on the topic of the provincial plan to enhance higher learning.

The *Toronto Star* and *Metro News* profiled a unique student exchange program between Ryerson and the University of PEI set to launch this fall. The article quoted **President Sheldon Levy**, EDGE Coordinator **Bill Whelan**, Professor, Department of Physics, and student **Amy Clarke**. The EDGE exchange program was also profiled in the *Charlottetown Guardian*, citing President Levy and quoting Professor Whelan, as well as Kathleen McNeill, a UPEI student, one of eight who will attend Ryerson next fall.

*Insidehighered.com* reported on the appointment of **Alan Shepard** as Ryerson's incoming Provost and Vice President, Academic.

Image Arts Professor and Director of the Graduate Program in Communication and Culture **R. Bruce Elder** made headlines across the country when he received the Governor General's Award in Visual and Media Arts, including *Playback Magazine*, the *Globe and Mail*, the *Toronto Star*, the *Montreal Gazette*, the *National Post*, *Ottawa Citizen*, *Saskatoon Star Phoenix*, *Kingston Whig-Standard*, *Prince George Citizen*, *Orillia Packet and Times*, *Cornwall Standard-Freeholder* and *CBC.ca*.

The *Georgetown Independent* profiled a production by Ryerson's Act II Studio that is based on the experiences of persons living with dementia and daughters whose mothers were diagnosed with Alzheimer's disease.

Psychology Professor **Frank Russo** was interviewed on Citytv's *City News at Six* for a segment on the effects of the Internet on cognition.

The *Toronto Star* profiled a study by Arts and Contemporary Studies students **Erica Gualtieri** and **Edyta Polnicki**, who are conducting research on the effects of wealth on ethics. Director of the ACS program **Mark Lovewell** was also quoted in the article.

The *Toronto Star* profiled **Jordan Scott**, author and creative writing teacher at Ryerson

The *Toronto Star* reported on research focussing on transit design by fourth-year engineering student **Mark Fernando**.

**Murtaza Haider**, School of Retail Management, spoke to CBC Radio's *Metro Morning* about traffic congestion in Toronto.

CBC Radio's *Here and Now*, the *Toronto Star* and the *National Post* profiled a group of Interior Design students who are creating vendor carts that can sell healthier alternatives to hot dogs, and interviewed **Lorella Di Cintio** and **Stefany Koutroupis**.

**Greg Elmer**, Bell Globemedia Chair and **Nora Loreto**, Vice President of RSU, spoke to the *Toronto Sun* about young adults finding their voice on YouTube. Dr. Elmer is conducting a study on the impact of video-sharing and similar websites on the political process. He was also interviewed by CBC Radio's *Metro Morning* and CBCS-FM (Sudbury).

The *Toronto Sun* reported on Chang School student **Karen Aiken**, a dentist who enrolled in the landscape design program and whose park design won a contest.

Professor **Grace-Edward Galabuzi**, Department of Politics and Public Administration, was quoted in a *Toronto Star* article on a job training program in Toronto's Jane-Finch area.

The *Toronto Sun* profiled a pyrotechnics special effects course offered at the Chang School that is unique in the world. The article quoted instructor **Ron Craig**.

Professor **David Mackenzie**, Department of History, commented in the *Toronto Star* on the need for iconographic memories.

The *Toronto Star* spoke to **Alice Chu**, School of Fashion, about upcoming colour trends.

Professor **Judy Rebick**, Department of Politics and Public Administration, Sam Gindin Chair in Social Justice and Democracy, spoke to SRC *Radio-Journal* about the backlash against a new North American partnership.

First-year Business Management student **Toby Whitfield** spoke to the *Toronto Star* about the role of research in selecting the right post-secondary institution.

CBC Radio's *Here and Now* interviewed Professor **Rena Mendelson**, School of Nutrition, in reaction to a report on childhood obesity.

A *Globe and Mail* article on high-profile rankings of MBA schools quoted **Ken Jones**, Dean, Faculty of Business. Elsewhere, remarks delivered by Dr. Jones at a shopping centre industry conference on the topic of the aging consumer were carried by the *Calgary Herald*, *Ottawa Citizen*, and *Nanaimo Daily News*.

The *Globe and Mail*'s "Report on MBA Schools" listed Ryerson's Faculty of Business as one of several universities offering unique MBA degree programs.

A *Globe and Mail* article on the city of Toronto's call for the province to help solve its budget woes quoted **David Amborski**, Director, School of Urban and Regional Planning. He also appeared on CBC Radio's *Ontario Today* discussing the city's budget.

A *Toronto Star* article on the City of Toronto's budget quoted Professor **Myer Siemiatycki**, Politics and Public Administration. He also published an opinion piece in the *National Post* on "One resident, one vote."

Associate Dean **Wendy Cukier**, Faculty of Business, commented in the *HR Reporter* on the preliminary findings of a study by Ryerson's Diversity Institute in Management and Technology, and Catalyst Canada.

The *Globe and Mail* quoted **Nora Loreto**, Vice President, Education, Ryerson Student Union, in an article on educators grappling with policing abusive conduct in online forums.

**Chris Wright**, education and campaign coordinator for RyePride, appeared on CKGL-AM's *Jeff Allan Show* discussing the campaign for unisex washrooms on university campuses.

The *Edmonton Journal* and *Ottawa Citizen* profiled Image Arts alumnus **Adam Garnet Jones** and his new short film, *Cloudbreaker*.

CBC Radio's *Here and Now* interviewed Professor **Joe Springer**, School of Urban and Regional Planning, about a study examining whether zero tolerance policies against fighting in schools lead to homelessness among Caribbean youth. He also spoke to the *Globe and Mail* about the report.

Image Arts students **Peter Harte**, **Paul Pritchard** and **Vanessa Leggett** were interviewed by the *Toronto Star* about the Axis Festival, where students combine everyday technologies to create art.

Professor **Greg Inwood**, Politics and Public Administration, appeared on Rogers TV's *Goldhawk Live*, discussing the federal budget released by Finance Minister Jim Flaherty. He was also quoted in an article carried by the *Peterborough Examiner*, *Brockville Recorder and Times*, *Timmins Daily Press* and *Owen Sound Sun-Times* on the provincial budget.

Sociology Professor **Murray Pomerance** appeared on CHML-AM (Hamilton) to discuss the *Canadian Idol* and *American Idol* reality television shows, and on a separate occasion, commenting on the move by filmmakers to increase sex and violence to boost their bottom line. He also spoke to CHCH's *CH Live*, discussing a radio personality who made racial comments about a basketball team.

Professor **Mary Jo Nicholson**, School of Business Management, appeared on CBC TV's *News Sunday* as part of a panel discussion on workplace privacy and employers spying on employees.

The *Globe and Mail* profiled Journalism alumna and CBC journalist **Wendy Mesley**.

The *Ottawa Citizen* reported on the rookie-of-the-year honours awarded by Canadian Interuniversity Sport to a number of players in their respective conferences, including Ryerson basketball forward **Boris Bakovic**.

Professor **Avner Levin**, School of Business Management, appeared on CBC Radio's *Metro Morning*, CBQ-FM (Thunder Bay) CBE-AM (Windsor) and CBCL-FM (London), in reaction to the head of the NHL Players Association being suspended for accessing players' private emails.

The *Toronto Star* reported on the VW Beetle push by the Ryerson Engineering Student Society, which raised \$3,000 for the Hospital for Sick Children.

**Elizabeth Podnieks**, Professor Emerita, School of Nursing, was quoted in an article on elder abuse on the news website *Vision.org*.

Professor **Martin Antony**, Department of Psychology, discussed phobias on CKWR FM (Waterloo) and in the *New Brunswick Telegraph-Journal*.

The *Toronto Star* profiled **Sivan Raz**, who is completing her masters degree in Public Policy and Administration, about her research on the political decentralization of developing nations.

A *Globe and Mail* article on a possible shift in political power due to population growth in the suburbs quoted both Professor **Myer Siemiatycki** and Chair **Neil Thomlinson**, Department of Politics and Public Administration.

Professor **Ida Berger**, School of Business Management and Centre for Voluntary Sector Studies, commented in the *Globe and Mail* on Canadians who use their holidays to volunteer abroad.

Professor **James Mars**, School of Urban and Regional Planning, was quoted in a *National Post* article on whether representation in Parliament reflects population growth. He also commented in the *Toronto Star* on the 15-year plan for the TTC that shifts the focus from subways to electric light rail cars and more streetcars. He also appeared on CBQ-FM (Thunder Bay), CBO-AM (Ottawa) and CBCS-FM (Sudbury) discussing highway congestion and traffic jams.

**Mustafa Koc**, Professor of Sociology and Director, Centre for Studies in Food Security, appeared on TVO's *The Agenda* as part of a discussion panel on people's changing relationship with food.

Rogers' *First Local* reported on a display of dance and fashion at an annual charity show in London featuring work by Ryerson, Centennial College and University of Western Ontario students.

*National Geographic* reported on Computer and Electrical Engineering Professor **Ali Hussein**'s study on lightning striking the CN Tower.

**Linda Lewis**, Chair, School of Fashion, was quoted in the *Toronto Star* and the *National Post*, commenting on NDP MPP Cheri DiNovo's call for fashion design to be included in the mandate of the provincial Ministry of Culture. She also commented on fashion designers developing a social conscience in the *Barrie Examiner*, *Peterborough Examiner*, *North Bay Nugget* and *Victoria Times-Colonist*.

**Mary McAllister**, School of Nursing, appeared on Global TV, commenting on infection control following a serious bacteria outbreak at Women's College Hospital's neo-natal unit.

Professor **Michael Doucet**, Department of Geography and president, Ontario Confederation of University Faculty Associations, commented on the need for more funding for graduate programs in a Canadian Press article carried by the *Toronto Sun*, the *Hamilton Spectator* and the *Toronto Star*.

Professor **Rob Wilson**, School of Business Management, was quoted in a *Marketing Magazine* article about controversial television ads.

**Saron Ghebressellaissie**, a third-year RTA student, was profiled in the *Toronto Star*, as a winner of the YWCA 2007 Women of Distinction Award.

**Business Edge.ca** and Sirius Satellite Radio reported on a study by Ryerson and Catalyst Canada on workplace diversity.

Professor **Gabor Forgacs**, Hospitality and Tourism Management, was quoted in a *Globe and Mail* article on Toronto's first eco-friendly hotel.

The *Toronto Star* profiled Theatre student **Janick Hebert**, star of the Tarragon Theatre production *Scorched*.

Several Ryerson Journalism alumni were among the finalists for National Newspaper Awards, including **Paul Waldie** of the *Globe and Mail*, **Naomi Powell** of the *Hamilton Spectator*, **Jen Gerson** of the *Toronto Star* and **Colin Hunter** of the *Kitchener-Waterloo Record*.

*Prepared by the Office of Public Affairs.*

## ACADEMIC COUNCIL CALENDAR

2007-2008

### ACADEMIC COUNCIL MEETINGS

**(For Agendas and Minutes, please go to: [www.ryerson.ca/acadcouncil/agenindex.html](http://www.ryerson.ca/acadcouncil/agenindex.html))**

MEETING DATE	AGENDA DEADLINE
Tuesday, October 2, 2007	Tuesday, September 18, 2007
Tuesday, November 6, 2007	Tuesday, October 23, 2007
Tuesday, December 4, 2007	Tuesday, November 20, 2007
Tuesday, January 29, 2008	Tuesday, January 15, 2008
Tuesday, March 4, 2008	Tuesday, February 19, 2008
Tuesday, April 1, 2008	Tuesday, March 18, 2008
Tuesday, May 6, 2008	Tuesday, April 22, 2008

**PLEASE NOTE:** Agenda deadlines must be adhered to. All reports and documents must be submitted electronically (with “**Signature on File**” inserted in the signature section of the report/ document) to: [lstewart@ryerson.ca](mailto:lstewart@ryerson.ca), by the agenda deadline. (It is preferred that all electronic documents be submitted in Microsoft Word.) Documents and reports, which contain signatures, should also be submitted in hard copy to the Office of Academic Council, Room JOR-1227, Jorgenson Hall. Meetings will be held in the Commons (Room POD-250) and will commence at 6:00 p.m. Dinner will be available from 5:30 p.m. If you have any questions, please contact the Secretary at ext. 5011.

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### SUBMISSION OF CURRICULUM/PROGRAM CHANGES

*See guidelines at [www.ryerson.ca/acadcouncil/Other.html/submittinguide.pdf](http://www.ryerson.ca/acadcouncil/Other.html/submittinguide.pdf) for details.*

TYPE OF CURRICULUM CHANGES	DEADLINE FOR SUBMISSION
Routine Course Changes	October 8, 2007
Significant Course Changes	October 8, 2007
Complex Curriculum Changes: (for full proposal to Academic Standards Committee)	June 29, 2007
Complex Curriculum Changes: (to submit CCF-A/N, ACA, CCS to Academic Advising)	October 8, 2007
Last date to submit ACA and CCS forms	October 23, 2007
Final Academic Council meeting to approve undergraduate curriculum, course and program changes for 2008/2009	November 6, 2007

#### **Consultation:**

Please contact Mehmet Zeytinoglu (Vice-Chair, ASC) ext. 6078 or Nancy Cavallin (Calendar Editor, Academic Advising) ext. 6007.

Any change identified by Academic Advising outside of the realm of a Routine or Significant Course change will be directed to Diane Schulman, Director, Office of the PVPA. Please consult Academic Advising if you think this is a possibility.

## **FACULTY COURSE SURVEYS**

**Schedule to follow.**

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### **ACADEMIC COUNCIL ELECTIONS**

*(For Election Guidelines and forms, please access:  
[www.ryerson.ca/acadcouncil/otherforms.html](http://www.ryerson.ca/acadcouncil/otherforms.html))*

E-mail message to Students on Elections	Monday, January 14, 2008
Nominations open	Monday, January 21, 2008
Orientation meeting for student candidates	Monday, January 28, 2008
Nominations close	Wednesday, January 30, 2008
Names of nominees forwarded by Chair to Dean	Thursday, January 31, 2008
Names of nominees forwarded by Dean to Secretary of Academic Council	Friday, February 1, 2008
E-mail message to students announcing candidates	Monday, February 4, 2008
Student Voter Eligibility lists verified by Registrar's Office	Wednesday, February 6, 2008
On-Line Student voting (8:00 a.m. – 9:00 p.m.)	Monday, February 11, 2008 – Friday, February 15, 2008
Faculty/Chair vote (10:00 a.m. – 3:00 p.m.)	Monday, February 11, 2008
Faculty/Chair results to Secretary of Academic Council	Friday, February 15, 2008
Verification of Student On-Line Votes	Monday, February 18, 2008

**MINUTES OF ACADEMIC COUNCIL MEETING**

**Wednesday, April 4, 2007**

<b>Members Present:</b>			
<b><u>Ex-Officio:</u></b>	<b><u>Faculty:</u></b>	<b><u>Students:</u></b>	
K. Alnwick	P. Albanese	G. Hunt	G. Alivio
E. Aspevig	D. Androutsos	D. Johnston	L. Brown
L. Bishop	I. Baitz	J. Lassaline	R. Castelino
S. Boctor	J. P. Boudreau	R. Keeble	O. Falou
C. Cassidy	V. Chan	D. Lee	R. Gherman
G. R. Chang	P. Corson	D. Mason	T. Haug
M. Dewson	M. Dionne	A. Mitchell	T. Koulik
D. Doz	S. Edwards	J. Morgan	N. Loreto
Z. Fawaz	D. Elder	M. Panitch	S. Omer
U. George	C. Evans	S. Rosen	R. Rose
K. Jones	E. Evans	A. Singh	L. Yung
A. Kahan	C. Farrell	C. Stuart	
S. Levy	M. Greig	D. Sydor	
A. Shilton			<b><u>Alumni:</u></b>
P. Stenton			
A. Venetsanopoulos			
M. Yeates			
<b><u>Regrets:</u></b>	<b><u>Absent:</u></b>		
C. Baskin	A. Ashraf		
T. Dewan	B. McIlroy		
A. Ganuelas	A. Lyn		
S. Giles	J. Pierce		
L. Grayson	A. Warnick		
R. Hudyma			
C. Katsanis			
R. Ravindran			
P. Schneiderman			
A. Walker			

- 1. President's Report** – In addition to the written submission, the President reported that he had attended the Dennis Mock awards recognizing student leaders earlier in the day and he applauded the work of the students. He did a short recap of the Ontario budget, indicating that advocacy for more capital funding will continue.
- 2. Report of the Secretary of Academic Council** – No report.
- 3. Good of the University** – E. Evans chaired. N. Loreto commented on the student Code of Non-Academic Conduct in relation to an issue that has recently occurred. On the Day of Student Action, students went to a press conference with the Minister of Training Colleges and Universities. T. Whitfield, who has been elected to Academic Council for next term, was told that he would be arrested if he was not a member of the press so he signed in as a member of the press. She stated that Section F1 of the Student Code of Non-Academic Conduct says that the Director of Student Services deals with these issues informally and he was told that he had to write a letter of apology. She believes that this policy needs to be reviewed and technical issues dealt with. She believes that the student should not have been charged. The President commented that any student can appeal to the Academic Council Appeals Committee and that he will discuss the policy review with his colleagues. If the issue had been raised earlier, he could have had more information. Z. Fawaz agreed that it is time to revisit the Student Code of Non-Academic Conduct. This will happen in the next few weeks or months, but there will be no change to what is happening in this case, and he considers what happened to be a serious offence. The means did not justify the end. The President asked that the particulars of the case not be discussed.

G. Alivio stated that there was a CESAR staff member and the CESAR President at the press conference as well, and that they received letters saying that they would be blocked from registering if they applied to Ryerson the next semester. She wonders why Student Services is monitoring these people, who said they were with Nightviews, the CE student paper.

R. Rose stated that N. Loreto received death threats when she made comments on white culture, based on items posted on Facebook, and that there was not much reaction from the university to these threats. She believes that this should be taken seriously. She commented on a situation in a journalism class, which she and N. Loreto are taking, when the editor of the Ryersonian and J. Rebick were invited to class to discuss a related Ryersonian article. It was a very uncomfortable situation. The Ryersonian quotes the President as saying that the university upholds diversity, is not racist, and is inclusive. She asked when the university will make a statement on these death threats, and what actions will be taken. The President responded that to even imagine that the university did not take this seriously was inconceivable. There was a high-level meeting on what should be done, and the assumption that nothing was done is incredibly wrong.

N. Loreto commented that the operating agreement for the Student Campus Centre has been signed after 2.5 years. She also stated that this will be her last meeting of Council and she invites all members to meet her at the Campus Centre after the next meeting in May.

T. Koulik commented that distance education courses fill up quickly over the summer and there is a need for more spaces. A. Shilton commented that the number of courses will grow by 45-50 per year. Resources are an issue, and she would like to hear additional courses are being requested.

G. Alivio announced that CESAR will be paying all part-time employees \$10/hour.

**4. Minutes.**

**Motion: That Academic Council approve the minutes of the March 6, 2007 meeting.**

**N. Loreto moved, T. Koulik seconded**

**Minutes approved.**

**5. Business Arising from the Minutes** – The President asked E. Aspevig to present the report of the *ad hoc* committee asked to review the Good of the University session. E. Aspevig reported that there were two meetings of the committee. C. Cassidy was on the committee that created this session about 10 years ago. The period at the beginning had turned into a “question period” and it was felt that a Good of the University session, confined to 30 minutes and chaired by a Vice-Chair, would allow people to bring things forward for information and discussion. Topics would be identified for meaningful discussion of issues relevant to the academic life of the university. The *ad hoc* committee recommends that the session reflect the original concept for the session. Reviewing the number of people who have spoken over the last few years, the *ad hoc* committee recommends that the by-law allowing two comments per member should be upheld. Important information should be brought forward, and topics could be brought forward for discussion. There could be regular reports by standing committees (e.g. Learning and Teaching or SRC) that could generate discussion. For pressing issues, the first course of action should be to contact those with primary responsibility for the matter. This would allow issues to be resolved in an effective way. N. Loreto stated that there are members around the table with more knowledge of issues and who would therefore be more likely to speak at these sessions. By and large she agrees with the report. Students view the session as a time to get something done and they value the sessions. The President suggested that this be moved to the Composition and By-Laws Committee for its discussion.

**6. Correspondence** – There was no correspondence.

**7. Reports of Actions and Recommendations of Departmental and Divisional Councils** - There were no comments on the items presented for information.

**8. Reports of Committees** – there were no reports.

**9. New Business**

9.1 Tripartite Curriculum Review

E. Aspevig presented the discussion paper. The final report will be brought to the May Council meeting for approval. If there are any further comments, or if any group would like a further discussion, they should email him.

Discussion: R. Gherman asked about transferring credits to other programs and universities. While this was not specifically on the topic of the TPC review, the Provost replied that each university is autonomous, and normally admission is done not on a course by course basis but on a program basis. Ryerson programs are designed to allow for transfer to graduate programs.

D. Mason asked what ASC would do if a program brings forward a proposal for a revised or new program based on a prerequisite structure instead of a lock-step program, or if there was a proposal to open up PR courses to any offered at the university. The response to the first question was that a pre-requisite structure could be accommodated by the TPC, but it might be difficult to schedule. The implications for implementation would need to be considered. In fact, Journalism had just had such a curriculum revision approved. On whether the range of courses could be opened up to students so they could take any course they could schedule, it was noted that ASC would need to investigate. There is a recommendation that there be a subcommittee of ASC to review the PR tables.

C. Stuart stated that she appreciates the TPC, and the report is well formed in offering gradual change, despite the fact that it is difficult for students to understand the category labeling of the courses. She supports D. Mason's proposal on establishing prerequisite structures. She is concerned with the requests to reduce PR tables as she believes this is driven by scheduling and not curriculum issues. Depending on the term, students may not be able to get courses and they need large numbers of them to choose from. If the PR elective tables are reduced there will be more course substitutions, thus increasing paper work. She also supports the increase in LS tables, but this increases one thing while decreasing another.

L. Brown commented that in Nutrition students come in with other degrees, and students get credit for PR courses, but not for LS courses. There are students who would prefer more transfer of LS courses. E. Aspevig replied that courses are to be judged by the role that they play rather than just the content. One of the things that the paper suggests is that the onus be shifted to justifying not giving a credit rather than justifying giving a credit. This will help address the issue. The broader community believes that an overly instrumental program should be avoided. Those who come from outside programs sometimes already come with substantial backgrounds.

R. Rose commented that she is an out-of-phase student as she took off two years. The courses she needed were no longer required, and she was not guaranteed a spot. She asked what out-of-phase students should do. E. Aspevig commented that this is what D. Mason was referring to when he asked about a prerequisite structure. K. Alnwick commented that our curriculum is updated more frequently than other institutions. The phase-out curriculum needs to be created, and there are challenges. Student access is an issue that he is concerned about.

J.P. Boudreau agreed with the spirit of the report. He asked if there is a way to ensure that PR courses will be made available to students. He is intrigued about writing competency and wonders about how this can be addressed. E. Aspevig stated that ASC is concerned about the size of the PR tables, and students' ability to get these courses. The consultants' report stated that as the university changes there is less time for faculty to be involved in the process of teaching students how to write well. It is not reasonable that all of the need for instruction about writing be dealt with in the LS. There are real writing experts in English and Professional Communication who can be asked to advise on this problem.

D. Sydor commented on recommendation 15 regarding the number of small courses to be taught by professors. She asked what a small class is and how this will be funded. E. Aspevig responded that 30-45 might be considered small, but this depends on programs. We must not lose sight of the need to think about having small classes with professors. The issue is how to balance large and small classes.

Academic Council expressed support for the direction the report has taken.

## 9.2 Recommendations of the Joint Committee to review the Faculty Course Survey (FCS)

M. Dewson stated that there are a variety of reasons to review the FCS. The discussion at Academic Council is part of the consultation process. The document will not come to Council for approval as it is a matter of collective bargaining and will be approved by the RFA. However, he would like input from the community including students. M. Dionne commented that she also wanted to hear from Council, and that she has already met with the Learning and Teaching Committee and the RFA reps, and there will be town halls. All of the input will be noted and a final presentation made to the AGM of the RFA on May 3. Any further input is welcome by email.

J.P Boudreau thanked the committee for bringing the survey forward. He likes a lot of the content, the increased security, and the options allowing faculty to develop their own survey questions. On-line delivery will be a radical departure. He asked how students would respond and if this provides a fair evaluation. There needs to be a psychometric analysis of this. He asked what the question “Class meeting as scheduled and on time” actually assesses. As there are TAs and markers, there is an intertwining of the instructor and the TA which might be an issue.

N. Loreto commented that TAs want to be evaluated. She is pleased about the comment sections. This is a victory for students. The integrity of on-line systems is a question, based on the fact that the students can be identified. Moving to web-based rather than in-class, students who have a bone to pick will go online to do so. There might be faculty who get strange responses. She realizes that there was no student involvement because it was a collective agreement issue. She thinks there might be a better way to ask the questions. There may be things that students want to ask about professors. The current form has a section for both the course and the faculty. This survey is about the faculty and there is nothing to indicate if there are complaints about the course.

J. Morgan commended those who were involved with this. He had sat on a previous committee. He commented on the elimination of question 10 (7) – the proposed questions seem to provide a basis for information and analysis but lack a conclusion. Perhaps there could be a summary question that gave an overall impression of the teacher and the course. There should also be a section on TAs. He noted that “course outline” should be replaced with “course handouts” instead. The question on “instructor available for consultation” is too open-ended and offers a subjective analysis from students. The current question is about office hours. This wording should be rethought.

A. Mitchell commented on the questions for studio courses and asked if this could be carefully considered. She recognizes that questions can be selected, but these questions assume that studios are skill-based. These should be reworked.

I. Baitz stated that this is good for tailored feedback, and the comments are appreciated. In GCM the current survey does not address whether it is a course survey or a faculty survey. Students are filling out a sheet on a specific professor, but they may have more than one in the course if a

single course has one professor for lecture and another for lab. He asked if the survey could be done in class where students sit in front of computers He also asked why is it a seven-day window, and if the survey can be redone after it is submitted.

T. Koulik commented that students who do not participate should not be able to see their grades, or that students should get a participation grade for doing the survey.

D. Lee applauds the committee's work and is concerned about the technical reliability of Blackboard.

M. Dionne summed up by asking for specific suggestions from members. She thought this was going to be easier than it was, and the committee has been at it a long time. The range of opinion was great. Research raises questions about reliability of results. What everyone agrees on is that there is not as much wrong with instruments as with the use of the results. There was a consensus that teaching is a priority, and that is why the questions were chosen. The question about effectiveness is more summative than formative. The questions were designed to provide some feedback for the instructor which is basic to run a class. We would not be the first university to introduce online surveys, as it has been done over 10 years at large universities. What will likely happen is that there will be some initial diminution of online response rate. There are some suggestions for this. The survey could be done in class. M. Dewson stated that while everyone's comments are taken seriously, there cannot be unanimity. Technically, there has been work with CCS and there have been trial runs. How the security operates will need to be communicated. Once the form has been submitted, the data is not tied to the individual student, and they only get one chance. One thing that is inherently easy to do is to be more flexible with the optional questions. Town Halls will be widely publicized.

S. Levy stated that the proposed changes to the Ryerson Act have been put forward by the Government. When approved, Academic Council will be changed to a Senate and there will be an elected librarian.

## **10. Adjournment**

The meeting adjourned at 7:50 p.m.

Respectfully submitted,

Diane R. Schulman, Ph.D.  
Secretary of Academic Council

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## Memorandum from

PROVOST AND VICE PRESIDENT ACADEMIC

**To:** Academic Council

**From:** **Errol Aspevig, Provost and Vice President Academic**

**Date:** **May 1, 2007**

### **Re: Tripartite Curriculum Review**

At the April 4, 2007 meeting of Academic Council I presented a Draft Report on the Tripartite Curriculum Review for discussion in preparation for submission of this final report. Changes were made to recommendations 5 and 13 to reflect Academic Council's input.

I now present this final report to Academic Council with the following motion:

**Motion: That Academic Council endorse the May 1, 2007 Tripartite Curriculum Review Report.**

## **Tripartite Curriculum Review**

### **May 1, 2007**

#### **I. Origins of this Report**

This report results from a commitment in *Learning Together: An Academic Plan 2003-2008*, to undertake a review of the tripartite curriculum (TPC). In the consultations leading to that *Plan* we heard voices ranging from "the tripartite curriculum is fine as it is" to "the tripartite curriculum is broken and needs to be fixed".

The review that followed went through many stages. Consultants were commissioned and gave advice. Further consultations with students, faculty, academic and administrative groups and committees were held. Focus groups gave input.

After all of this it is fair to say that opinions still vary. It is also fair to say that there is no panic, that Ryerson has been able to create a number of new and innovative programs to meet the challenge of the double cohort, and that existing programs have been able to evolve in the directions sought. All of this has been done under our current curriculum policy.

#### **II. Going Forward**

Bringing this review to a close and arriving at a "go-forward" position has not been easy. What to do next is, in fact, a matter of judgment. Not arbitrary judgment of course, but judgment based on principle, facts, and circumstances. The most appropriate principle, given the range of opinion that still exists, is that we preserve what is valuable in our current approach, address what is problematic, and do so in a way which, taking circumstances into account, is most likely to produce the desired effects while minimizing unforeseen and undesirable consequences.

In very general terms, the judgment which flows from this principle is that we should approach curriculum change in a reforming manner, in the near term at least. As circumstances change, Ryerson may wish to adopt more radical measures. But the community is not yet there.

Sections to follow try to flesh out the meaning of this judgment. They summarize facts about important strengths and problems in our tripartite approach to curriculum, they outline circumstances that bear on going forward, and they present conclusions in the form of recommendations.

But, before turning to those sections, it is worth being reminded of the core elements (at least) of the tripartite curriculum.

The TPC is governed by Academic Council policies and reports going back to Report 23 in 1977. Its basic tenets have undergone interpretation in practice, and a number of rules and protocols have been developed as a result. At its core, the TPC policy can be summarized as follows:

- Programs will contain courses in each of the following three categories: Professional Studies, Professionally Related Studies, and Liberal Studies.

- These categories are defined as follows:

Professional Studies (P): Studies that induce functional competencies by presenting the knowledge and developing the skills characteristic of current practice in the career field.

Professionally Related Studies (PR): Studies that develop an understanding of the theoretical disciplines upon which the career field is based, or which synthesize the diverse elements of Professional Study.

Liberal Studies (LS): Studies that develop the capacity to understand and appraise the social and cultural context in which the graduate will work as a professional and live as an educated citizen

The policy also mandates the proportion of the curriculum to be presented through each category: P (50-75%), PR (10-40%), LS (6-8 one-semester courses). It provides for the possibility of course electivity in the P and PR categories and sees electivity as an essential feature of the LS category.

### **III. Strengths and Problems in the TPC**

Strengths: The consultants' report and the follow-up consultations identified a number of important strengths. These may be summarized as follows:

- The TPC addresses the need for career relevant programs which combine theory and practice. It is consistent with Ryerson's mission, addressing its goals of learning for a purpose by providing an intentional curriculum with societal relevance.
- In uniting the values of professional and liberal education the TPC expressly avoids problems found in some other curricular approaches to career related education:
  - a narrow approach to programming marked by too much "internalization", i.e., where programs are like silos, with too large a proportion of the courses being taught by faculty from the department responsible for the Professional Studies component;
  - an overly instrumental approach to education, i.e. where too many of the courses in a student's curriculum, whether compulsory or elective, directly serve career interests; and
  - too little student choice of courses.
- The TPC provides honours level concentrations of study.
- The TPC has provided a valuable template for the development of new programs and the adjustment of existing curricula to meet changing societal needs.

Problems: A number of problems have also been identified, and may be summarized as follows:

- One size does not fit all - The constraints imposed by accreditation requirements sometimes challenge the TPC. When strictly interpreted, the TPC may also create anomalies for some programs when they benchmark themselves against comparator programs in the university system. In the case of some of our new programs, strict conformity to the rules and protocols used to interpret the TPC structure is problematic.
- Course classification problems - In practice, Professional and Professionally Related courses are not always functionally distinct. Similarly, Professionally Related and Liberal Studies courses, and sometimes Professional and Liberal Studies courses, functionally overlap. An administrative implication of this is that students are sometimes denied transfer credits when they enter a program.
- Majors, Minors and Professionally Related Tables - Questions have been raised about whether majors can be grafted onto an intentional curriculum having the honours level Professional concentration that Ryerson programs have. What does “major” mean in this context? Concerns have also been raised about minors. Too often they are available in principle, but not in practice because of the requirement that they be scheduled through the Professionally Related category. A consequence of this is that some programs list minors courses, which may not actually be able to be scheduled, in their Professionally Related tables, misleading students about the real options they have for minors completion and the real access they have to Professionally Related courses.
- Writing competency - While writing can be a component of courses in the Professional and Professionally Related categories, the only category in which substantial writing is mandated is the Liberal Studies category. It is felt by many that as valuable as this writing requirement is, it is insufficient to meet the writing instruction needs of a growing number of students.
- Lack of choice and flexibility - The rules and protocols that have developed around the TPC have made it too restrictive. Students are sometimes prevented from taking courses as Liberal Studies which could, given the subject matter of these courses, be Liberal Studies. This is sometimes because these courses have been classified in their programs as Professionally Related. It is sometimes because departments have not opted to, or been able to, offer these courses. Students are limited in their choice of Professionally Related courses as well. This is sometimes because of scheduling difficulties, sometimes because of insufficient student spaces in courses, and sometimes because course substitution possibilities are not explored and exploited.
- Complexity - The TPC, with its complex rules and protocols, can be difficult for students and faculty to understand and can give rise to errors of choice and advising.
- Addressing Core Competencies – Both *Learning Together* and the consultants’ report stress the need to provide a broad range of capacities and competencies. The TPC provides a mechanism for this that is not always fully exploited.

#### **IV. Circumstances**

The principle underlying the judgment on how to go forward points to the importance of doing what is most likely to be effective while avoiding unforeseen and undesirable consequences, and this underscores the importance of taking circumstances into account. They have a bearing on the scope of what should be done.

Perhaps the most important thing to say about our circumstances is that Ryerson has recently undergone, and will continue to undergo, very positive, multi-faceted growth and development. The number of both undergraduate and graduate programs that have begun in the last few years, coupled with unprecedented growth in the number of students and faculty, and the resultant growth in SRC, is exhilarating. But, it is also very demanding on the faculty and staff who would ultimately be responsible for any major change to the curriculum structure.

The university has recently introduced a new student administrative system (SAS). Our undergraduate programs continue to undergo periodic program review as required by UPRAC (the Undergraduate Program Review Audit Committee of the Council of Ontario Universities). In addition, Ontario universities, including Ryerson, will be amending their Program Review policies to incorporate program outcomes, and programs will be required to demonstrate that their curricula meet the degree level requirements recently articulated by the Ontario Council of Vice Presidents Academic.

The last eight years have seen significant campus expansion, with many new buildings and consequent moves and improvements for students, staff and faculty. We are now engaged in a significant and important master planning process.

Finally, we are the beneficiaries of an exciting appointment to the Presidency and will soon be welcoming our new Provost.

All of these things are wonderful. Students, staff, faculty and the community will certainly benefit from them. Our successes are a result of commitment, energy and hard work. It is clear that Ryerson is in a period that makes great demands on its people.

The undergraduate curriculum, as one member of the community put it, is a bit like DNA. It affects so many things: our students' education first and foremost, but also budget and space and resource allocations, student and faculty scheduling, the content of the SAS, the shapes and sizes of departments, schools and Faculties, and so on. Fundamental change to the basic curriculum model would have potentially far-reaching consequences. We need to carefully consider these consequences before undertaking any major change to the basic curriculum structure.

The upshot of this is that prudence and careful forethought is needed. In the absence of serious curriculum problems, changes should be introduced gradually and monitored for their

effects. It would appear that the TPC has served Ryerson well. Perhaps a few years from now a fundamental change to the model might be warranted – but maybe not.

## **V. Conclusions and Recommendations**

The conclusions and recommendations outlined below fall into three categories: those related to the near term evolution of the curriculum, those related to longer term change, and those related to matters associated more with curriculum delivery than with the curriculum itself.

### **Near Term**

1. The first major conclusion and recommendation is that the university continue, as it has done in recent years, to be judiciously flexible in its interpretation of the TPC. This means respecting the fundamental principles, goals, values and recognized strengths of the TPC while at the same time addressing problems, and in particular those problems outlined above. It also means that Departmental recommendations for curricular accommodation must follow the normal course of Departmental Council approval, approval of the relevant Deans and the Provost, and the Academic Standards Committee (ASC) recommendation before coming to Academic Council for approval.
2. It is further recommended that if the ASC recommends a curricular accommodation for any program, it clearly present and record the principle(s) underlying that accommodation such that rational precedents are developed which can be applied to requests for accommodations proposed by other programs.
3. As the curriculum evolves, it is essential that the University continue to respect the students' right to be taught by faculty with the relevant discipline expertise in all categories: P, PR, LS. At the same time, it is essential that courses provided as "service courses" be delivered in a manner and at a level appropriate for the required "service" teaching. Should disputes on this issue arise which cannot be resolved by the affected program Chairs and their respective Deans, these will be taken to the Provost for resolution. The Provost will balance the "expertise principle" and the goals of avoiding internalization and undue instrumentalism on the one hand, with the program Department's overall responsibility for the health of its program on the other.
4. It is recommended that the ASC monitor changes over the next three years and provide an annual report to the Provost, assuming that more formal curriculum reform has not been adopted in the interim.
5. In order to begin addressing specific problems identified above, it is recommended that each program review its Professionally Related tables to determine whether the courses listed are being offered and whether students have a reasonable opportunity to enroll in them. It is further recommended that an ASC sub-committee, chaired by the Vice Chair of ASC, be struck to review these tables including the reasons for listing courses, and make recommendations to the Provost. Any relevant recommendations from the

Timetabling Committee should be taken into consideration. ASC sub-committee recommendations will need to take into account the requirement for consultation between program departments and departments offering PR courses, the expertise principle, and the requirements to avoid undue internalization and instrumentalism. The sub-committee may wish to investigate and make recommendations on other issues related to the PR component of the curriculum.

6. It is recommended that the ASC sub-committee identified in recommendation 5 also review issues related to the inclusion of majors and minors in Ryerson's honours level curricula. Among the issues to be reviewed: the appropriateness (in principle) of including majors and minors in the TPC structure, and, if majors and minors are deemed appropriate, the principles defining them and the problems and solutions related to their inclusion.
7. It is recommended that current efforts to increase elective choices in the Liberal Studies continue and that the Dean responsible for Liberal Studies review policy on the Liberal Studies Curriculum Committee and the Liberal Studies Council to ensure that the composition of these committees is consistent with this goal. It is further recommended that the Dean report annually to Academic Council on courses proposed for inclusion in the Liberal Studies category.
8. The definition of Liberal Studies should be expanded to include "natural context". This would expand student choice in the areas of scientific and environmental studies, two areas of context that are important for the development of professional leaders and citizens. Such expansion would be consistent with the functional principles underlying this category.
9. It is recommended that when reviewing applications for course credits and course substitutions, decision makers continue to consider both the function and content of courses, but recognizing the potential overlaps in function, approve requested credits and substitutions unless it is clear that such approval would not be warranted. In other words, it is recommended that the onus is to justify the denial of course credits (rather than the approval) and that the grounds for denial be clear.
10. It is recommended that during the normal course of curriculum review, Departments assess the extent to which opportunities are being offered for students to develop knowledge, capacity and competencies in the following areas: communication (oral, written, electronic), international understanding, scientific literacy, and environmental understanding. All three categories of study – P, PR and LS – should be used to provide these opportunities.
11. It is recommended that an Experts Task Force be struck to explore and report to the Provost on ways to address more fully student needs for writing instruction.

## **Short to Longer Term change**

12. It is recommended that the Provost monitor the evolution of the TPC, taking into consideration the ASC annual reports (Recommendation 4), and that he, in consultation with the Academic Planning Group, consider whether more fundamental change is desirable. Processes by which such change is generated are at the Provost's discretion. Normal Academic Council approvals apply.

## **Associated Matters**

13. It is recommended that approaches to scheduling continue to be reviewed with the goal of maximizing student access to chosen courses, recognizing needs for economic and space-use efficiency and the pedagogic and SRC requirements of faculty. In this connection, consideration should be given to the possibility that some programs will propose a pre-requisite course sequencing structure (as opposed to a "lock-step" semester based structure).
14. It is recommended that the adoption of Faculty Councils and/or Faculty Curriculum Committees be considered. Their role would be, as a minimum, to facilitate inter-departmental discussion and collaboration.
15. It is recommended that within their budget frameworks, Departments ensure that an appropriate number of small classes be taught by professors.
16. It is recommended that Departments ensure that experiential learning be part of every Ryerson student's education.

Errol Aspevig  
Provost and Vice President Academic

INITIATING SCHOOL/DEPARTMENT: The Chang School DATE of SUBMISSION: March 19, 2007

Is this the Teaching School/Department, Program School/Department, or both? \_\_\_\_\_

Provost and Vice-President Academic \_\_\_\_\_ Date \_\_\_\_\_

Please add extra rows as needed if more courses are involved.

Course Code/Number	Course Title	Nature of Change									Program(s) / School(s) / Department(s) / Continuing Education affected and informed of change	Purpose of Change	Minors Affected	Implementation Date		
		Hours and Mode	New Course (Y/N)	Check one			Check one									
				Re-position	Addition	Deletion	Required	Elective	Professional Elective	Professionally-Related Elective						
CVFN410	Understanding Urban Agriculture	42hrs	Y		✓			✓			Add Urban Agriculture course content to elective group to the Food Security Certificate			Fall 2007		
CVFN411	Dimensions of Urban Agriculture	42 hrs	Y		✓			✓			Add Urban Agriculture course content to elective group to the Food Security Certificate			Fall 2007		
CVFN412	Urban Agriculture Types	42 hrs	Y		✓			✓			Add Urban Agriculture course content to elective group to the Food Security Certificate			Fall 2007		
CVFN413	Urban Agriculture Policy Making	42 hrs	Y		✓			✓			Add Urban Agriculture course content to elective group to the Food Security Certificate			Fall 2007		

## INITIATING SCHOOL/DEPARTMENT:

### Project Management Certificate, School of Architecture, Chang School Engineering, Architecture & Applied Science

DATE OF SUBMISSION: 18 April 2007

Is this the Teaching School/Department, Program School/Department, or both? Teaching Department  Teaching

Provost and Vice-President Academic

Date

Please add extra rows as needed if more courses are involved.

Course Code/ Number	Course Title	Nature of Change								Program(s) / School(s) / Department(s) / Continuing Education affected and informed of change	Purpose of Change	Minors Affected	Implementation Date					
		Check one ✓		Check one ✓		Hours and Mode	New Course (Y/N)	Re-position	Addition	Deletion	Required	Elective	Professional Elective	Professional-Related Elective				
CQMS 102	Business Statistics	42	N		X					X					Certificate in Project Management	To provide a course that will add to the stats learned in ckpm209 and fill empty elective slot		Sept. 2007
CXCP 187	MS Project	42	N			X				X					Certificate in Project Management	Course is outdated and hasn't been offered in a number of years		Sept. 2007
CKPM 208	Analytical Decision Making	42	N			X				X					Certificate in Project Management	Course is not popular and doesn't get enough registrants to support it		Sept. 2007

## **SCHOOL OF GRADUATE STUDIES**

### ***REPORT TO ACADEMIC COUNCIL, MAY 1, 2007***

#### **1. Review of Status of New Graduate Programs**

New Programs Planned for 2008

#### **2. Course Description Changes (for information):**

- a) *Nutrition Communication*
- b) *Biomedical Physics*
- c) *Master of Nursing*
- d) *Master of Business Administration*

#### **3. Curriculum Changes / Degree Requirement Changes (for information):**

- a) *Chemical Engineering*
- b) *Management of Technology and Innovation*
- c) *Master of Business Administration*
- d) *Biomedical Physics*

#### **4. Admissions Requirement Changes (for information):**

- a) *Nutrition Communication*

#### **5. Courses Additions/Deletions (for information):**

*Computer Science*

*International Economics and Finance*

*Biomedical Physics*

*Chemical Engineering*

*Master of Nursing (Primary Health Care Nurse Practitioner)*

*Management of Technology and Innovation*

*Master of Business Administration*

Submitted by:

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Maurice Yeates, Dean  
Chair, School of Graduate Studies

<b>Status of New Programs in Graduate Review Process (programs planned for September, 2008)</b>							
<b>Approval or Action by</b>	<b>Responsibility</b>	<b>MSc Applied Mathematics</b>	<b>PhD/MA Psychology (MA in 2007)</b>	<b>MASc/MBSc Building Sc.</b>	<b>MA Lit of Mod</b>	<b>MPI Urban Planning</b>	
<b>Ryerson Review</b>							
Dean - SGS	Letter of Intent (LoI) – including initial analysis of financial viability	X	X	X	X	X	
SGS Program & Planning Comm	Reviews LOI to determine if program appears feasible.	X	X	X	X		
Provost	Decides to proceed based on responses to LoI. Instructs sponsors to prepare OCGS program proposal.	X	X	X			
Internal/External Consultant	An expert in the field from another university reviews the proposal. Sponsors re-draft if necessary.	Seco in	Evans, Guelph Hunsley, Ottawa	Staube			
Provost	Discusses proposal with Dean, sponsor.	X	X				
P&P of SGS	Reviews draft OCGS brief in light of I/E report – recommends to Council SGS based on academic quality	X	X				
Council, SGS	Reviews proposal	X	X				
Academic Council/Senate	Reviews program proposal for academic quality and moves to proceed to OCGS	X	X				
<b>Ontario Council on Graduate Studies Review</b>							
Appraisal Committee	7 senior faculty from across Ontario + Exec. Dir read brief and comment to Ryerson. Univ can advertise program.	X Bona, Illinois Bland, Toronto	X Dobson , Calgary Klein , Dalhousie				
External Consultants	2 or 3 selected, visit Ryerson for a two day period. Prepare reports for submission to OCGS, which sends reports to Ryerson.						
Ryerson	Responds to report(s)						
Appraisal Committee	Reviews report and response and presents recommendation to OCGS (All graduate Deans in Ontario)						
OCGS Executive Director	Informs Ryerson of decision, provides letter required by Ministry for funding claim. <b>OCGS meeting.</b>						
<b>Further Procedures</b>							
Board of Governors	Program is presented to Board of Governors for approval of financial						

	viability.						
Ministry	The Program is presented to the Ministry for approval						
Provost	Provost decides about implementation						

2. a) Course Description Changes: *Nutrition Communication*

The *Nutrition Communication* graduate program has changed the course descriptions of the following courses to be as follows:

*Biostatistics and Epidemiology for Nutrition Research (original title)*  
*Epidemiology for Nutrition Research and Interpretation (new title)*

This course will provide a survey of the most frequently used elements of biostatistics (odds ratios, relative risk, meta analysis, etc.), demography, informatics, methodology (study design elements), and epidemiology (classical as well as clinical) that are used to establish nutrition practice and policy. Some emphasis will be placed on the tools that are used to convey information about dietary risk and risk management. This course will provide an opportunity for students to critically evaluate and interpret epidemiologic reports in the nutrition literature for methodological and analytical soundness. Prerequisites: undergraduate course in statistics and research methods (FNR 201 and FNR 301, or equivalent).

*Nutrition Communication with Diverse Audiences (original title)*  
*Social Dimensions of Nutrition Communication (new title)*

This course introduces the social dimensions of communication by first establishing the contexts within which nutrition communications occur through discussions of subjectivity, diversity, and media constructed messages. Next, we examine the evolution of nutrition communications related to the changing roles of “experts” and “audiences”, the dynamics of communication theory, and the influences of technology on the communication process and experience. We conclude by recognizing social justice issues inherent in nutrition communication.

*Advanced Interpersonal Nutrition Communication (original title)*  
*Interpersonal Nutrition Communication: Practicing the Inter/Personal (new title)*

Using a range of interactive techniques and theoretic frameworks, this course will provide an opportunity to enhance personal and professional interpersonal communication skills. Specifically, the narrative medicine model will be studied, practiced and appraised regarding application to interpersonal health and nutrition practice. Students will be invited to engage in self-reflective practice as a means of connecting experiential and theoretical applications. Health [and illness] and nutrition communication will be acknowledged as occurring in a range of contexts and readings will be drawn from various disciplines to elaborate on these contexts.

*Advanced Research in Approaches to Healthy Living (original title)*  
*Advanced Approaches to Health Research (new title)*

This course aims to provide an in-depth discussion of the advanced approaches and frameworks used in health research. In doing so, this course will examine the evolution of transdisciplinarity as a framework for health-related research and practice in contemporary society. Students will develop a sophisticated understanding of urban health issues through critical analysis of the nature, capacities, limitations, and knowledge creation activities arising from both discipline-specific and transdisciplinary research. Transdisciplinary perspectives on issues such as food choice, body weight, food access and chronic disease prevention will be examined with an emphasis on the communication of meaningful outcomes. The roles of epistemological traditions and competing research agendas will be analyzed with respect to the methodological challenges and benefits of transdisciplinary approaches to research. The evolution, politics, and future of the urban health movement will be explored through the perspectives of leading Canadian scholars in this field.

*Risk Analysis: Assessment, Perception and Communication (original title)*

*Risk/Benefit Analysis: Assessment, Perception and Communication (new title)*

This course will focus on the analysis, assessment and communication of risk in nutrition and food. Students will engage in discussions of the necessary relationships between risk and benefit as they relate to recurring themes in public health with implications for Canadians and the International community. For example, issues that will be explored include the use of food additives; links between diet and chronic diseases such as breast cancer, diabetes; food borne illnesses, environmental contaminants etc. Students will develop an in depth understanding of risk assessment methodologies; differences in risk perception by individuals, groups and the public-at-large; as well as communication strategies by stakeholders including industry, government, nutrition and food professionals etc. The discussion of communication strategies and methodologies will focus on the interpersonal as well as mass media and their inherent differences, objectives and results.

*Nutrition and Food Policy (original)*

*Food and Nutrition Policy (new)*

No change to the course description.

#### *Practicum Course*

The practicum course is required of students pursuing the professional option. Students will spend a minimum of eight weeks (4 days/week, full time) in either a professional practice setting working with individuals or groups or within an organization with Nutrition Communication expertise. They will be required to undertake a specific project of mutual interest to the student and the Practicum Supervisor in consultation with the Faculty Supervisor and develop a written report. Before the practicum begins, students will prepare a set of goals and objectives (Learning Agreement). Following the practicum, they will submit a reflexive analysis and meet together as a group to share the value of their experience. Some examples of practicum include the Online Nutrition Communication Center (School of Nutrition, Ryerson University), Kellogg's, The Canadian Council for Food and Nutrition, Transformations, the Advanced Foods and Materials Network, AgriFood Technologies, and Dietitians of Canada. Students will be co-supervised by a faculty advisor and will be given a pass/fail grade for this course. Students should not expect to be remunerated for this practicum experience. Prerequisites: Advanced Interpersonal Communication and Advanced Approaches to Health Research.

*Major Research Paper (original)*

*Major Research Paper/Project (new)*

**The major research paper/project is an opportunity for students to acquire breadth, depth, synthesis and originality in a specific nutrition communication area. This experience will provide students the opportunity to be involved in a broad range of activities which contribute to the creation, enhancement, and dissemination of knowledge within nutrition communication, and shape policy, practice and teaching through a process of rigorous inquiry. Students will gain experience working independently under faculty supervision. The major research paper/project may take one of several forms, for example, a research report, such as a case study, an action research project, a small survey, or a program evaluation; a development or field- testing of a research instrument, nutrition communication technique, a learning, teaching or assessment piece; an analytic project, such as a comprehensive literature review, policy or secondary data analysis; a critique or application of a theoretical framework or construct; or a development of a multi-media product including audio, video or a website. Students are required to develop a**

**project plan for approval, early in the winter term and submit their final report at the end of the spring/summer term. Pass / Fail.**

b) Course Description Change: *Biomedical Physics*

The *Biomedical Physics* graduate program has changed the course description of the following course to be as follows:

*BP8105 Computational Modeling in Biomedical Physics*

This course will focus on the use of computational modeling techniques for hypothesis driven investigation of problems in biomedical physics. The student will apply and integrate fundamental knowledge of mathematics, physics, and life sciences to design and implement appropriate models and to analyze and interpret simulation results. Emphasis will be placed on simulation methods such as Monte Carlo methods, and finite element and finite difference techniques. Corequisite BP8506.

c) Course Description Change: *Master of Nursing*

The *Master of Nursing* graduate program has changed the course description and title of the following existing course *MN8940 Seminar in Advanced Nursing Practice* to be as follows:

*MN8904: Seminar in Advanced Nursing Practice (original title)*

***MN8904: Seminar in Professional Nursing Advancement (new title)***

**Students will analyze theoretical perspectives related to the advancement of professional nursing practice from a variety of philosophical and critical standpoints. Using case studies and examples from their practica, students will examine and synthesize linkages between theory, research, advanced practice, and their field of study. Students will explore and critique the multiple domains of professional nursing at an advanced level, including clinical practice, leadership, policy, education, and research. Corequisite: MN8905**

e) Course Description Changes: *Master of Business Administration*

**The *Master of Business Administration* graduate program has changed the course descriptions of the following courses to be as follows:**

*MB8103: Strategy in an International Business Environment*

This course develops pragmatic and dynamic perspectives on functional level, business level, and corporate strategies through the analysis of the internal and external environment. Strategic analytical theories and processes are examined using current business cases in a range of industries. The focus is on creating competitive advantages through strategic control and governance, diversification, effective foreign market entry, creating a learning organization, and fostering innovation and entrepreneurship, all while responding ethically.

*MB8201: Strategic Management Challenges in the International Environment*

This course discusses seminal strategic theory debates. Traditional strategy courses emphasize strategy as a linear process, focusing on the strengths and weaknesses, opportunities and threats that an organization faces, then establishing alternatives with normative assumptions and idealizing radical change. This course challenges the assumptions that strategy is neither sequential, nor conducive to

long-term planning. Topics include the “Porter perspective”, and how it can be challenged by some of the world’s best, and conflicting, strategic writers.

*MB8401: Marketing Management*

This course uses an integrated approach to marketing management using economic, quantitative and behavioural concepts to understand analysis, planning, implementation and control of marketing decisions. The course develops the marketing principles by which products and services are designed to meet customer needs, priced, promoted, and distributed to the end user. The focus is on applying these marketing principles to customers, both internal and external. Topics are discussed with an international lens and a strong sense of social responsibilities.

*MB8404: Understanding and Managing Consumer Behaviour*

Central to the concept of marketing is marketing behaviour. The course deals with consumer behaviour, information processing, consumer decision making and “consumption” in the broadest sense of the word. Special attention is paid to psychological, psychosocial, sociological and cultural influences on consumer choice, decision processes and context effects that influence consumer behaviour. The fundamental question driving this course is “Who consumes what and why, and what can we do once we know?”

*MB8505: Legal Aspects of Retail and Commercial Development*

**This course examines the legal implications of retail and commercial property development. Real Property tenure, forms of ownership, creditors’ rights, landlord, tenant rights are constrained at law, and may vary from jurisdiction to jurisdiction. Knowledge of this interrelationship is essential for dealing with retail and commercial development issues. This course focuses on the complexity of the real estate field and the tools and techniques necessary to properly structure retail and commercial real estate transactions.**

3. a) **Curriculum Changes: *Chemical Engineering***

**Starting Fall 2007, the MSc in Chemical Engineering will include the milestone course *Master’s Seminar* as a degree requirement. Students will register in this course upon initial registration in the program and will receive a pass grade if they meet the course requirements.**

**Starting Fall 2007, the PhD in Chemical Engineering will include the milestone course *Doctoral Seminar* as a degree requirement. Students will register in this course upon initial registration in the program and will receive a pass grade if they meet the course requirements.**

b) **Curriculum and Degree Requirement Changes: *Management of Technology and Innovation***

### Degree Requirement Changes:

	<b>MBA – Current 2006-7</b>	<b>MBA – New Fall 2007</b>	<b>MMSc – Current 2006-7</b>	<b>MMSc – New Fall 2007</b>
Core Courses	10 modules (5 credits)	7 credits	10 modules (5 credits)	5 credits
Research Methods	0	0	2 modules (1 credit)	2 credits
Electives:	10 modules (5 credits)	5 credits*	0	0
Thesis	0	0	8 modules (4 credits)	4 credits
Total	20 modules (10 credits)	12 credits	20 modules (10 credits)	11 credits

\*For field specialization, students do either A) 2 courses plus 3 credit practicum/ internship  
OR B) 4 courses (of which a minimum of 3 must be field specific electives) plus 1 credit applied management project.

### Specific Changes to the MBA Core Curriculum: (*Management of Technology and Innovation*)

<b>Current Code</b>	<b>Current MBA 2006-7</b>	<b>New MBA Fall 2007</b>
MT8201	Technology and Org Theory	<b>Innovation and Organization Theory</b>
MT8203	Tech Diffusion and Innovation	
MT8202	Technology and Org Strategy	<b>Technology and Organization Strategy</b>
MT8204	Ethical Leadership/Chng Mgmt	<b>Diversity, Skills &amp; Leadership</b>
		<b>Ethics and Corporate Social Responsibility (.5)</b>
MT8207	Financial Analysis	<b>Finance and Technology Valuation</b>
MT8211	Global Markets and Tech Trends	<b>Global Markets and Technology Trends</b>
MT8209	Human Factors in Tech Design	Becomes elective course in ISM field
MT8210	Adv Technology Integration	Becomes elective course in ISM field
		<b>Product Development and Commercialization (.5) NEW</b>
MT8208	Entrepreneurial Thinking	<b>Entrepreneurial Thinking (.5)</b>
MT8205	Adv Project Management I	<b>Adv Project Management I (.5)</b>

Specific Changes to the MMSc Core Curriculum:  
*(Management of Technology and Innovation)*

<b>Current Code</b>	<b>Current MMSc 2006-7</b>	<b>New MMSc Fall 2007</b>
MT8201	Technology and Org Theory	<b>Innovation and Organization Theory</b>
MT8203	Tech Diffusion and Innovation	
MT8202	Technology and Org Strategy	<b>Technology and Organization Strategy</b>
MT8204	Ethical Leadership/Chng Mgmt	<b>Diversity, Skills &amp; Leadership</b>
MT8207	Financial Analysis I	<b>Finance and Technology Valuation</b>
MT8211	Global Markets and Tech Trends	<b>Global Markets and Technology Trends</b>
MT8209	Human Factors in Tech Design	<b>Deleted for MMSc</b>
MT8208	Entrepreneurial Thinking	<b>Deleted for MMSc</b>
MT8205	Adv Project Management I	<b>Deleted for MMSc</b>
MT8101	Applied Research Methods I	Applied Research Methods I
MT8102	Applied Research Methods II	Applied Research Methods II

c) Curriculum and Degree Requirement Changes: *Master of Business Administration*

<b>CURRENT- MBA Program 2006-7</b>	<b>NEW- MBA Program Fall 2007</b>
<b>Foundation Semester</b> – not offered (6 credits)	<b>Foundation Semester</b> – no changes from OCGS proposal (6 credits)
<b>Core Semester</b> (6 credits) MB8101 Law, Regulatory & Gov Issues .5 MB8102 Socially Rsp and Ethical Mgmt .5 MB8103 Strategy in Intl Bus Environ MB8104 Acctg and Fin for Todays Mgrs MB8105 Wrld Lgsts & Supply Chn Mgmt MB8106 Diversity in HR Mgmt MB8107 Adv Intl Mkting	<b>Core Semester</b> (5 credits) MB8101-deleted MB8102-deleted MB8103 Strategy in Intl Bus Environ MB8104 Acctg and Fin for Todays Mgrs MB8105 Wrld Lgsts & Supply Chn Mgmt MB8106 Diversity in HR Mgmt MB8107 Adv Intl Mkting
<b>Specialization Semester</b> (5 credits) 2 credits from specialty stream, 3 credits from other streams or elective list	<b>Specialization Semester</b> (5 Credits) 2 credits from specialty stream, 2 credits from other streams or elective list 1 credit- required: Regulation, Governance and Socially Responsible Management (new course combines former MB8101/ 8102) The rest of the courses are as listed in the OCGS proposal – only the number to be chosen changes
<b>Integration Semester</b> (3 credits) No change from OCGS proposal	<b>Integration Semester</b> (3 credits) No change from OCGS proposal
<b>Total credits non-B.Comm – 20 credits</b> <b>Total credits B.Comm – 14 credits</b>	<b>Total credits non-B.Comm. – 19 credits</b> <b>Total credits B.Comm – 13 credits</b>

**d) Degree Requirement Changes: *Biomedical Physics***

**The new degree requirements for the graduate program in *Biomedical Physics* will be:**

- i) Master's thesis**
- ii) BP8108**
- iii) Five credits from the electives list**

**4. Admissions Requirement Changes: *Nutrition Communication***

The new minimum requirements and application requirements for the graduate program. in *Nutrition Communication*, starting for Fall 2008 admission are:

- Four-year bachelor's degree in Nutrition and Food (or equivalent), and
  - Minimum of a B average (or equivalent), and completion of at least one of each of the following:
    - undergraduate research methods course (or equivalent),
    - introduction to statistics course (or equivalent)
    - interpersonal/professional communications course
    - course in biological sciences (e.g., physiology, biochemistry) , and
    - course in social sciences (e.g., sociology, psychology);
- Two letters of recommendation;
- Statement of interest in the master's program in relation to their experiences and career aspirations (800-1000 words)
- Two samples of verifiable communication products, at least one of which must be a product that was completed individually

**School of Graduate Studies****Graduate Program:** Computer Science**Initiating School/Department:** School of Graduate Studies**Approval of VP Academic:** \_\_\_\_\_  
Dr. Errol Aspevig

Course Number	Course Title	Mark with "X"			Required/Elective Y/N	Credits	Programs Affected	Implement Date	Purpose of Change
		Amended	Deleted	Added					
CPS8308	Directed Studies in Computer Science			X	N	1	MSc Computer Science	Sept 2007	To allow tailoring of research programs to individual students and faculty.

**School of Graduate Studies****Graduate Program:** International Economics and Finance**Initiating School/Department: School of Graduate Studies****Approval of VP Academic:**

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Dr. Errol Aspevig

Course Number	Course Title	Mark with "X"			Required/Elective Y/N	Credits	Programs Affected	Implement Date	Purpose of Change
		Amended	Deleted	Added					
EF89xx	International Public Economics			X	N	1	EF001, 002	Sept 2007	More course choices for students and faculty.
EF89xx	Microeconomic Issues of Development, Industry & the International Economy			X	N	1	EF001, 002	Sept 2007	More course choices for students and faculty.
EF89xx	Nonparametric Econometrics			X	N	1	EF001, 002	Sept 2007	More course choices for students and faculty.
EF89xx	Environment and Economic Growth			X	N	1	EF001, 002	Sept 2007	More course choices for students and faculty.
EF89xx	International Labour Economics			X	N	1	EF001, 002	Sept 2007	More course choices for students and faculty.
EF89xx	Topics in International Economic Development			X	N	1	EF001, 002	Sept 2007	More course choices for students and faculty.

**School of Graduate Studies****Graduate Program:** Biomedical Physics**Initiating School/Department:** School of Graduate Studies**Approval of VP Academic:**

Dr. Errol Aspevig

Course Number	Course Title	Mark with "X"			Required/ Elective	Credits	Programs Affected	Implement Date	Purpose of Change
		Amended	Deleted	Added					
BP8105	Comp Methods in Biomedical Physics	X			Elective	1	BP001	Sept 2007	Based on delivery to more accurately describe the course content and to add a co-requisite.
BPXXXX	Seminar			X	Required	Pass/Fail	BP001	Sept 2007	To give students the opportunity to pursue crucial aspects in Biomedical Physics and to exchange ideas and to train in the delivery of seminars.
BPXXXX	Special Topics I			X	Elective	1	BP001	Sept 2007	To allow flexibility in the delivery of courses to graduate students.
BPXXXX	Special Topics II			X	Elective	1	BP001	Sept 2007	To allow flexibility in the delivery of courses to graduate students.

**School of Graduate Studies****Graduate Program:** Chemical Engineering**Initiating School/Department: School of Graduate Studies****Approval of VP Academic:**

Dr. Errol Aspevig

Course Number	Course Title	Mark with "X"			Required/Elective	Credits	Programs Affected	Implement Date	Purpose of Change
		Amended	Deleted	Added					
CE8304	Rheology			X	Y	1	CM001 CM003 CM004 CP001	Sept 2007	To add a course on a current research area in chemical engineering. Faculty member has already agreed to teach in 2007/2008.
CE8603	Advances in Biomaterials			X	Y	1	CM001 CM003 CM004 CP001	Sept 2007	To add a course on a current research area in chemical engineering. Faculty member has already agreed to teach in 2007/2008.
NA*	Master's Seminar			X	Y	NA*	CM001	Sept 2007	To add a seminar course as a milestone in the PhD curriculum.
NA*	Doctoral Seminar			X	Y	NA*	CP001	Sept 2007	To add a seminar course as a milestone in the PhD curriculum.
CE8302	Kinetic Theory in Multiphase Flow		X		Y	1	CM001 CM003 CM004 CP001	Sept 2007	Course has never been offered since program started in Sept 2001; no faculty member is interested in teaching it.
CE8701	Solid Waste Engineering and Processing		X		Y	1	CM001 CM003 CM004 CP001	Sept 2007	Course has never been offered since program started in Sept 2001; no faculty member is interested in teaching it.

\*This milestone course does not require a course number and carries no credit value.

**COURSE CHANGE FORM - 2****School of Graduate Studies****Graduate Program:** Nursing (Primary Health Care Nurse Practitioner)**Approval of VP Academic:** \_\_\_\_\_**Dr. Errol Aspevig**

<b>Course Number</b>	<b>Course Title</b>	<b>Mark with "X"</b>			<b>Required Elective?</b>	<b>Credits</b>	<b>Programs Affected</b>	<b>Implement Date</b>	<b>Purpose of Change</b>
		<b>Amended</b>	<b>Deleted</b>	<b>Added</b>					
MNXXXX	Major Research Proposal			*	Y	1	Master of Nursing	Fall 2007	Course part of new field
NPXXXX	Pathophysiology for Nurse Practitioners A & B			*	Y	1	Master of Nursing	Fall 2007	Course part of new field
NPXXXX	Primary Health Care Nurse Practitioner Roles & Responsibilities A & B			*	Y	1	Master of Nursing	Fall 2007	Course part of new field
NPXXXX	Advanced Health Assessment I			*	Y	1	Master of Nursing	Fall 2007	Course part of new field
NPXXXX	Advanced Health Assessment II			*	Y	1	Master of Nursing	Fall 2007	Course part of new field
NPXXXX	Therapeutics in Primary Care I			*	Y	1	Master of Nursing	Fall 2007	Course part of new field
NPXXXX	Therapeutics in Primary Care II			*	Y	1	Master of Nursing	Fall 2007	Course part of new field
NPXXXX	Integrative Practicum			*	Y	1	Master of Nursing	Fall 2007	Course part of new field

**School of Graduate Studies**

**Graduate Program:** Management of Technology and Innovation: MBA/MMSc

**Initiating School/Department:** School of Graduate Studies

**Approval of VP Academic:**

\_\_\_\_\_  
Dr. Errol Aspevig

Course Number	Course Title	Mark with "X"			Required/Elective	Credits	Implement Date	Purpose of Change
		Amend-ed	Deleted	Added				
MT8207	Financial Analysis for Technology Managers		X		R	.50	Fall 2007	Replaced with MT8215
MT8209	Human Factors in Technology Design		X		R	.50	Fall 2007	Removed from core, replaced with MT8314
<b>MT8212</b>	Innovation and Organization Theory			X	R	1.0	Fall 2007	New course, combines former MT8201 & MT8203
<b>MT8213</b>	Technology and Organization Strategy			X	R	1.0	Fall 2007	New course, expands MT8202 to full credit
<b>MT8214</b>	Diversity, Skills & Leadership			X	R	1.0	Fall 2007	New course, encompasses elements of MT8204
<b>MT8215</b>	Finance and Technology Valuation			X	R	1.0	Fall 2007	New course, expands MT8207 to full credit
<b>MT8216</b>	Global Markets and Technology Trends			X	R	1.0	Fall 2007	New course, expands MT8211 to full credit

<b>MT8217</b>	Ethics and Corporate Social Responsibility			X	R - MBA only	.50	Fall 2007	New course, encompasses elements of MT8204
<b>MT8218</b>	Product Development and Commercialization			X	R - MBA only	.50	Fall 2007	New course, pre-requisite MT8212
<b>MT8103</b>	Applied Research Methods I			X	R - MMSc only	1.0	Fall 2007	New course combines former MT8101 and MT8102
<b>MT8104</b>	Applied Research Methods II			X	R - MMSc only	1.0	Fall 2007	New course, provides additional research methods training for MMSc students.
<b>Changes to ISM Field</b>								
MT8302	Data and Knowledge Management I		X	E	.50	Fall 2008	To be Deleted	
MT8303	Data and Knowledge Management II		X	E	.50	Fall 2008	To be Deleted	
<b>MT8310</b>	Special Topics in ISM		X	E	1.0	Fall 2007	New course, added for flexibility	
<b>MT8311</b>	Advanced Technology Integration and Process Design		X	E	1.0	Fall 2007	New course, extends MT8210 which was a 0.5 credit core course.	
<b>MT8312</b>	Collab/Decision Technologies		X	E	1.0	Fall 2007	New course, expands MT8301 to full credit	
<b>MT8313</b>	Data and Knowledge Management		X	E	1.0	Fall 2007	New course combines former MT8302 & MT8303	
<b>MT8314</b>	Human Factors in Tech Design		X	E	1.0	Fall 2007	New course, extends MT8209 which was a 0.5 credit core course.	

<b>MT8315</b>	Directed Readings in Information Systems Management A			X	E	1.0	Fall 2007	New course, replaces MT8901 with a field specific directed readings course. Anti-requisite MT8316.
<b>MT8316</b>	Directed Readings in Information Systems Management B			X	E	.50	Fall 2007	New module, field specific directed readings module. Required for flexibility with modular electives. Anti-requisite MT8315.
<b>Changes to MM Field</b>								
MT8401	Adv Media/Communication Tech		X		E	.50	Fall 2007	To be Deleted, replaced with MT8408
MT8402	Legal/Policy Issues for Media		X		E	.50	Fall 2007	To be Deleted, replaced with MT8409
MT8404	Innovation in Media Industries		X		E	.50	Fall 2007	To be Deleted, replaced with MT8411
MT8405	Understanding Media Consumers		X		E	.50	Fall 2007	To be Deleted, replaced with MT8411
<b>MT8408</b>	Adv Media/Communication Tech			X	E	1.0	Fall 2007	New course, expands MT8401 to full credit
<b>MT8409</b>	Legal/Policy Issues for Media			X	E	1.0	Fall 2007	New course, expands MT8402 to full credit
<b>MT8410</b>	Competitive Strategy for Media II			X	E	.50	Fall 2007	New, 1 module, 0.5 credit, prereq Competitive Strategy for Media I (MT8403), exclusion Technology and Organization Strategy
<b>MT8411</b>	Media Consumers and Markets			X	E	1.0	Fall 2007	New course, combines former MT8404 & MT8405
<b>MT8412</b>	Core Issues in Media Management			X	E	1.0	Fall 2007	New course

<b>MT8413</b>	Media Entrepreneurship			X	E	.50	Fall 2007	New course, 1 module, prerequisite MT8208
<b>MT8414</b>	Directed Readings in Media Management A			X	E	1.0	Fall 2007	New course, replaces MT8901 with a field specific directed readings course. Anti-requisite MT8415.
<b>MT8415</b>	Directed Readings in Media Management B			X	E	.50	Fall 2007	New module, field specific directed readings module. Required for flexibility with modular electives. Anti-requisite MT8414.
<b>MT8416</b>	Special Topics in MM			X	E	1.0	Fall 2007	New course, extends MT8207 to 1 credit
<b>Changes to SCM Field</b>								
MT8501	Advanced Supply Chain Tech I		X		E	.50	Fall 2007	To be Deleted, replaced with MT8510
MT8502	Advanced Supply Chain Tech II		X		E	.50	Fall 2007	To be Deleted, replaced with MT8510
MT8503	Implementing ERP Systems I		X		E	.50	Fall 2007	To be Deleted, replaced with MT8511
MT8504	Implementing ERP Systems II		X		E	.50	Fall 2007	To be Deleted, replaced with MT8511
MT8505	Logistics Management		X		E	.50	Fall 2008	To be Deleted, replaced with MT8512
MT8506	Production/Inventory Mgmt Systems		X		E	.50	Fall 2008	To be Deleted, replaced with MT8512
MT8507	Intro Operations Research I		X		E	.50	Fall 2007	To be Deleted, replaced with MT8513
MT8508	Intro Operations Research II		X		E	.50	Fall 2007	To be Deleted, replaced with MT8513

<b>MT8509</b>	Special Topics in SCM			X	E	1.0	Fall 2007	New course, added for flexibility
<b>MT8510</b>	Advanced Supply Chain Technology			X	E	1.0	Fall 2007	New course, combines former MT8501 & MT8502
<b>MT8511</b>	Implementing ERP Systems			X	E	1.0	Fall 2007	New course, combines former MT8503 & MT8504
<b>MT8512</b>	Logistics and Inventory Management			X	E	1.0	Fall 2007	New course, combines former MT8505 & MT8506
<b>MT8513</b>	Intro Operations Research			X	E	1.0	Fall 2007	New course, combines former MT8507 & MT8508
<b>MT8514</b>	Directed Readings in Supply Chain Management A			X	E	1.0	Fall 2007	New course, replaces MT8901 with a field specific directed readings course. Anti-requisite MT8515.
<b>MT8515</b>	Directed Readings in Supply Chain Management B			X	E	.50	Fall 2007	New module, field specific directed readings module. Required for flexibility with modular electives. Anti-requisite MT8514.
<b>Changes to General Electives</b>								
<b>MT8061</b>	Practicum/Internship			X	E	3.0	Fall 2007	New course, expand former MT8060 to 3 credits
MT8801	Managing Knowledge and IP		X		E	.50		To be Deleted, replace with MT8807
MT8804	Contracts and Negotiations I		X		E	.50		To be Deleted, substitute MB8204
MT8805	Contracts and Negotiations I		X		E	.50		To be Deleted, substitute MB8204
<b>MT8806</b>	Applied Management Project			X	E	1.0	Fall 2007	New course

<b>MT8807</b>	Managing Knowledge and IP			X	E	1.0	Fall 2007	New course, expands former MT8801 to full credit
<b>MT8317</b>	Info Arch Theory			X	E	1.0	Fall 2007	Anti-requisite: ITM613
<b>MT8318</b>	Wireless/ Mob Comm			X	E	1.0	Fall 2007	Anti-requisite: ITM704
<b>MT8319</b>	Telecom Apps			X	E	1.0	Fall 2007	Anti-requisite: ITM705
<b>MT8320</b>	Strategic Tele/IT			X	E	1.0	Fall 2007	Anti-requisite: ITM715
<b>MT8321</b>	Data Privacy			X	E	1.0	Fall 2007	Anti-requisite: ITM725
<b>MT8322</b>	Data Warehousing			X	E	1.0	Fall 2007	Anti-requisite: ITM729
<b>MT8323</b>	CRM			X	E	1.0	Fall 2007	Anti-requisite: ITM730
<b>MT8324</b>	Info Systems Security & Control			X	E	1.0	Fall 2007	Anti-requisite: ITM420
<b>MT8325</b>	ICT Markets			X	E	1.0	Fall 2007	Anti-requisite: ITM515
<b>MT8326</b>	Advanced Re-eng Methods			X	E	1.0	Fall 2007	Anti-requisite: ITM601
<b>MT8417</b>	TV Distribution			X	E	1.0	Fall 2007	Anti-requisite: BDC911
<b>MT8418</b>	Legal Aspects Media			X	E	1.0	Fall 2007	Anti-requisite: BDC912
<b>MT8419</b>	Economics of Media			X	E	1.0	Fall 2007	Anti-requisite: BDC914
<b>MT8420</b>	Legal Issues in Media			X	E	1.0	Fall 2007	Anti-requisite: BDC915, MT8408

<b>MT8421</b>	Media Bus Studies			X	E	1.0	Fall 2007	Anti-requisite: FPN536
<b>MT8422</b>	Advertising in Electronic Media			X	E	1.0	Fall 2007	Anti-requisite: BDC901
<b>MT8423</b>	TV Marketing Promotion			X	E	1.0	Fall 2007	Anti-requisite: BCD906
<b>MT8424</b>	Production Mgmt			X	E	1.0	Fall 2007	Anti-requisite: BDC910
<b>MT8516</b>	Purchase/Supply Mgmt			X	E	1.0	Fall 2007	Anti-requisite: MGT701
<b>MT8517</b>	Princ. Transportation			X	E	1.0	Fall 2007	Anti-requisite: MGT803
<b>MT8518</b>	Studies in Global Supply Chain Mgmt			X	E	1.0	Fall 2007	Anti-requisite: MGT804 and MB8707
<b>MT8519</b>	Logistics Mgmt I			X	E	1.0	Fall 2007	Anti-requisite: RMG903
<b>MT8520</b>	Logistics Mgmt II			X	E	1.0	Fall 2007	Anti-requisite: RMG904, Pre-req MT8519
<b>MT8521</b>	Ops Mgmt			X	E	1.0	Fall 2007	Anti-requisite: MGT401
<b>MT8808</b>	Consulting Skills			X	E	1.0	Fall 2007	Anti-requisite: ITM724

## COURSE CHANGE FORM - 2

### School of Graduate Studies

Graduate Program: Master of Business Administration

Initiating School/Department: School of Graduate Studies

Approval of VP Academic:

\_\_\_\_\_  
Dr. Errol Aspevig

Course Number	Course Title	Mark with "X"			Required/Elective	Credits	Programs Affected	Implement Date	Purpose of Change
		Amend-ed	Deleted	Added					
MB8103	Strategy in an International Business Environment	X			R	1.0	MBA	Fall 2007	Course Description Change
MB8101	Law, Regulatory and Governance Issues		X		R	.50	MBA	Fall 2007	Deleted
MB8102	Socially Responsible and Ethical Management		X		R	.50	MBA	Fall 2007	Deleted
<b>MB8108</b>	<b>Regulation, Governance and Socially Responsible Mgmt</b>			X	R	1.0	MBA	Fall 2007	New course which combines 2 previous 0.5 credit courses: MB8101 and MB8102, moved to specialization term
MB8201	Strategic Management Challenges in the International Environment	X			R	1.0	MBA	Fall 2007	Course Description Change
MB8401	Marketing Management	X			R	1.0	MBA	Fall 2007	Course Description Change
MB8404	Managing Customer Relations	X			R	1.0	MBA	Fall 2007	Course Description and Title Change

MB8406	Special Topics in Marketing: Sport and Event Marketing		X		R	1.0	MBA	Fall 2007	Deleted
<b>MB8407</b>	Special Topics in Marketing			X	R	1.0	MBA	Fall 2007	New course added to Marketing Specialization
MB8505	Legal Aspects of Retail and Commercial Development	X			R	1.0	MBA	Fall 2007	Course Description Change

**The following Undergraduate courses will be offered as electives. A maximum of 2 courses may be taken in the specialization semester.**

<b>MB8701</b>	Advanced International Accounting			X	E	1.0	MBA	Fall 2007	Anti-requisite: ACC808
<b>MB8702</b>	Ethics in Finance			X	E	1.0	MBA	Fall 2007	Anti-requisite: FIN800
<b>MB8703</b>	Corporate Financial Analysis			X	E	1.0	MBA	Fall 2007	Anti-requisite: FIN801
<b>MB8704</b>	Legal Aspects of International Business			X	E	1.0	MBA	Fall 2007	Anti-requisite: IBS800
<b>MB8705</b>	Issues in Information Technology Law			X	E	1.0	MBA	Fall 2007	Anti-requisite: LAW732
<b>MB8706</b>	Ethical Leadership			X	E	1.0	MBA	Fall 2007	Anti-requisite: MGT802
<b>MB8707</b>	Studies in Global Supply Chain Mgmt			X	E	1.0	MBA	Fall 2007	Anti-requisite: MGT804 and MT8518
<b>MB8708</b>	Project Mgmt			X	E	1.0	MBA	Fall 2007	Anti-requisite: MGT806
<b>MB8709</b>	Organizational Theory and Design			X	E	1.0	MBA	Fall 2007	Anti-requisite: MHR841
<b>MB8710</b>	Compensation Management			X	E	1.0	MBA	Fall 2007	Anti-requisite: MHR749
<b>MB8711</b>	Negotiation and Conflict			X	E	1.0	MBA	Fall 2007	Anti-requisite: MGR741
<b>MB8712</b>	Industry Analysis			X	E	1.0	MBA	Fall 2007	Anti-requisite: MKT731

<b>MB8713</b>	Marketing Management II			X	E	1.0	MBA	Fall 2007	Anti-requisite: MKT802
<b>MB8714</b>	Business Forecasting Techniques			X	E	1.0	MBA	Fall 2007	Anti-requisite: QMS703
<b>MB8715</b>	Decision Models for Managers			X	E	1.0	MBA	Fall 2007	Anti-requisite: QMS751
<b>MB8716</b>	Retail Operations I-HR Challenges			X	E	1.0	MBA	Fall 2007	Anti-requisite: RMG900
<b>MB8717</b>	Retail Operations II -Productivity Issues			X	E	1.0	MBA	Fall 2007	Anti-requisite: RMG901
<b>MB8718</b>	Design, Commerce and Culture			X	E	1.0	MBA	Fall 2007	Anti-requisite: RMG905
<b>MB8719</b>	International Retailing			X	E	1.0	MBA	Fall 2007	Anti-requisite: RMG906
<b>MB8720</b>	Issues and Innovations in Retailing II			X	E	1.0	MBA	Fall 2007	Anti-requisite: RMG908

**Report of the Nominating Committee**  
**#W2007-3**  
**May 1, 2007**

The following are being nominated to serve on the Standing Committees of Academic Council beginning September 2007, filling vacancies on these committees. Faculty terms are for two years and student terms are for one year.

Note that members of the Nominating Committee have abstained from voting for themselves for any committee position.

**Academic Council Appeals Committee**

Faculty

Sanjeev Bhole, Engineering, Architecture and Science (Mechanical & Industrial Engineering)  
Lucia Dell'Agnese, Communication & Design (Fashion) – 3<sup>rd</sup> term  
Andrew Furman, Communication & Design (Interior Design) 2<sup>nd</sup> term  
George Gekas, Business (Business Management) - 3<sup>rd</sup> term  
Avner Levin, Business (Business Management) – 2<sup>nd</sup> term

Students

Shaista Ali, Engineering, Architecture and Science (Industrial Engineering)  
Ashley Aseltine, Arts, (Arts & Contemporary Studies)  
Anna Bridges, Arts - 3<sup>rd</sup> term  
Robin Castelino, Graduate Studies (Electrical & Computer Engineering) – 2<sup>nd</sup> term  
Michael Levine, Business (Business Management)  
Diane Liu, Engineering, Architecture and Science (Industrial Engineering)  
Ashley Rumsley, Communication & Design (Interior Design)  
Tom Schwerdtfeger, Community Services (Urban and Regional Planning)  
Maame Twum-Barima, Community Services (Nursing)

**Academic Standards Committee**

Faculty

Dimitri Androutsos, Engineering, Architecture and Science (Electrical Engineering)  
Elizabeth Evans, Business (Retail Management) – 2<sup>nd</sup> term  
Ron Keeble, Community Services (Urban and Regional Planning)  
Lynda McCarthy, Engineering, Architecture and Science (Chemistry & Biology) – 3<sup>rd</sup> term  
Ron Stagg, Arts (History) - 3<sup>rd</sup> term  
Mehmet Zeytinoglu, Vice Chair, (Electrical Engineering) – 3<sup>rd</sup> term

Students

Paul Hadian, Social Science – 2<sup>nd</sup> term

**Admissions Committee**

Students

Tobias Whitfield, Business (Business Management)  
Samih Abdelgadir, Engineering, Architecture and Science (Electrical Engineering)

## **Awards & Ceremonials**

### Faculty

Martin Greig, Arts (History) - 2<sup>nd</sup> term

Ian Baitz, Communication & Design (Graphics Communication Management)

Kernaghan Webb, Business (Business Management)

### Deans/Chairs/Directors

Usha George, Dean, Community Services

James Norrie, Chair, Information Technology Management

David Tucker, Chair, Radio and Television Arts

### Continuing Education

Janet Hercz, Director of Marketing & Communications

### Students

Melanie Merglesky, Undergraduate Student (Arts & Contemporary Studies)

Reza Sadjadi, Graduate Student (Civil Engineering)

## **Composition and By Laws Committee**

(Members must be Academic Council representatives)

### Faculty

David Checkland, Arts (Philosophy)

Dana Lee, Communication and Design (Radio and Television Arts) – 2<sup>nd</sup> term

### Students

April Bahdur, Arts (International Economics)

Salman Omer, Engineering, Architecture and Science (Aerospace Engineering)

## **Learning and Teaching Committee**

### Students

Samih Abdalgadir, Engineering Architecture and Science (Electrical Engineering)

Omar Falou, Graduate Studies (Computer Engineering) – 2<sup>nd</sup> term

Amandeep Mahli, Arts (Arts & Contemporary Studies) – 2<sup>nd</sup> term

Rebecca Rose, Communication and Design (Journalism)

Maame Twum-Barina, Community Services (Nursing) – 2<sup>nd</sup> term

## **Nominating Committee**

### Faculty

Martin Antony, Arts (Psychology)

Carlyle Farrell, Business (Business Management)

Ravi Ravindran, Engineering, Architecture and Science (Mechanical Engineering)

### Students

Omar Falou, Graduate Studies (Electrical and Computer Engineering)

Melanie Stanton, Community Services (Nutrition and Food)

## **Research Ethics Board**

### Faculty

Asher Alkoby, (Business Management)

Frances Hare, member at Large (Child and Youth Care)

Jo Kornegay, Arts (Philosophy) – 2<sup>nd</sup> term

Avner Levin, Member with Legal Expertise (Business Management)

Laura Nenych, Communication and Design (Radio and Television Arts)

Medhat Shehata, Engineering Architecture and Science (Civil Engineering)

Karen Spalding, Graduate Studies (Nursing)

Bettina West, Member at Large (Business Management)

Sharon Wong, Member at Large (Nutrition)

### Students

Alexandra Jurczak, Graduate Student (Nursing)

Jehangir Saleh, Undergraduate Student (Arts & Contemporary Studies) – 3<sup>rd</sup> term

### Community Member

Maureen Cava, 2<sup>nd</sup> term

Archna Patel,

## **SRC Committee**

### Faculty

Susanne Edwards, Community Services (Nursing – 2<sup>nd</sup> term

### Students

Omar Falou, Graduate Student (Computer Engineering – 2<sup>nd</sup> term

Roxana Gherman, Undergraduate student (Nursing) – 2<sup>nd</sup> term

Respectfully submitted,

M. Dionne, Chair, for the Committee

I. Baitz, C. Cassidy, C. Evans, E. Evans, O. Falou, K. Jones, T. Koulak, L. Merali, M. Panitch, D. Schulman (non-voting)

# REPORT OF THE ACADEMIC STANDARDS COMMITTEE

## Report #W2007-2; May 2007

In this report Academic Standard Committee (ASC) presents its recommendations on several items. The report has been divided into two sections:

- **Section A** presents proposals by the G. Raymond Chang School of Continuing Education which include new certificates in:
  - *Enterprise Mainframe Computing for IBM Z Series Computers,*
  - *Environmental Public Health Leadership;* andrevisions to certificates in:
  - *Computer Programming,*
  - *Family Supports,*
  - *Project Management.*
- **Section B** presents new program proposals and structural changes pertaining to liberal studies in engineering programs:
  - *Mathematics and Its Applications,*
  - *Liberal Studies in Engineering Programs,*
  - *Biomedical Engineering.*

Further documentation on the items addressed in this and all other ASC reports is available for review through the Secretary of Academic Council.

## **SECTION A: CONTINUING EDUCATION**

### **A1. Certificate in Enterprise Mainframe Computing for IBM Z Series Computers**

Over the last two decades, the curricula of information technology programs have had very limited to non-existent coverage of mainframe computer systems. As a result, there is an increasing shortage of information technology specialists with expertise in mainframe computers. Employers have also observed that many of their staff supporting mainframe computer systems are approaching retirement age.

The proposed certificate program is the result of collaboration between IBM Canada and the Chang School of Continuing Education. Its objective is to increase the number of information technology specialists with mainframe computer skills. Towards this goal, IBM Canada will provide course material, system access and knowledge transfer, whereas the Chang School of Continuing Education will assist in course development and contribute teaching resources and administrative expertise.

**Admission Requirements:** Eligible applicants must have completed an undergraduate degree in computer sciences or a related field, or have clear standing in the final year of such a degree program, or have significant related employment experience. Applicants must complete an application form for the program and be accepted before entering the program. Applicants wishing to enroll in the program must provide a resume listing employment experience, copies of credentials of academic standing, and certification documents.

**Curriculum:** The curriculum is based on material prepared by IBM Canada as part of its global education strategy for mainframe computers. An Academic Advisory Committee which includes representatives from the School of Computer Science and the School of Information Technology Management provides academic guidance and support for the proposed certificate program. Under the guidance of this committee, the Chang School of Continuing Education has extensively revised the curriculum to ensure that it conforms to academic standards of the University.

The certificate program consists of six courses (1 required and 5 elective).

**Required Course:**

CKCS 191 Introduction to Mainframe Computing Featuring the z/OS Operating System

**Elective Courses:** Select five courses

CKCS 192	Mainframe Application Programming ASSEMBLER
CKCS 193	Mainframe Application Programming COBOL
CKCS 194	Mainframe Batch Programming JCL
CKCS 195	Mainframe Online Programming CICS
CKCS 196	Mainframe Database Management Systems DB2
CKCS 197	Websphere Application Server on z/OS

**Recommendation**

Having satisfied itself of the academic merit of this proposal, ASC recommends:

*That Academic Council approve the Certificate in Enterprise Mainframe Computing for IBM Z Series Computers.*

**A2. Certificate in Environmental Public Health Leadership**

Management positions in public health units are almost exclusively occupied by public health professionals who have been promoted from within their organizations. Many within this cohort do not have a formal education in management, and when individuals with only science-based skills move into management positions, lack of administrative skills becomes a disadvantage.

**The proposed Certificate in Environmental Public Health Leadership has been designed for public health professionals who want to acquire and/or upgrade their administrative, leadership and management skills with an eye towards supervisory positions within their organizations. The School of Occupational and Public Health will provide academic leadership for this certificate program. If approved, the target start date is Fall 2007.**

**Admission Requirements:** All applicants must have a university level course in Canadian public health law. Applicants must also have a baccalaureate or masters degree in public health or a minimum of two years education in public health and five years experience in public health and permission of the Academic Coordinator.

**Curriculum:** This certificate program consists of seven required courses which will be offered both in classroom and online formats.

- CVPH 401 Public Health Administration
- CVPH 402 Public Health Practice
- CVPH 403 Social Marketing
- CVPH 404 Public Health Policy
- CVPH 405 Public Health Leadership
- CVPH 406 Current Topics in Public Health
- CHSM 408 Program Planning and Evaluation

### **Recommendation**

Having satisfied itself of the academic merit of this proposal, ASC recommends:

*That Academic Council approve the Certificate in Environmental Public Health Leadership.*

### **A3. Revisions to the Computer Programming Certificates**

Certificate programs in computer programming deliver comprehensive training in application programming, operating systems principles, client/server architectures and the development of computer-based solutions to engineering problems. Currently, the Chang School of Continuing Education offers three certificate programs in computer programming: *Computer Programming (Computer Applications)*, *Computer Programming (Computer Systems)* and *Computer Programming (Engineering)*.

Over the past five years, enrollment in these certificate programs has dropped significantly. The proposed changes revise and streamline these certificates in response to a smaller market and reduce curriculum overlap. The proposed revisions include:

- Discontinuation of *Certificate in Computer Programming (Engineering)*;
- Consolidation of the *Computer Applications* and *Computer Systems* certificate programs within a revised *Certificate in Computer Applications*;
- Reducing the number of courses from seven to six;
- Repositioning of CCPS 109 as a required core course;
- Providing specialization in software engineering, database technology and networking.

The School of Computer Science, which provides academic administration to all computer science certificates, and the Chang School of Continuing Education have provisions in place which would allow currently registered students to complete the certificate program in which they originally registered.

The curriculum of the revised *Certificate in Computer Applications* would consist of 6 courses:

**Required courses:**

CCPS 109	Computer Science I
CCPS 209	Computer Science II
CCPS 305	Data Structures
CCPS 393	Introduction to C and UNIX

**Elective Courses** (select one Group):

**Group A: Software Engineering**

CCPS 311	Object Oriented Programming and Design
CCPS 613	Human-Computer Interaction and GUI Development

**Group B: Database Technology**

CCPS 510	Database Systems I
CCPS 610	Database Systems II

**Group C: Networking**

CCPS 590	Introduction to Operating Systems
CCPS 706	Introduction to Data Communications

The required courses in the “new” certificate program define a core set of theory and principles and thus provide a strong basis for professional practice in computer science, whereas the elective courses aim to introduce students to specific application areas.

**Admission Requirements:** OSSD with six OAC credits or Grade 12 U or M credits, or equivalent, or mature student status and permission from the coordinator.

**Recommendation**

Having satisfied itself of the academic merit of these proposals, ASC recommends:

*That Academic Council approve the revisions in Certificate in Computer Applications.*

*That Academic Council approve the discontinuation of the Certificates in Computer Programming (Computer Systems) and Computer Programming (Engineering).*

**A4. Revision to the Certificate in Family Supports**

In a recent strategy meeting, stakeholders for the *Certificate in Family Supports* recognized the need for a revised certificate structure that would increase accessibility and participation in family support education. Participants reported that, due to cost and time commitments, the 8-course format of the current certificate program was daunting to many practitioners, who are more likely to achieve academic success by completing studies with a reduced set of focused, interdisciplinary family supports courses.

The proposed revisions include a reduction in the number of courses from 8 to 6 and the restructuring of the core and elective category of courses. The revised curriculum is as follows:

**Required courses:**

- CVFS 401 Family Issues I
- CVFS 403 Theory and Practice in Family Supports
- CVFS 404 Program Planning and Evaluation

**Elective Courses:**

**Group A:** (select two)

- CVFS 400 Group Dynamics and Interpersonal Communication
- CVFS 402 Family Issues II
- CVFS 407 Community Economic Development
- CVFS 408 Practicum/project
- CCLD 103 Human Development

**Group B:** (select one)

**Students will choose one course as follows:**

1. An additional course from Elective Group A above excluding courses that are already completed.
2. One Interdisciplinary (CINT) course.
3. One Nonprofit and Voluntary Sector Manager (CINP) course.
4. With the submission of an approved course substitution form signed by the Academic Coordinator, one course from Ryerson psychology, sociology, philosophy or politics courses or equivalent.
5. With the submission of an approved course substitution form signed by the program coordinator, one related Ryerson professional course from Early Childhood Education, Nutrition, Child and Youth Care, Social Work or Gerontology or equivalent.

**Recommendation**

Having satisfied itself of the academic merit of these proposals, ASC recommends:

*That Academic Council approve the revisions in Certificate in Family Supports.*

**A5. Revision to the Certificate in Project Management**

The recently restructured *Certificate in Project Management* offers specialization in (i) architecture and construction, (ii) information technology management, and (iii) health services management. The curriculum consists of eight courses (5 required core, 2 stream-specific required courses and 1 course selected from a common group of electives). The curriculum has been closely modeled on the body of knowledge identified by the Project Management Institute, an international professional association that provides regulation and certification of the Project Management Professional designation.

Since the inception of the restructured certificate, current and potential students have indicated their preference for a “generalist” curriculum that would not require specialization in any of the three streams. In response, the curriculum committee developed a “generalist” stream to accommodate students who do not wish to pursue an industry-specific specialization stream.

The curriculum of the generalist stream would consist of 8 required courses (including the same 5 core courses required for all certificate students):

- CCMN 114 Short Management Reports
- CKPM 202 Fundamentals of Project Management
- CKPM 203 Planning and Scheduling
- CKPM 207 Project Management Systems
- CKPM 209 Project Risk and Quality Management
- CKPM 211 Leadership in Project Management
- CKPM 212 Project Cost and Procurement Management
- CMHR 405 Human Resources: Organizational Behavior and Interpersonal Skills

## **Recommendation**

Having satisfied itself of the academic merit of these proposals, ASC recommends:

*That Academic Council approve the revision in Certificate in Project Management.*

## ***SECTION B: SCIENCE and ENGINEERING***

### **B1. Mathematics and Its Applications**

**As a branch of science, mathematics explores general patterns that explain our world. Mathematics also provides the language, reasoning and analytic tools that many other disciplines, including physical, social and health sciences, use for exploration. A wide range of businesses rely on mathematics to provide insight and analysis. Mathematics programs deliver such competencies as they educate students and develop their skills in abstraction, conceptualization, modeling and problem solving.**

The *Mathematics and Its Applications* program recognizes that advanced careers in today’s knowledge-based economy require a strong background in mathematical and quantitative skills. The program has been designed to foster critical thinking and analysis while emphasizing applications of mathematical tools to real-world problems within a multidisciplinary framework. The program objectives are (i) to broaden career options available to students within science programs, and (ii) to enhance science education and research that will ensure Ryerson’s ability to attract and retain the best students and faculty.

Among the twenty-one publicly funded universities in Ontario, Ryerson is one of only three<sup>1</sup> which currently do not offer any programs in mathematics. The proposed program conforms to Ryerson’s mandate to deliver programs of study that provide a balance between theory and

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1 The other two are the Dominican University College which is an Ottawa based seminary, and the Ontario College of Art and Design.

application, prepare students for careers in professional and quasi-professional fields, and advance applied knowledge and research in response to existing and emerging societal needs.

## Curriculum

The proposed program builds on the *Contemporary Science* platform which has been designed to provide a broad and flexible path to science education while serving as a portal to science programs at Ryerson. Following the first-year common science platform, students can choose to remain in the *regular* program or opt to pursue an option in *Computer Science* or *Economics*. Students in the *regular* program would be required to declare a specialization area in one of *Accounting*, *Biology*, *Chemistry*, *Finance* or *Physics* by the beginning of the fourth semester. Each specialization requires the completion of six elective courses in that subject area with at least two of these being upper level courses.

The curriculum consists of 41 one-semester courses including one orientation, six Liberal Studies and one professional communication course. Appendix B1 presents the curriculum and provides full listing of the required and elective courses that constitute each option and stream.

**Practicum:** Co-operative and internship options will provide qualified students with up to 20 months of work experience that enhances the students' organizational and technical abilities as well as their oral and written communication skills. Students will have to complete a minimum of four of the five work terms in order to graduate from the co-op program. Alternatively, students can opt to complete a 16-month industrial internship placement following the completion of the third year of study.

**Optional Designation in Management Science:** Students who opt for this specialization will gain a solid foundation in management science courses, specifically tailored to better prepare them for a career in engineering or applied science management, or for graduate studies in management related specializations. The designation in Management Science will require that students complete a total of six additional courses beyond their regular program.

**Admission, Enrollment, Implementation:** The admission requirements for the *Mathematics and Its Applications* program is an OSSD or equivalent with six Grade 12 U/M courses including Grade 12 U English (ENG4U/EAE4U is the preferred English), Chemistry (SCH4U), Biology (SBI4U) and Advanced Functions and Introductory Calculus (MCB4U)<sup>2</sup> with a minimum of 60 percent or higher in each of these courses. Students are encouraged to include Grade 12 U Physics in their high school studies. Subject to competition, candidates may be required to present averages/grades above the minimum.

The enrollment target for the *Mathematics and Its Applications* program is 30 first-year students. Revised direct-entry admission and second year enrollment targets in other science programs will reflect the enrollment target in the new program without increasing the total first-year intake of the science programs.

The projected implementation date is Fall 2008.

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<sup>2</sup> Effective Fall 2008, MHF4U (Advanced Functions) will replace MCB4U (Advanced Functions and Introductory Calculus) in the admission requirements. MCB4U (Advanced Functions and Introductory Calculus) will continue to be accepted where presented and where applicable.

## Peer Review Assessment

In accordance with the University policy on *The Development, Review and Approval of New Undergraduate Programs*, a peer review team<sup>3</sup> assessed the proposed program. The peer review team (PRT) was favourably impressed with the quality of the mathematics faculty, and concluded that the proposed program is of high quality, innovative and meets the criteria for new programs set out by the University and recommended the program for implementation.

### *ASC Evaluation*

The proposed program in *Mathematics and Its Applications* represents a significant step in the formulation and delivery of science programs at Ryerson. The common first-year science platform is designed to expose students to various science fields before they select a more narrowly defined program. The common elements of the upper year curricula with other science programs allow efficient program delivery and greater credit transferability among programs and streams/options within programs.

**ASC believes that the proposed program will provide an applied education that addresses societal needs and exhibits distinctiveness from other Ontario university programs. The ASC presents the following recommendations in the spirit of making the program stronger.**

- In its report the PRT observed that several mathematics courses in the proposed curriculum are service-type courses offered to other science programs. Therefore, the PRT recommended that such courses would “*need to be made more rigorous in order to serve as prerequisites for the more advanced courses.*” The PRT further stated that strengthening the rigor of mathematics courses would “*probably occur naturally.*” ASC recognizes natural evolution of program curricula. However, such changes typically occur over an extended period of time. Therefore, **ASC recommends that the Department of Mathematics investigate alternate strategies to strengthen the rigor of core mathematics courses that can be implemented from the onset of the program.** Possible approaches may include “*offering several ‘flavours’ of the same course*” and/or requiring program students to attend additional seminar/tutorial sessions to supplement the coverage of mathematical topics and concepts introduced in service-type mathematics courses.
- The PRT also observed that proposed program is based on “*a well thought out curriculum ...[which] compared with some other Ontario mathematics programs, requires 1-3 fewer mathematics courses, and does not permit as intensive a concentration in mathematics as some of these programs.*” Indeed, the program requires the completion of 15–18 mathematics courses. **ASC recommends that the Department of Mathematics investigate the feasibility of increasing the number of mathematics courses in the curriculum.**

ASC recommends that the Department of Mathematics prepare a follow-up report on how it intends to address the above recommendations. This report is to be submitted to the Dean with a copy to the Provost and Vice-President Academic by May 31, 2008.

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<sup>3</sup> Profs. B.L. Keyfitz (Fields Institute for Mathematical Sciences), L. Michelis (Ryerson) and V.K. Murty (University of Toronto).

## Recommendation

Having satisfied itself of the merit of this proposal, the Academic Standards Committee recommends:

*That Academic Council approve the program in Mathematics and Its Applications leading to the Bachelor of Science (Mathematics) degree.*

## B2. Liberal Studies in Engineering Programs

This section presents a proposal for restructuring the Liberal Studies component in engineering programs. ASC brings forward its recommendation on this proposal in the context of, and contingent upon endorsement of, the Tripartite Curriculum (TPC) review report presented to Academic Council earlier. The review report states that “*...[t]he constraints imposed by accreditation requirements sometimes challenge the Tripartite Policy. When strictly interpreted, the TPC may also create anomalies for some programs when they benchmark themselves against comparator programs in the university system. In the case of some of our new programs, strict conformity to the rules and protocols used to interpret the TPC structure is problematic.*”

The engineering programs at Ryerson are all accredited by the Canadian Engineering Accreditation Board (CEAB). In November 2006, accreditation visitors re-assessed the engineering programs on behalf of the CEAB to determine the compliance of these programs with accreditation criteria. The Faculty of Engineering, Architecture and Science (FEAS) has recently received the CEAB report which presents the observations, findings and comments of the accreditation visitors. One of the key concerns expressed in the CEAB report is the high course load in all engineering programs. In response to this concern, engineering programs will be submitting curriculum change proposals to ASC which would reduce the total number courses in all engineering programs to levels comparable with other accredited engineering programs in Canada. Towards this goal, the Deans of FEAS and Faculty of Arts (who is responsible for the administration of Liberal Studies and also chairs the Liberal Studies Council) have established a framework for restructuring the Liberal Studies component in the engineering programs. The new structure would reduce the number of Liberal Studies courses in engineering programs from 6 to 4. ASC evaluated this proposal in view of Recommendations 1 and 2 in the TPC review report which states:

1. *The first major conclusion and recommendation is that the university continue, as it has done in recent years, to be judiciously flexible in its interpretation of the TPC. This means respecting the fundamental principles, goals, values and recognized strengths of the TPC while at the same time addressing problems, and in particular those problems outlined above. ...*
2. *It is further recommended that if ASC recommends a curricular accommodation for any program, it clearly present and record the principle(s) underlying that accommodation such that rational precedents are developed which can be applied to requests for accommodations proposed by other programs.*

As part of the assessment of this proposal, ASC also analyzed the curricula of accredited engineering programs at other Canadian universities. The results of this analysis provided ASC

with data that allowed the committee to benchmark the engineering programs at Ryerson against comparator programs. This comparison revealed that the proposed changes in the engineering curricula, including the proposed reduction in the Liberal Studies courses, would make the curricula of the Ryerson engineering programs comparable to the curricula of other accredited programs in all categories (number of technical and Liberal Studies courses).

ASC makes its recommendation within the conceptual framework formed by the TPC review report, particularly the two recommendations stated above. The curricular accommodation in this recommendation is based on a consideration of both of the following principles, and on the fact that Ryerson's engineering programs have among the highest course and hour loads in the University:

- The need to address accreditation concerns related to certification essential for professional practice; and
- The comparability (curriculum, and number of courses and hours) with comparator programs.

## **Recommendation**

Having satisfied itself of the merit of this proposal, the Academic Standards Committee recommends:

*That Academic Council approve a reduction in the Liberal Studies requirement for engineering programs to a minimum of four one-semester courses.*

## **B3. Biomedical Engineering**

Biomedical engineering is a discipline that integrates physical, chemical, mathematical and computational sciences and engineering principles to study biology, medicine and health. It applies engineering and scientific tools to analyze biological and physiological problems. Today, biomedical science industries are some of the fastest growing. Ontario, specifically the Greater Toronto Area, has the fourth largest biomedical industry cluster in North America and employs over 35,000 people. The biomedical sciences industry in Ontario is renowned for its research expertise in medical biotechnology and advanced agri-food technologies. Fundamental to these activities are the biomedical engineers who often serve as an interface between the engineering and medical fields as a result of their multidisciplinary background.

The proposed *Biomedical Engineering* program recognizes the demand for highly educated individuals who would work in the biomedical sciences and health care industries. The program aims to impart expertise in biomedical engineering, and the ability to work, research and design in a multidisciplinary setting. Programs in biomedical engineering are not widely available in Canada. Most biomedical engineering programs offered at Canadian universities are at a graduate level and those offered at an undergraduate level appear to be hybrid programs<sup>4</sup>. However, other Canadian universities are in the planning stages of establishing stand-alone undergraduate biomedical engineering programs. The proposed program will likely be the

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<sup>4</sup> **Western Ontario: Integrated Engineering and Medicine, Carleton and McMaster: Biomedical and Electrical Engineering, Manitoba: Biosystems Engineering.**

educational choice of individuals who want to receive a first-rate education in this emerging field.

The proposed program will be administered by the Department of Electrical and Computer Engineering in the Faculty of Engineering, Architecture and Science (FEAS). FEAS has identified the development of biomedical engineering and sciences as one of its strategic priorities. Currently, there are several faculty in FEAS with expertise in all areas of biomedical engineering and sciences. These faculty members have extensive collaborative partnerships with hospitals and health networks, and they direct successful research programs funded by federal research councils, federal and provincial centres of excellence, foundations, and biomedical industries. The proposed *Biomedical Engineering* program, if approved, would complement the recently introduced undergraduate and graduate programs in *Medical Physics* and the *Computational Biology* option within the *Biology* program.

## **Curriculum**

The proposed curriculum has been designed in accordance with accreditation guidelines and provides a broad background in biology, chemistry and physiology together with courses dedicated to key areas of biomedical engineering. The curriculum consists of 46 one-semester courses including one orientation, four Liberal Studies, one economics and one professional communication course. Appendix B3 presents the curriculum and provides a full listing of the required and elective courses.

**Practicum:** An optional Industrial Internship Program (IIP) will be available to qualified students and provide up to 16 months of work experience. Qualified third year students, if hired by one of the corporations who intend to provide internship placements, will spend a period of 12–16 months, from May to September of the following year, as engineering interns. After the completion of the internship students will return to the program to complete their final year of studies. Enrollment in the IIP will extend the program to five years.

**Optional Designation in Management Science:** Students who opt for this specialization will gain a solid foundation in management science courses specifically tailored to better prepare them for a career in engineering or applied science management, or for graduate studies in management related specializations. The designation in Management Science will require that students complete a total of six additional courses beyond their regular program.

**Admission, Enrollment, Implementation:** The admission requirements for the *Biomedical Engineering* program is an OSSD or equivalent with six Grade 12 U/M courses including Grade 12 U English (ENG4U/EAE4U is the preferred English), Advanced Functions and Introductory Calculus<sup>5</sup> (MCB4U), Physics (SPH4U), Chemistry (SCH4U) and one of Geometry and Discrete Mathematics<sup>6</sup> (MGA4U), or Mathematics of Data Management (MDM4U), or Biology (SBI4U), or Earth and Space Science (SES4U). Biology (SBI4U) would be the preferred course.

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5 Effective Fall 2008, MHF4U (Advanced Functions) will replace MCB4U (Advanced Functions and Introductory Calculus) in the admission requirements. MCB4U (Advanced Functions and Introductory Calculus) will continue to be accepted where presented and where applicable.

6 Effective Fall 2008, MCV4U (Calculus and Vectors) will replace MGA4U (Geometry and Discrete Mathematics) in the admission requirements. Note: MGA4U (Geometry and Discrete Mathematics) will continue to be accepted where presented and applicable.

Minimum grades in each of Advanced Functions and Introductory Calculus (MCB4U) and Physics (SPH4U) (normally 65-70 percent), will be determined by the Faculty of Engineering, Architecture and Science subject to competition.

The enrollment target for the *Biomedical Engineering* program is 70 first-year students. Revised direct-entry admission and upper year enrollment targets in other engineering programs will reflect the enrollment target in the new program without increasing the total first-year intake of the engineering programs.

The projected implementation date is Fall 2008.

### **Peer Review Assessment**

In accordance with the University policy on *The Development, Review and Approval of New Undergraduate Programs*, a peer review team<sup>7</sup> assessed the proposed program. The peer review team (PRT) reported that the proposed curriculum provides a broad background in basic sciences with upper-year courses emphasizing areas of concentration which reflect current faculty strengths. The PRT praised the modern facilities available at Ryerson and concluded that the proposed program meets the criteria for new programs set out by the University and recommended its implementation.

### **ASC Evaluation**

The proposed program is based on a rigorous curriculum which emphasizes design and has a strong practical component. Laboratory and tutorials account for 28 percent of the total curriculum hours. The program uses existing courses, wherever possible, thus avoiding duplication and making optimal use of available resources. The proposed program expands the multidisciplinary collaboration between engineering and science programs at Ryerson.

While assessing the proposal ASC recommended the addition of Anatomy (BLG 700), as this course would be considered a foundation course in a program which places human physiology at its core. ASC also recommended introducing a course in numerical methods reflecting the PRT's recommendation on this issue. In response to these recommendations, the Department incorporated BLG 700 as a required course, and the numerical methods course as a technical elective in Semester 7. ASC believes that these changes further enhance the curriculum.

### **Recommendation**

Having satisfied itself of the merit of this proposal, the Academic Standards Committee recommends:

*That Academic Council approve the program in Biomedical Engineering leading to the Bachelor of Engineering (Biomedical Engineering) degree.*

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<sup>7</sup> Profs. C. Evans (Ryerson), H. Ladak (The University of Western Ontario) and D. Westwick (University of Calgary).

Respectfully submitted by

Errol Aspevig,  
for the 2006/2007 Academic Standards Committee

G. Allen (Journalism)	L. Jin (Library)
K. Alnwick (Registrar)	L. McCarthy (Chemistry and Biology)
J. Dianda (Philosophy)	R. Mendelson (Nutrition)
E. Evans (Retail Management)	D. Schulman (Secretary of Academic Council; ex-officio)
Z. Fawaz (FEAS)	J. Smith (Journalism)
V. Fleet (Student, Chemistry and Biology)	R. Stagg (History)
D. Glynn (Continuing Education)	J. Waddell (Nursing)
P. Hadian (Student, Sociology)	M. Zeytinoglu (Electrical and Computer Engineering)
G. Hunt (Business Management)	

## APPENDIX B1: Mathematics and Its Applications – Curriculum

### B1.1 Regular Program

<b>Semester 1</b>		<i>Course Title</i>	<i>Course Number</i>	<i>Lec</i>	<i>Lab</i>	<i>Tut</i>
<b>REQUIRED</b>						
		Biology I	BLG 143	3	1.5	
		Chemistry I	CHY 103	3		
		Intro. Programming for Scientists	CPS 118	4	1	
		Modern Mathematics I	MTH 131	4		1
		Physics I	PCS 120	4		1
		Orientation (Note 1)	SCI 180	1		
			<b>TOTAL</b>		23.5	

<b>Semester 2</b>		<i>Course Title</i>	<i>Course Number</i>	<i>Lec</i>	<i>Lab</i>	<i>Tut</i>
<b>REQUIRED</b>						
		Biology II	BLG 144	3	1.5	
		Chemistry II	CHY 113	3	3	
		Modern Mathematics II	MTH 231	4		1
		Physics II	PCS 130	4	1	
<b>LIBERAL STUDIES ELECTIVE</b>						
		Liberal Studies Elective 1		3		
			<b>TOTAL</b>		23.5	

<b>Semester 3</b>		<i>Course Title</i>	<i>Course Number</i>	<i>Lec</i>	<i>Lab</i>	<i>Tut</i>
<b>REQUIRED</b>						
		Advanced Programming for Scientists	CPS 313	3	1	
		Discrete Mathematics I	MTH 110	3	1	
		Calculus and Geometry	MTH 330	4		
		Probability and Statistics I	MTH 380	3		
<b>LIBERAL STUDIES ELECTIVE</b>						
		Liberal Studies Elective 2		3		
			<b>TOTAL</b>		18	

<b>Semester 4</b>					
	<i>Course Title</i>	<i>Course Number</i>	<i>Lec</i>	<i>Lab</i>	<i>Tut</i>
<b>REQUIRED</b>					
	Data Structures for Scientists	CPS 411	3	1	
	Discrete Mathematics II	MTH 210	3	1	
	Dynamic Systems and Differential Eqns	MTH 430	4		
	Probability and Statistics II	MTH 480	3		
<b>REQUIRED – Select one course from Tables 1–9</b>					
	Elective 1 (Note 2)		(3)	(1)	
<b>TOTAL</b>				19	

<b>Semester 5</b>					
	<i>Course Title</i>	<i>Course Number</i>	<i>Lec</i>	<i>Lab</i>	<i>Tut</i>
<b>REQUIRED</b>					
	Mathematical Analysis	MTH 5xx	3		1
	Numerical Analysis	MTH 501	3		1
<b>REQUIRED – Select one course from Table 1</b>					
	Elective 2 (Note 2)		(3)	(1)	
<b>REQUIRED – Select one course from Tables 1–9</b>					
	Elective 3 (Note 2)		(3)	(1)	
<b>LIBERAL STUDIES ELECTIVE</b>					
	Liberal Studies Elective 3 (Note 3)		3		
<b>TOTAL</b>				19	

<b>Semester 6</b>					
	<i>Course Title</i>	<i>Course Number</i>	<i>Lec</i>	<i>Lab</i>	<i>Tut</i>
<b>REQUIRED</b>					
	Science, Communication and Society	CMN 600	3		
	Algebra	MTH 6xx	3		1
<b>REQUIRED – Select one course from Table 1</b>					
	Elective 4 (Note 2)		(3)	(1)	
<b>REQUIRED – Select one course from Tables 2–6</b>					
	Elective 5 (Note 2)		(3)	(1)	
<b>LIBERAL STUDIES ELECTIVE</b>					
	Liberal Studies Elective 4		3		
<b>TOTAL</b>				18	

**Semester 7**

<i>Course Title</i>	<i>Course Number</i>	<i>Lec</i>	<i>Lab</i>	<i>Tut</i>
<b>REQUIRED – Select one course from Table 1</b>				
Elective 6 (Note 2)		(3)	(1)	
<b>REQUIRED – Select one course from Tables 2–6</b>				
Elective 7 (Note 2)		(3)	(1)	
<b>REQUIRED – Select two courses from Tables 1–9</b>				
Elective 8 (Note 2)		(3)	(1)	
Elective 9 (Note 2)		(3)	(1)	
<b>LIBERAL STUDIES ELECTIVE</b>				
Liberal Studies Elective 5		3		
<b>TOTAL</b>				19

**Semester 8**

<i>Course Title</i>	<i>Course Number</i>	<i>Lec</i>	<i>Lab</i>	<i>Tut</i>
<b>REQUIRED – Select one course from Table 1</b>				
Elective 10 (Note 2)		(3)	(1)	
<b>REQUIRED – Select one course from Tables 2–6</b>				
Elective 11 (Note 2)		(3)	(1)	
<b>REQUIRED – Select two courses from Tables 1–9</b>				
Elective 12 (Note 2)		(3)	(1)	
Elective 13 (Note 2)		(3)	(1)	
<b>LIBERAL STUDIES ELECTIVE</b>				
Liberal Studies Elective 6		3		
<b>TOTAL</b>				19

**B1.2 Computer Science Option**

**Note:** Semester 1 and Semester 2 curricula are common to all program options.

**Semester 3**

	<i>Course Title</i>	<i>Course Number</i>	<i>Lec</i>	<i>Lab</i>	<i>Tut</i>
<b>REQUIRED</b>					
	Computer Science I	CPS 109	3	2	
	Discrete Mathematics I	MTH 110	3	1	
	Calculus and Geometry	MTH 330	4		
	Probability and Statistics I	MTH 380	3		
<b>LIBERAL STUDIES ELECTIVE</b>					
	Liberal Studies Elective 2		3		
<b>TOTAL</b>				19	

<b>Semester 4</b>					
	<i>Course Title</i>	<i>Course Number</i>	<i>Lec</i>	<i>Lab</i>	<i>Tut</i>
<b>REQUIRED</b>					
	Computer Science II	CPS 209	3	2	
	Introduction to C and UNIX	CPS 393	3		
	Discrete Mathematics II	MTH 210	3	1	
	Dynamic Systems and Differential Eqns	MTH 430	4		
	Probability and Statistics II	MTH 480	3		
			<b>TOTAL</b>	19	

<b>Semester 5</b>					
	<i>Course Title</i>	<i>Course Number</i>	<i>Lec</i>	<i>Lab</i>	<i>Tut</i>
<b>REQUIRED</b>					
	Data Structures	CPS 305	3	1	
	Mathematical Analysis	MTH 5xx	3		1
	Numerical Analysis	MTH 501	3		1
<b>REQUIRED – Select one course from Tables 1–9</b>					
	Elective 1 (Note 2)		(3)	(1)	
<b>LIBERAL STUDIES ELECTIVE</b>					
	Liberal Studies Elective 3 (Note 3)		3		
			<b>TOTAL</b>	19	

<b>Semester 6</b>					
	<i>Course Title</i>	<i>Course Number</i>	<i>Lec</i>	<i>Lab</i>	<i>Tut</i>
<b>REQUIRED</b>					
	Science, Communication and Society	CMN 600	3		
	Algebra	MTH 6xx	3		1
<b>REQUIRED – Select two course from Table 8</b>					
	Elective 2 (Note 2)		(3)	(1)	
	Elective 3 (Note 2)		(3)	(1)	
<b>LIBERAL STUDIES ELECTIVE</b>					
	Liberal Studies Elective 4		3		
			<b>TOTAL</b>	18	

**Semester 7**

<i>Course Title</i>	<i>Course Number</i>	<i>Lec</i>	<i>Lab</i>	<i>Tut</i>
<b>REQUIRED – Select one course from Table 1</b>				
Elective 4 (Note 2)		(3)	(1)	
<b>REQUIRED – Select three courses from Table 8</b>				
Elective 5 (Note 2)		(3)	(1)	
Elective 6 (Note 2)		(3)	(1)	
Elective 7 (Note 2)		(3)	(1)	
<b>LIBERAL STUDIES ELECTIVE</b>				
Liberal Studies Elective 5		3		
	<b>TOTAL</b>			19

**Semester 8**

<i>Course Title</i>	<i>Course Number</i>	<i>Lec</i>	<i>Lab</i>	<i>Tut</i>
<b>REQUIRED – Select one course from Table 1</b>				
Elective 8 (Note 2)		(3)	(1)	
<b>REQUIRED – Select two courses from Table 8</b>				
Elective 9 (Note 2)		(3)	(1)	
Elective 10 (Note 2)		(3)	(1)	
<b>REQUIRED – Select one course from Tables 1–9</b>				
Elective 11 (Note 2)		(3)	(1)	
<b>LIBERAL STUDIES ELECTIVE</b>				
Liberal Studies Elective 6		3		
	<b>TOTAL</b>			19

**B1.3 Economics Option**

**Note:** Semester 1 and Semester 2 curricula are common to all program options.

**Semester 3**

<i>Course Title</i>	<i>Course Number</i>	<i>Lec</i>	<i>Lab</i>	<i>Tut</i>
<b>REQUIRED</b>				
Introductory Microeconomics	ECN 104	3		
Discrete Mathematics I	MTH 110	3	1	
Calculus and Geometry	MTH 330	4		
Probability and Statistics I	MTH 380	3		
<b>LIBERAL STUDIES ELECTIVE</b>				
Liberal Studies Elective 2		3		
	<b>TOTAL</b>			17

<b>Semester 4</b>					
	<i>Course Title</i>	<i>Course Number</i>	<i>Lec</i>	<i>Lab</i>	<i>Tut</i>
<b>REQUIRED</b>					
	Introductory Macroeconomics	ECN 204	3		
	Discrete Mathematics II	MTH 210	3	1	
	Dynamic Systems and Differential Eqns	MTH 430	4		
	Probability and Statistics II	MTH 480	3		
<b>REQUIRED – Select one course from Table 1</b>					
	Elective 1 (Note 2)		(3)	(1)	
<b>TOTAL</b>				18	

<b>Semester 5</b>					
	<i>Course Title</i>	<i>Course Number</i>	<i>Lec</i>	<i>Lab</i>	<i>Tut</i>
<b>REQUIRED</b>					
	Intermediate Macroeconomics I	ECN 301	3		
	Intermediate Microeconomics I	ECN 504	3		
	Mathematical Analysis	MTH 5xx	3	1	
	Numerical Analysis	MTH 501	3		1
<b>LIBERAL STUDIES ELECTIVE</b>					
	Liberal Studies Elective 3 (Note 3)		3		
<b>TOTAL</b>				17	

<b>Semester 6</b>					
	<i>Course Title</i>	<i>Course Number</i>	<i>Lec</i>	<i>Lab</i>	<i>Tut</i>
<b>REQUIRED</b>					
	Science, Communication and Society	CMN 600	3		
	Algebra	MTH 6xx	3		1
<b>REQUIRED – Select one course from Table 1</b>					
	Elective 2 (Note 2)		(3)	(1)	
<b>REQUIRED – Select one course from Table 9</b>					
	Elective 3 (Note 2)		(3)	(1)	
<b>LIBERAL STUDIES ELECTIVE</b>					
	Liberal Studies Elective 4		3		
<b>TOTAL</b>				18	

**Semester 7**

<i>Course Title</i>	<i>Course Number</i>	<i>Lec</i>	<i>Lab</i>	<i>Tut</i>
<b>REQUIRED – Select one course from Table 1</b>				
Elective 4 (Note 2)		(3)	(1)	
<b>REQUIRED – Select three courses from Table 9</b>				
Elective 5 (Note 2)		(3)	(1)	
Elective 6 (Note 2)		(3)	(1)	
Elective 7 (Note 2)		(3)	(1)	
<b>LIBERAL STUDIES ELECTIVE</b>				
Liberal Studies Elective 5		3		
	<b>TOTAL</b>		19	

**Semester 8**

<i>Course Title</i>	<i>Course Number</i>	<i>Lec</i>	<i>Lab</i>	<i>Tut</i>
<b>REQUIRED – Select one course from Table 1</b>				
Elective 8 (Note 2)		(3)	(1)	
<b>REQUIRED – Select two courses from Table 9</b>				
Elective 9 (Note 2)		(3)	(1)	
Elective 10 (Note 2)		(3)	(1)	
<b>REQUIRED – Select one course from Tables 1–9</b>				
Elective 11 (Note 2)		(3)	(1)	
<b>LIBERAL STUDIES ELECTIVE</b>				
Liberal Studies Elective 6		3		
	<b>TOTAL</b>		19	

**Notes:**

1. This course is graded on a PASS / FAIL basis.
2. Lecture, lab/tutorial hours shown in () are estimates due to elective nature of these courses.
3. This is a designated liberal studies elective where the students must select from a thematic list of courses on history of science/impact of technology (for the 2006/2007 academic year this list includes ENG 507, GEO 702, HST 701, PHL 709, POL 507).

## B1.4 Electives

**Regular Program:** Students in the regular program must take a total of 13 elective courses. At least four electives must be *Mathematics* courses from **Table 1**. Students must select a specialization area in one of *Biology*, *Chemistry*, *Physics*, *Finance* or *Accounting*. A minimum of six elective courses must be taken from the table (**Tables 2–6**) corresponding to the student's selected specialization area; a minimum of two of these elective courses must be at Level-2. The remaining three elective courses can be chosen freely from **Tables 1–9** subject to course prerequisites. Students enrolled in an option/specialization cannot take core courses in that particular option/specialization as electives.

**Computer Science Option:** Students pursuing the *Computer Science* option must take at least four *Mathematics* electives from **Table 1**. Students enrolled in this option must also take six electives from **Table 8** of which at least 2 must be at Level-2.

**Economics Option:** Students pursuing the *Economics* option must take at least four *Mathematics* electives from **Table 1**. Students enrolled in this option must also take six electives from the **Table 9** of which at least 2 must be at Level-2.

**Table 1: Upper Level Mathematics Electives**

A minimum of four courses from this list is required for graduation.

MTH 40A/B	Project – Thesis	MTH 640	Complex Analysis
MTH 405	Formal Languages	MTH 710	Fourier Analysis
MTH 500	Intro. to Stochastic Processes	MTH 712	Differential Equations II
MTH 503	Operations Research I	MTH 714	Logic & Computability
MTH 540	Geometry	MTH 718	Design & Codes
MTH 601	Numerical Analysis II	MTH 814	Computational Complexity
MTH 603	Operations Research II	MTH 816	Cryptography
MTH 607	Graph Theory	MTH 817	Combinatorics
MTH 609	Number Theory	MTH 820	Image Analysis

**Table 2: Biology Electives**

Students in the *Biology* stream must take a minimum of six courses from this table, of which at least 2 must be at Level-2 (courses with course numbers at 300 or higher).

BLG 151	Microbiology I	BLG 567	Applied Ecology
BLG 251	Microbiology II	BLG 600	Physiology
BLG 307	Principles of Biotechnology	BLG 700	Anatomy
BLG 351	Applied Microbiology	BLG 785	Developmental Biology
BLG 401	Ecotoxicology	BLG 788	Applications of Biotechnology
BLG 402	Limnology	BLG 888	Biotechnology Laboratory
BLG 400	Genetics		

**Table 3: Chemistry Electives**

Students in the *Chemistry* stream must take a minimum of six courses from this table, of which at least 2 must be at Level-2 (courses with course numbers at 300 or higher).

CHY 142	Organic Chemistry I	CHY 423	Environmental Science
CHY 242	Organic Chemistry II	CHY 431	Applied Analytical Chemistry
CHY 213	Analytical Chemistry I	CHY 434	Analyt. C. of Complex Matrices
CHY 223	Analytical Chemistry II	CHY 435	Chemical Instrumentation
CHY 330	Spectroscopy	CHY 436	Pharmaceutical Chemistry
CHY 331	Chromatography	CHY 445	Materials Chemistry
CHY 337	Spectroscopy in Organic Che.	CHY 449	Inorganic Chemistry II
CHY 344	Inorganic Chemistry I	CHY 706	Computational Chemistry
CHY 381	Physical Chemistry I		

**Table 4: Physics Electives**

Students in the *Physics* stream must take a minimum of six courses from this table, of which at least 2 must be at Level-2.

<b>Level 1</b>		<b>Level 2</b>	
PCS 227	Biophysics	PCS 335	Thermodyn. and Stat. Physics
PCS 228	Electricity and Magnetism	PCS 350	Modeling in Medical Physics
PCS 229	Introduction to Medical Physics	PCS 353	Quantum Mechanics
PCS 230	Photonics and Optical Devices	PCS 405	Medical Diagnostic Techniques
PCS 352	Nuclear Physics with Radiation	PCS 406	Rad. Protection/Health Physics
PCS 354	Radiation Biology	PCS 407	Radiation Therapy
		PCS 510	Fundamentals of Astrophysics

**Table 5: Finance Electives**

Students in the *Finance* stream must take a minimum of six courses from this table, of which at least 2 must be at Level-2.

<b>Level 1</b>		<b>Level 2</b>	
ACC 100	Intro. Financial Accounting	FIN 521	Advanced Portfolio Mgmt
FIN 300	Managerial Finance I	FIN 611	Applied Investment Mgmt
FIN 401	Managerial Finance II	FIN 710	Advanced Corporate Finance
FIN 501	Investment Analysis I	FIN 711	Advanced Investment Mgmt
FIN 502	Personal Financial Planning	FIN 801	Financial Risk Management
FIN 510	Entrepreneurial Finance		
FIN 512	Risk Management and Insurance		
FIN 601	Investment Analysis II		
FIN 610	Short-Term Financial Management		
FIN 612	Retirement and Estate Planning		
FIN 621	International Finance		
FIN 701	Financial Intermediation		
FIN 611	Applied Investment Management		
FIN 800	Ethics in Finance		
FIN 812	Advanced Personal Financial Planning		

**Table 6: Accounting Electives**

Students in the *Accounting* stream must take a minimum of six courses from this table, of which at least 2 must be at Level-2.

<b>Level 1</b>		<b>Level 2</b>	
ACC 100	Intro. Financial Accounting	ACC 514	Intermediate Accounting II
ACC 406	Intro. Management Accounting	ACC 621	Internal Auditing
ACC 414	Intermediate Accounting I	ACC 803	Advanced Mgmt Accounting
ACC 507	Accounting for Managers		
ACC 521	Auditing		
ACC 522	Taxation		
ACC 801	Intermediate Cost and Mgmt Accounting		

**Table 7: Miscellaneous Electives**

ECN 104	Introductory Microeconomics	CPS 305	Data Structures
ECN 204	Introductory Macroeconomics	CPS 314	Graphical Modeling
ECN 301	Intermediate Macroeconomics I	CPS 315	Database Appl. for Scientists
ECN 504	Intermediate Microeconomics I	CPS 393	Introduction to C and UNIX
CPS 109	Computer Science I	MTH 322	Chaos, Fractals and Dynamics
CPS 209	Computer Science II	MTH 599	Foundation of Math. Thought

**Table 8: Computer Science Electives**

Students in the *Computer Science* option must take a minimum of six courses from this table, of which at least 2 must be at Level-2.

**Level 1**

CPS 406	Intro. to Software Engg.
CPS 510	Database Systems I
CPS 511	Computer Graphics
CPS 520	Comp Assisted Inst/Learning
CPS 590	Introduction to Operating Systems
CPS 613	Human-Comp I. & GUI Dev.
CPS 616	Advanced Algorithms
CPS 615	Theory of Parsing
CPS 621	Intro. to Multimedia Systems
CPS 630	Web Applications
CPS 721	Artificial Intelligence I
CPS 707	S/W Verification & Validation

**Level 2**

CPS 530	Comp.-Based Pr. for the Web
CPS 610	Database Systems II
CPS 633	Computer Security
CPS 706	Intro to Data Communications
CPS 710	Translators I
CPS 720	Artificial Intelligence II
CPS 731	Software Engineering I
CPS 750	Tel. Networks: Wireless Sys.
CPS 815	Analysis of Algorithms
CPS 820	Knowledge Based Systems
CPS 831	Software Engineering II
CPS 840	Selected Topics in Comp Sci
CPS 841	Advanced Topics in Comp Sci
CPS 842	Info. Retrieval & Web Search
CPS 843	Digital Image Computing
CPS 844	Data Mining
CPS 845	Extreme Pr. & Agile Processes

**Table 9: Economics Electives**

Students in the *Economics* option must take a minimum of six courses from this table, of which at least 2 must be at Level-2.

**Level 1**

ACC 100	Intro. Financial Accounting
ECN 220	Evo. of the Global Economy
ECN 320	Intro. to Financial Economics
ECN 321	Intro. to Law and Economics
ECN 330	Economic Sys in the New World Economy
ECN 501	Industrial Organization
ECN 502	Economics of Natural Resources
ECN 506	Money and Banking
ECN 510	Environmental Economics

**Level 2**

ECN 702	Econometrics II
ECN 815	Advanced Macroeconomics
ECN 715	Advanced Microeconomics

ECN 600	Intermediate Macroeconomics II
ECN 605	Labour Economics
ECN 607	Issues in the International Economy
ECN 606	International Monetary Economics
ECN 614	An Introduction to Game Theory
ECN 627	Econometrics I
ECN 700	Intermediate Microeconomics II
ECN 703	Public Finance I
ECN 707	Economics of International Trade
FIN 401	Managerial Finance II

## APPENDIX B3: Biomedical Engineering – Curriculum

<b>Semester 1</b>						
	<i>Course Title</i>	<i>Course Number</i>	<i>Lec</i>	<i>Lab</i>	<i>Tut</i>	
<b>REQUIRED</b>						
	Introduction to Engineering	CEN 100	1			
	General Chemistry	CHY 102	3	1		
	Calculus I	MTH 140	4		2	
	Algebra	MTH 141	4		0.5	
	Physics: Waves and Fields	PCS 125	3	1	0.5	
<b>LIBERAL STUDIES ELECTIVE</b>						
	Liberal Studies Elective 1		3			
<b>TOTAL</b>						23

<b>Semester 2</b>						
	<i>Course Title</i>	<i>Course Number</i>	<i>Lec</i>	<i>Lab</i>	<i>Tut</i>	
<b>REQUIRED</b>						
	Introduction to Biomedical Engineering	BME 100	2	1		
	Digital Computation and Programming	CPS 125	3	2		
	Principles of Engineering Economics	ECN 801	3			
	Electric Circuits	EES 512	3	2		
	Calculus II	MTH 240	4			
	Mechanics	PCS 211	4	1		
<b>TOTAL</b>						25

<b>Semester 3</b>						
	<i>Course Title</i>	<i>Course Number</i>	<i>Lec</i>	<i>Lab</i>	<i>Tut</i>	
<b>REQUIRED</b>						
	Biology I	BLG 143	3	1.5		
	Biomedical Physics	BME 229	3			
	Statics and Mechanics of Materials	BME 323	4	1		
	Digital Systems	BME 328	4	3		
	Differential Equations and Vector Calculus	MTH 312	4			
<b>TOTAL</b>						23.5

**Semester 4**

	<i>Course Title</i>	<i>Course Number</i>	<i>Lec</i>	<i>Lab</i>	<i>Tut</i>
<b>REQUIRED</b>					
	Physiology	BLG 600	3		
	Biomechanics	BME 406	3	2	
	Biomaterials	BME 423	3	1	
	Art of Technical Communication	CMN 432	2	2	
	Electronics and Sensors	EES 614	3	2	
<b>LIBERAL STUDIES ELECTIVE</b>					
	Liberal Studies Elective 2		3		
			<b>TOTAL</b>		24

**Semester 5**

	<i>Course Title</i>	<i>Course Number</i>	<i>Lec</i>	<i>Lab</i>	<i>Tut</i>
<b>REQUIRED</b>					
	Anatomy	BLG 700	3		
	Bioinformatics	BME 501	3		
	Fluid Mechanics	BME 516	3	1	
	Introduction to Software	BME 518	3	2	
	Signals and Systems 1	BME 532	3	2	
	Microprocessor Systems	BME 538	3	2	
			<b>TOTAL</b>		25

**Semester 6**

	<i>Course Title</i>	<i>Course Number</i>	<i>Lec</i>	<i>Lab</i>	<i>Tut</i>
<b>REQUIRED</b>					
	Signals and Systems II	BME 632	3	2	
	Control Systems	BME 639	3	1.5	
	Biomedical Instrumentation	BME 674	3	1	
	Electric Machines & Actuators	EES 612	3	2	
	Bio-statistics	MTH 614	3		
<b>LIBERAL STUDIES ELECTIVE</b>					
	Liberal Studies Elective 3		3		
			<b>TOTAL</b>		24.5

<b>Semester 7</b>						
	<i>Course Title</i>	<i>Course Number</i>	<i>Lec</i>	<i>Lab</i>	<i>Tut</i>	
<b>REQUIRED</b>						
	Engineering Design	BME 700	1	1		
<b>REQUIRED – Select four courses from Table A</b>						
	Technical Elective 1		3	2		
	Technical Elective 2		3	2		
	Technical Elective 3		3	2		
	Technical Elective 4		3	2		
<b>LIBERAL STUDIES ELECTIVE</b>						
	Liberal Studies Elective 4 (Note 1)		3			
		<b>TOTAL</b>		25		
<b>Semester 8</b>						
	<i>Course Title</i>	<i>Course Number</i>	<i>Lec</i>	<i>Lab</i>	<i>Tut</i>	
<b>REQUIRED</b>						
	Design Project	BME 800		5		
	Law and Ethics in Engineering Practice	CEN 800	3			
<b>REQUIRED – Select three courses from Table B</b>						
	Technical Elective 5		3	2		
	Technical Elective 6		3	2		
	Technical Elective 7		3	2		
		<b>TOTAL</b>		23		

**Note 1:** This is a designated liberal studies elective where the students must select from a thematic list of courses on history of science/impact of technology (for the 2006/2007 academic year this list includes ENG 507, GEO 702, HST 701, PHL 709, POL 507).

**Table A**

- BME 703 Tissue Engineering
- BME 704 Radiation Therapy Devices
- BME 705 Rehabilitation Engineering
- BME 772 Biomedical Signal Analysis
- ELE 703 Simulation and Computation Techniques

**Table B**

- BME 802 Human-Computer Interfaces
- BME 804 Design of Bio-MEMS
- BME 808 Computations in Genetic Engineering
- BME 809 Biomedical Systems Modeling
- BME 872 Biomedical Image Analysis

**Learning Together: An Academic Plan for Ryerson University**  
**2003-2008**  
**Provost's Report**  
**May 1, 2007**

*Learning Together* describes Ryerson as “a university with a difference...known for its distinctive mixture of innovative professionally relevant programs of study and an educational experience built on the creative integration of theoretical and applied learning.” It goes on to say that the university is increasing known “for the quality and value of its scholarship, research and creative endeavors [and above all] for the quality of its graduates who leave Ryerson well prepared to contribute to their professions, their communities, the economy, and society as a whole.” These statements remain true.

*Learning Together* sets out the long view of Ryerson as well, as a “comprehensive” university maintaining the distinctive societal relevance of its programs, but offering a significant number of innovative new graduate programs. That long view is rapidly becoming a reality. Not only has the university maintained the distinctive quality of its undergraduate program offerings, it has added to their numbers: from 38 in 2003/04 to 50 in 2006/07. On the graduate program side the University went from 8 masters programs to 18 and from 1 doctoral program to 5 during the same period. Eight more masters programs and one more doctoral program are currently scheduled to start in the Fall of 2007, and one more Masters program is awaiting final approval. Full-time undergraduate enrollment rose from 19,168 in Fall 2003 to 22,911 in Fall 2006, part-time undergraduate enrollment from 2,893 to 3,482, graduate enrollment from 497 to 1,085, and continuing education registrations from 62,070 to 64,689. This is enormous growth and development.

To provide a little more detail: In Fall 2005 new full-time undergraduate programs were implemented in Criminal Justice, Politics and Governance, Sociology, Contemporary Science (Biology and Chemistry), and Midwifery (previously part-time). New masters programs were begun in International Economics, Public Policy, and Nursing. In 2006, new full-time undergraduate programs in Psychology (added to the Social Science platform), Medical Physics (added to the Contemporary Science offerings), and Child and Youth Care (previously only part-time) were implemented. Masters programs in Business Administration, Management of Technology and Innovation, Early Childhood Studies, Biomedical Physics, and Molecular Science were begun. Next year, Masters programs in Aerospace Engineering, Architecture, Computer Science, Documentary Media, Journalism, Media Production, Nutrition Communication and Social Work will begin, and a Masters in Psychology will begin, pending approval. A Doctoral program in Psychology is in the approvals process. Ryerson’s innovation and reputation have grown and continue to grow.

In addition to the goals and objectives identified in our Academic Planning process, other strategic initiatives have given us direction: the Quality Agenda that drives the University’s budget, the Multi-Year Agreement with the provincial government, the

National Survey of Student Engagement (NSSE) and the President's Commission on Student Engagement and Experience. Deans were requested to provide a modified annual update that reflected all of these and which linked their goals and objectives to these university-wide initiatives. This integrated approach (new this year) is important for generating consistent and integrated performance measures, and the setting of appropriate performance targets.

The four identified core quality-enhancing priorities are:

- Student Engagement
- SRC
- Graduate Programming
- Reputation

This year, each of the Faculties, the Chang School of Continuing Education, the Library, and the Vice President Research and Innovation have reported on their individual plans. I have specifically asked the Deans of the five Faculties to provide summary reports which address the four core areas. They are included as part of this report. I would however, like to report briefly on several university-wide initiatives.

### **Academic Programs**

As I noted above, Ryerson's programs continue to grow in number. They also continue to maintain high quality, currency and societal relevance. The Periodic Program Review policy was updated and the first program review under that policy, Nutrition and Food, was approved by Academic Council. In February, 2007, the Undergraduate Program Review Audit Committee (UPRAC) was on campus for its review (this is done every seven years) of Ryerson's process. Although the report of this committee has not yet been received, preliminary responses have been very positive. UPRAC is impressed by the seriousness with which we take our program review process.

*Learning Together* committed Ryerson to review its tripartite curriculum (TPC) model in the context of ensuring an appropriate balance between theory and practice. This review was lengthy, beginning with an external consultant's report, and including a wide range of consultations. A final report on that review is included in the agenda of today's Academic Council meeting.

Graduate programming is a high institutional priority. Our success in generating high quality programs which attract excellent students in large numbers is remarkable. It attests to strong faculty interest and energy, and to extraordinary leadership in this area.

### **Scholarly, Research and Creative Activity (SRC)**

As Ryerson transforms into a comprehensive university, attracting new faculty, adding graduate programs and graduate students, and improving teaching and learning opportunities for all students, SRC continues to be a high priority. The hiring of a Vice President, Research and Innovation recognizes this. The Vice President has been fully

engaged in SRC planning, and development. His report is included in the agenda of today's Academic Council meeting.

## **Teaching**

One of the objectives of *Learning Together* was to reinforce the importance of high quality teaching, ensuring appropriate support and recognition. This year the President was pleased to establish six new faculty teaching awards, in addition to the existing Ryerson Teaching Excellence Awards. These are:

- The Chancellor's Award of Distinction
- The President's Award for Teaching Excellence
- The Ryerson Educational Leadership Award
- The Ryerson Educational Innovation Award
- The Ryerson Experiential Teaching Award
- The Ryerson Interdisciplinary Teaching Award

Each of these awards includes a stipend, and the recipients of the Chancellor's and President's awards will be speakers at Convocation. There will be a university-wide awards ceremony, and a dinner hosted by the President.

Beginning in Fall 2005, Faculty Associates were appointed in each of the Faculties. These positions were designed to act as liaisons with the Learning and Teaching Office and to serve as a teaching resource for faculty. In addition, programs have been initiated through the Learning and Teaching Office, and through the individual Faculties, to provide training for TAs and GAs, a need which has been identified in several student surveys. The New Faculty Orientation program has continued to grow.

## **Faculty**

Each of the Faculties will report that they have been able to recruit some of the best and brightest, both nationally and internationally, to join the ranks of Ryerson's faculty. In 2003 there were 581 total RFA faculty and in Fall 2006 there were 705. There was a total of 76 new (46 net new) RFA faculty hires in Fall 2006 alone. Space for new faculty offices and labs continues to be a challenge, but innovative solutions and community cooperation has been able to address most of these issues, at least for the near term.

## **Students**

Students have continued to be Ryerson's focus. The National Survey of Student Engagement (NSSE), in which Ryerson participated for the past two years, has become an integral part of University planning. In fact, I have asked each of the Faculties to report specifically on their initiatives in student engagement. The recommendations of the President's Commission on Student Engagement and Experience are being worked into our planning and operations. Some significant early results of the Commission's report are: the appointment of a Vice Provost, Students and the assignment of Student Services and the Registrariat to that portfolio; the increase in student study space and an

increase in library space; and the initiatives of the Director, Innovation Technology in improving student systems and services. (A fuller report on follow-up related to the Commission's recommendation will be given later this year.) The purchase of new space will allow the library to expand and better serve our students. Student study space as well as IT enhanced classrooms and labs have contributed to an improved learning environment.

Ryerson's undergraduate growth is stabilizing to support quality. The 16.3% increase in first choice applications in 2007 from students entering from high school was the highest in the system. The overall increase for all applications was 11.4%. This is an unprecedented increase. Ryerson's reputation is clearly "out there". Strategies to ensure success and retention continue to evolve.

Experiential learning is an area in which Ryerson excels. The type and number of opportunities for students have grown over the years. A Report on Experiential Learning submitted last year indicated a need to assess and coordinate this area so that Ryerson can make its expertise more apparent and accessible. Toward that end, a faculty member has been seconded to begin the implementation of the recommendations of that report.

### **Staff and Academic Administrators**

*Learning Together* identified a frustration felt at the Faculty and Department levels about not having the tools needed to meet their responsibilities. Decades of budget cutting, the need to do this at short notice, and the desire to avoid constant budget reduction planning exercises at the local level, had caused a relatively high degree of "centralization" at the university. With fuller funding under "Reaching Higher" the University has recently been able to increase the "tools" at the Faculty level by providing full base funding rather than the base plus one-time-only marginal funding which reflected the unfunded BIUs. This increase in Faculty base resources has increased local planning and delivery capacity. Additional funding has been budgeted for HR, Financial, and Registrarial support to Faculties. Further allocations are being made to address pressures.

### **Infrastructure and Environment**

Clearly, space has been, and remains, Ryerson's biggest challenge. The Master Planning project, begun by President Levy, strives to address the long-term needs of Ryerson as a part of the larger urban Toronto community in which it resides. But the short-term space needs have presented a challenge.

That said, significant progress has been made. Library space has been increased by 17,000 sq. ft. or 12.4%. The new Business Building, 105 Bond Street, and the CJRT space in the Rogers Communications Centre add some 300,000 gross sq. ft. or 10.3%. 35,000 sq. ft. of space will be leased to facilitate graduate and SRC expansion. Backfill space in Eric Palin Hall, Kerr Hall, and Jorgenson Hall is being renovated to meet program and faculty expansion needs in Arts, Communication and Design, Community Services, and Engineering, Architecture and Science.

To further illustrate our infrastructure enhancements: 3 central computing labs have been upgraded, 8 classrooms have been upgraded with PT, campus wireless has been expanded, the SAS has been implemented, student lounges have been upgraded, and over 600 new study spaces have been added in 45 locations. These enhancements, together with the improvements in the appearance and feel of our campus add to the quality of the student, faculty and staff experience at Ryerson.

## **Summary**

In almost every way Ryerson has exceeded expectations for the 2003-2007 period of its Academic Plan. This is partly because our external financial environment changed. But that is far from the whole story. The University had built a solid foundation and was poised to take full advantage of the opportunities that came its way. *Ryerson is a learning community.* Its students, staff, faculty, administration, Academic Council, and Board of Governors worked together with energy, passion, wisdom and virtually unlimited commitment, and achieved extraordinary things. It has been a pleasure and an honour to be associated with these achievements. I look forward to reading the results next year, of the entire 2003-2008 *Learning Together* Plan.

Errol Aspevig  
Provost and Vice President Academic

## **FACULTY OF ARTS ACADEMIC PLAN UPDATE**

### **Student Engagement**

The focus of attention in the Faculty of Arts through the 2005-2006 academic year has been on rolling out our “new” undergraduate programs (5 new programs over the past 4 years), welcoming in hundreds of new Arts program students, as well as 24 new faculty members. Between the 2004-05 and 2005-06 academic years, we have experienced 40% growth in the number of undergraduate program students (from 1,001 to 1,406) and 107% growth in the number of graduate students (from 59 to 122), along with 17% net growth in number of faculty (from 118 to 138) and 51% net growth in the number of staff (from 18 to 28) required to service those students.

In terms of curriculum development, the faculty in Arts developed over 25 new courses to meet the requirements of the new undergraduate programs, as well as over 20 new graduate courses to launch two new MA programs. Despite the challenge of developing this many new courses, the Faculty of Arts maintained its commitment to excellence in teaching and again had the highest FCE scores in the university. And of particular note, Dr. Arne Kislenko was awarded the first TVO top lecturer award.

Dr. Alan Sears was appointed as Teaching Associate and developed a number of workshops for faculty with the assistance of the Faculty Teaching Advisory Committee. He also developed the Arts Student Advisory on Teaching and Learning which culminated in a student-led Roundtable for faculty, coordinators and chairs. The Faculty of Arts also developed a very effective collaboration with Student Services leading to the development of the Partnership for Arts Student Experience at Ryerson (PASER) which is exploring a variety of ways to assist students adjust and transition into university life.

In order to enhance the learning environment for undergraduate students and to contribute to professional development for our graduate students, we developed a Certificate and Advanced Certificate in TA Development (a first for Ryerson). This has been very successful and we are looking at ways to expand this important program.

### **SRC**

The Faculty of Arts also appointed Dr. Michael Finn as SRC Associate to organize workshops, review grant proposals, mentor new faculty, and adjudicate internal travel and seed grant competitions. Arts has continued to support its young, newly hired faculty in their attempts to balance their teaching and SRC obligations with start-up grants in excess of \$160,000 and 4.8 FTE in SRC release time. Based on the Vice Provost, Faculty Affairs’ summary of the 2005-2006 Annual Reports, Arts produced over 200 peer reviewed publications in 2005-2006 and over 100 other publications, as well as over 200 conference papers and presentations. The Criminal Justice program was successful in winning a Law Foundation of Ontario Community Leadership in Justice Fellowship. Politics professor Dr. Janet Lum’s *Knowledge in Society* proposal ranked first out of 85 proposals from across Canada. The Faculty of Arts supports a number of research initiatives including the CFI funded Modern Culture Multimedia Centre, CERIS, the

CAW Sam Gindin Chair in Social Justice and Democracy and the Centre for Food Security. The Faculty of Arts also supported a number of conferences organized by Arts faculty such as English faculty member, Dr. Hyacinth Simpson who organized an international conference *Caribbean Migrations: Negotiating Borders*, and English faculty member, Dr. Dennis Denisoff, who as President of the Victorian Studies Association organized the annual Victorian Studies Conference.

### **Graduate Programming**

In the Fall of 2005 we launched two new MA programs – in International Economics and Finance and in Public Policy and Administration. Applications for the latter degree were very strong with close to 7 applicants for every place. Over 17,000 hours of TA and RA positions were created to provide employment and experience for Arts graduate students. We expect to launch a new MA in Psychology in Fall 2007, an MA in Literatures of Modernity for Fall 2008 and two PhD programs (Psychology and Policy Studies) in Fall 2009.

The Faculty of Arts has been able to recruit excellent faculty with PhD's from universities such as Queen's, Toronto, Western, Bonn, Beijing, Oxford, Cambridge and Harvard. As our reputation grows, we are increasingly able to recruit faculty at the Associate or higher rank from other universities. Our excellent new hires have brought new energy and insight into our teaching and research.

### **Reputation**

In terms of reputation, we have focused on quality and innovation. We have highlighted this through a number of events particularly the very successful Arts NOW event in May which highlighted Arne Kislenko and a number of Arts students. Our new publication, the *Arts Chronicle* was launched in May 2005 and has highlighted faculty research accomplishments. Our May 2007 edition will highlight our 34 new faculty who joined us in September 2006. As well, with an average of 1.2 peer reviewed articles per faculty member, 65% of which are sole or lead authored, and the high quality hiring of established researchers we made in 2005-2006, our contribution to Ryerson's scholarly reputation is significant. As a final note, beginning this year we are undertaking a content analysis of the media to ascertain Arts' contribution to Ryerson's reputation in the general press.

Carla Cassidy, Dean  
Faculty of Arts

## **FACULTY OF BUSINESS ACADEMIC PLAN UPDATE**

The outcomes of the 2006-7 strategic plan for the Faculty of Business were linked closely to both the strategic planning priorities of the university and the requirements of the Association for the Advancement of Collegiate Schools of Business (AACSB) accreditation. As a Faculty, we are implementing an outcomes-based strategic planning process that continues to strengthen our competitive position and that differentiates the Faculty of Business Management from other business schools in Canada. The plan continues to build upon the career-relevant reputation of the Faculty, the relevance of our curriculum and our growing links to the professions. The career-ready aspects of our curriculum are assured in a variety of ways – active and progressive advisory committees; student awards and scholarships, experiential learning (e.g., internships, co-op placements, career placements, required work experience); applied projects, case competitions, peer mentoring, and participation in various industry-supported competitions. For the 2006-7 period, advisory committees and alumni groups were established by the newly formed departments in the School of Business Management.

### **Student Engagement:**

In the area of student engagement a number of faculty initiatives have been implemented. The Faculty believes that student engagement occurs in both the teaching and learning environment and through extra-curricular, student-led activities. Currently, the Faculty supports a wide variety of student events and associations at both the undergraduate and graduate level (e.g., Ryerson Business Forum, Connect IT, International Tourism Day, MBA games, undergraduate case competitions, ACE, AIESAC). In addition, to improve the quality of students and to improve retention rates, the Faculty and University Advancement has engaged in a successful fund-raising campaign to significantly increase the number of endowed scholarships and bursaries across the Faculty.

To improve our ability to serve our students, new resources have been invested in the following areas:

- Increasing administrative, front-line staff in the School of Business Management at the departmental level;
- Establishing a learning and teaching coordinator and support staff in the Faculty;
- Establishing an Associate Director of Internationalization

### **SRC Outcomes**

The growth of our research activity and output is directly linked to a number of strategic objectives. These include (i) AACSB accreditation; (ii) the strength of our graduate MBA programs; (iii) the relevance and success of our research centres and institutes; (iv) our ability to attract and retain high quality faculty and (v) our plans for future Ph.D. programs. Investment in these areas is beginning to show significant results. In the 2006-7 academic year the following outcomes have been realized.

- Faculty continue to increase the number of peer reviewed publications;
- The largest NSERC grant in the university was awarded to an ITM faculty member;
- The Centre for the Study of Commercial Activity, a Faculty of Business research centre, received a major Canada Foundation for Innovation award;
- The Faculty was awarded its first Canada Research Chair;
- The Faculty was awarded a 1 million dollar grant from the Ministry of Colleges and Universities in the area of entrepreneurship;
- Two research units that focused on Diversity and Voluntary Sector received major industry research support;
- Two new research institutes, led by new hires (Dr. Haider and Dr. Lin) were established in Housing and Transportation and International Business, respectively and;
- Research alliances are being explored with the University of Quebec system in five areas of specialization (retailing, tourism, IT, Finance/Entrepreneurship, and Voluntary Sector studies and,
- The Faculty housed visiting university scholars from Canada China, Denmark and Ireland.

### Graduate Programming

The Faculty introduced three new graduate programs in 2006-7 offering MBA and MMSc degrees. The “global MBA” provides four fields of study –marketing, human resources management, international business and retail and commercial development; while the MBA IT offered specializations in the management of information, supply network management, and media management. A large part of graduate program activity was dedicated to course and case development and to providing our graduate students with innovative learning opportunities such as the *integrated week*; developing partnerships with international universities (e.g., Tsinghua University, Dublin Institute of Technology and San Andres University); integrating industry guest lecturers into our courses, and in participating in the MBA case competition. In addition, considerable resources were allocated to marketing and branding the MBA/MBA IT programs.

### Reputation

A major priority for the Faculty has been to invest in building the reputation and brand of the Faculty of Business Management. Currently, survey results indicate that there is a general lack of understanding of the Faculty and the quality of its programs and students. To that end, a major branding and communication project is underway. This project is being conducted in parallel with a branding exercise that is currently underway in University Advancement. The results of our study (that are now available) will enable the Faculty of Business to create and clarify the Faculty of Business Brand and communicate it effectively across a number of constituencies. The branding of the Faculty will have a number of positive impacts in the areas of student quality, attracting high quality faculty, and fund raising. The Faculty also has invested significant

resources in the area of communication in order to both provide support for the MBA program in a highly competitive market and to brand the Faculty of Business in the marketplace. Finally, the Faculty has hired a Coordinator of Events and Facilities to oversee the management of the new business building that is now used 90 per cent of the time to host either academic, student, business or community events.

By investing in these various enabling strategies Ryerson Faculty of Business Management is beginning to capitalize on our location, our connections to industry and the broader community, our state of the art business building and our career relevant programs. These elements will enable the Faculty and its four Schools and departments to attract students and faculty who in the coming years will shape the future of Canadian business, ensure the competitiveness of Canadian business in an increasingly international environment and enrich and respond to the changing needs of the Canadian business community and by extension Canadian society.

Ken Jones, Dean  
Faculty of Business

## **FACULTY OF COMMUNICATION & DESIGN ACADEMIC PLAN UPDATE**

The following narrative focuses on four key areas:

- Student Engagement
- SRC
- Graduate Programming
- Reputation

### **Graduate Programming**

In 2005-06, the Annual Review of the Faculty Academic Plan ranked New Graduate Programs as the number one goal for the Faculty. Substantial progress has been made in this area. In 2005-06 our first cohort from the Master in Photographic Preservation was in its second year (to graduate Fall06). Three of our proposed Masters (Master of Journalism, Master of Arts in Media Production, and Master in Fine Arts in Documentary Media) were successfully proceeding through the various approval stages. In addition, the Faculty began developing two additional graduate degrees: a Master in Professional Communication, and a Master in Design Culture (a joint venture between the Schools of Interior Design, Fashion, and Theatre). Preliminary exploration of a cross-disciplinary Master in Scenography was also initiated. In addition to these developments, the Faculty, in concert with the School of Graduate Studies, has been working on a funding structure for the Master in Photographic Preservation, changing from cost recovery to a fee plus grant structure. Related to Graduate Programming is the further development of the Rogers Communication Centre to embrace Graduate Programs as well as advanced scholarly, research and creative activities.

### **Reputation**

Definite contribution to the reputation of the University continues to be a very strong characteristic of the various Schools in the Faculty (although in 2005-06, reputation is not a specific goal in the Annual Review of the Faculty Academic Plan, goals that strongly contribute to it are: Teaching Quality & Student Success (ranked #2), SRC Activities (ranked #3), and Advancement (ranked #7). Reputation manifests itself through a variety of elements, from students to alumni, and from program to faculty. The quality of incoming students is apparent in the fact that the Faculty accepted one student out of each dozen applicants. The employment rate for graduates from the School of Graphic Communications Management has been 100%. Our faculty and alumni, such as Ed Burtynsky and Stephen Bulger (Image Arts), or David Tucker (RTA) who received a Gemini nomination, often make headlines. Reputation is also about facilities. We opened the first four-camera High Definition Television studio in a Canadian University (RTA/RCC). Reputation is about programs. The School of Fashion's end-of-the-year fashion student show Mass Exodus sold out all 4,000 tickets. With such wealth of activity, the Faculty has been developing the position of Communication Coordinator to

internally and externally organize and promote the many successful accomplishments of its stakeholders.

### **Development of SRC Activities**

In 2005-06, the Annual Review of the Faculty Academic Plan ranked SRC Activities as the number three goal for the Faculty, in addition to the goal of Faculty Hiring and Development, ranked number five. This was approached on several fronts. Programs started the process of developing their own SRC guidelines (the Faculty has had an overall SRC Plan last revised in 2001) that explored issues of specificity at the local level. Programs such as GCM and Fashion developed a 5-year SRC plan. Support was provided for hosting an international conference on Media History (School of Journalism). Programs explored workload issues to internally support SRC activities. The Faculty continued to regularly support public events (SRC lunches) that provide opportunities for faculty to disseminate and celebrate their SRC activities to the larger community. Recent hirings have been key, as new faculty with existing SRC records are strongly supported to further develop these activities. New faculty members without an established SRC record are provided with mentoring to establish their SRC agenda. In addition, it is believed that the development of graduate programs will further contribute to the development of the Faculty's SRC agenda.

### **Student engagement**

Although Student Engagement was not a specific goal in the 2005-06 Annual Review of the Faculty Academic Plan, it is nonetheless central to many of the goals listed such as Teaching Quality & Student Success (ranked #2), Faculty Hiring (ranked #5), and Curriculum (ranked #9 and 11). Student engagement can be seen in many places. It can occur through curriculum development. Many programs have developed new curricula to better respond to changes (currency) in their respective fields and therefore better prepare their students, as well as to increase flexibility. The Faculty, through the Learning and Teaching Associate position, has developed a very successful and active Student Advisory Committee to better examine issues of teaching. This led to a series of recommendations implemented in 2006/07 such as a workshop for CUPE instructors where new instructors could better understand the specific academic standards and culture of Ryerson.

Daniel Doz, Dean  
Faculty of Communication & Design

## **FACULTY OF COMMUNITY SERVICES ACADEMIC PLAN UPDATE**

This report summarizes the achievements of the Faculty of Community Services (FCS)\* in the areas of student engagement, scholarship, research and creative activity (SRC), graduate programming and reputation building. Results-focused reporting on these four areas is hampered by the absence of commonly identified indicators and baseline measures of these indicators.

From the data provided by the University Planning (Progress indicators and related statistics & NSSE survey) we identified indicators that speak to the four areas and tracked their status over time. This report covers the Faculty as a whole, and not individual schools.

### **Student Engagement**

The indicators identified for student engagement are: student-faculty ratio, student retention, graduation rates, scores on faculty course surveys and NSSE 2006 results at the FCS level.

The student-faculty ratio has increased over the years from 15.6 in 98/99 to 18.7 in 04/05.

A number of measures are available for student retention, which has improved over the years. There has been a steady increase in the percentage of students retained in any year level of the program after one year of study (from 84.7 % in 99/00 to 89.6% in 03/04). However, there was a decline in 04/05 (80.7%) in comparison to 03/04 (83.9%) in the percentage of newly admitted students registered in first-year level on November 1 with a clear academic standing after one year.

Graduation rates have also increased from 66 % in 99/00 to 68% in 04/06. All programs had a formal experiential component from 03/04 to 05/06.

Faculty of Community Services scores on Faculty course Surveys are comparable to Ryerson averages and there is high level of student participation in these surveys.

FCS scores on the fourth-year NSSE 2006 items such as ‘worked on a project that required integrating ideas or information from various sources, included diverse perspectives, participated in community based projects, worked with faculty members on activities other than coursework’ are consistently higher than Ryerson scores and most of the other faculties.

### **SRC**

The Faculty is making steady progress in SRC activities. According to a report from the VP Research and Innovations, The Faculty of community Services ranks second out of the five faculties in 2005-2006 in research dollars, number of awards earned, from

external research funding, the percentage of faculty members who have been awarded external funding and the research intensity by faculty member. At the beginning of the academic plan (03/04) the Faculty's externally funded dollar averages were lower than Ryerson average (\$ 13,744 Vs \$ 15,306); however, in 04/05 FCS surpassed Ryerson average (\$16,953 Vs \$13,846). The figures for Mode II faculty have consistently been higher than Ryerson averages from 00/01 to 05/06.

Application to external granting bodies as well as success rates have increased over the years. For example, of the five applications to Social Science and Humanities Research Council (SSHRC) in 03/04, none was funded; in 04/05 the success rate was 25% and in 05/06 the success rate was 29% with four out of the seven applications receiving 4A status.

SRC outputs such as peer reviewed publications have not been tracked over the years; however, we may be able to do that in the near future.

### **Graduate Programming**

With the assistance of Graduate School, the Faculty has successfully launched four graduate programs during this academic plan period. Masters program in nursing was launched in fall 2005 and an MA in Early Childhood Education started in the fall of 2006. Masters in Social Work and Master of Science in Nutrition Communication are to commence in fall 2007. The Letter of intent for graduate program in Urban and Regional Planning is being reviewed by the Dean of Graduate School.

### **Reputation**

One of the indicators of reputation is the demand for the programs at the Faculty. Three measures of the demand for the program are ratio of applicants to registrants, mean entering average of newly admitted students, and the percentage of new students with 80% or higher. The ratio of applicants to registrants (yield rate) experienced a steady increase from 96/97 to 03/04; however, it experienced a slight decline on 04/05 (7.1 to 10.2 to 10). Mean entering scores of newly admitted students and the percentage of new students with 80% or higher also follow the same pattern. We have to review the figures for 05/06 and 06/07 to ascertain the trend.

Another indicator for reputation is media appearances by faculty members. Baseline data for 2006 is available (FCS faculty appeared in the media 108 times); however, it has to be compared with data from subsequent years.

Usha George, Dean  
Faculty of Community Services

\*The Faculty of Community services consists of ten Schools: Child and Youth care, Disability Studies, Early Childhood education, Health Services Management, Midwifery, Nursing, Nutrition, Occupational and Public Health, Social Work and Urban and Regional Planning.

## **FACULTY OF ENGINEERING, ARCHITECTURE AND SCIENCE ACADEMIC PLAN UPDATE**

Significant progress has been achieved towards satisfying the six goals of our 2003-2008 five-year strategic plans. These goals are:

- 1) Programs' Enhancements through continued curriculum developments to ensure their high quality and continued peer-reviewed accreditation status.
- 2) Strengthening and enhancing SRC productivity of faculty members, and expansion of graduate programs.
- 3) Improve research support infrastructure and services to enhance high quality faculty and staff recruitment and retention.
- 4) Development and implementation of new undergraduate and graduate programs in Contemporary Science, Medical Physics, Architecture and Biomedical Engineering.
- 5) Implementation of policies and procedures to enhance retention and quality of undergraduate program students, and the academic and support services provided to them.
- 6) Enhancement of internationalization initiatives, including collaborations in research and graduate studies, and graduate and undergraduate student recruitment.

This short narrative report focuses on the results of these activities as they are related to the four strategic priorities of the University.

### **Student Engagement and Success**

Our goal to enhance the quality of our professional academic programs has resulted in achieving the best possible accreditation decision for any "new" engineering program, as our Computer Engineering program received a 3R status by the CEAB through their very demanding and intensive peer-review-based processes. The trial accreditation visit report by CIPS, which took place in order to review our new Computer Science program, also provided us with confidence about this program's quality. The official CIPS accreditation visit took place in March, 2007. Similarly, considerable progress has been made in the re-design of the new "Architectural Science" undergraduate program, which was approved by Academic Council for implementation in September 2007. The new Science programs were successfully implemented in September 2005, achieving their initial target enrolment of 190 students. In September 2006, these programs were even more successful with an intake of 289 students, 39 students above their target. The Medical Physics program was also implemented in September 2006, with a first-year enrolment of 32 students, and a simultaneous second-year intake of 16 students.

Despite the shrinkage of the engineering high-school applications pool by over 35% in both 2005 and 2006, we were able to achieve our enrolment targets. However, since this is an Ontario-wide phenomena, competition for high quality students was extremely fierce. Further, numerous committees were constituted by the Ministry of Education to review the new high school mathematics curriculum. This resulted in a new mathematics curriculum plan that has been phased in starting in September 2006. Unfortunately, this phenomena had negative impact on the rate of retention in the engineering programs, despite all of the student success, support and retention initiatives undertaken by the Faculty (including remedial math and language courses, early intervention, focused academic and social counselling, and transitional program expansion). Student retention in higher years continues to be satisfactory, in-line with historical data.

To improve the quality of teaching, the Faculty continued to support a number of initiatives, including Teaching Excellence Awards, Annunciation Improvement classes, targeted mentoring and better access to PT training, and to the LTO's numerous workshops. Further the Faculty intends to:

- a. significantly improve the “marketing” efforts of our engineering programs both domestically (specifically throughout the GTA) and internationally, in order to recruit higher-quality first-year student intake,
- b. implement a much more proactive and encompassing co-op and internship program to enhance experiential learning opportunities to a greater number of our undergraduate program students.

### **Scholarly Research and Creative Activities**

All of our newly hired faculty members over the past 4 years have terminal degrees, and they are research focused. Similarly, all of our technical and office staff members are highly qualified, knowledgeable and dedicated. Over the same period, we were successful in receiving an allocation of five tier 2 CRC Chairs. In 2005/06 we welcomed two new tier 2 CRC Chairs, and most recently Ryerson University's first NSERC Industrial Research Chair, Dr. B. Wu. We expect to welcome three more tier 2 CRC Chairs over the next year. Such developments provide significant support to our research endeavours and productivity, and strengthen and enhance the quality of our graduate programs and graduate student research theses.

The Faculty spent a significant amount of its resources to provide research seed-funding to the newly hired faculty members, and to provide further support to strategic research-teams-based initiatives. Further, a significant number of science and engineering research facilities were renovated and created, and a number of multi-user research quality infrastructure equipment were purchased (such as: Scanning Electronic Microscope, NMR equipment, and specialized Software/Hardware Computers and Servers for research teams).

The success rates of our faculty members' NSERC grants, and externally funded research project applications have been rising steadily, and the dollars value per grant have also

been increasing, but not to the value we are anticipating. Reputation enhancement over the next few years should improve our results substantially. Faculty members' research productivity, measured primarily by the number of peer-reviewed research papers published by scientific journals, has also increased over the past three years, from approximately 1.0 papers/year/faculty member, to approximately 1.8 papers/year/faculty member. We are very pleased with these measures of success in SRC.

Overall, our Faculty has received 276 research awards, totaling \$6.4M in 2005/06. Over 61.5% of our faculty members hold externally funded research grants and/or projects, with an average award of over \$33,000 per faculty member. Despite the fact that these outcomes are relatively high in comparison with the University's averages, we are still striving to improve these results. In order to achieve the norm of our external comparator group (Engineering and Science Faculties in Canada), we need to double our efforts. This goal is achievable, considering where we were a short few years ago. To ensure that we can reach our goal, more highly reputed research-team leaders need to be attracted to the Faculty, more strategic research grant applications need to be encouraged and produced, and adequate research infrastructure (laboratories, equipment, and technical staff) need to be implemented to support these endeavours. Since graduate programming, and graduate research training in Engineering and Science are intricately related to SRC, the strengthening and the enhancement of SRC outcomes will have the same impact on the quality and the reputation of our graduate programs.

### **Graduate Programming**

The first two science based graduate programs have been approved by OCGS, Academic Council and the Board in 2005/06, and have been successfully implemented in September 2006. Both of the M.Sc. programs in Molecular Science and Medical Physics were successful in achieving their planned enrolment targets. OCGS cyclical peer review of our Computer Networks and our Electrical and Computer Engineering graduate programs extended their approval status for the full seven-year cycle. Also, during the 2005/06 academic year, the following graduate programs were under development:

M.Arch., M.Sc. in Computer Science, and M.A.Sc., M.Eng. and  
Ph.D. in Aerospace Engineering.

*(At the time of writing this report, all of these graduate programs were approved by Academic Council, received significant praise from the OCGS peer-review teams and were later approved by OCGS, and the Board of Governors, for implementation in September 2007).*

Planning was underway in 2005/06 to develop three more graduate programs in Applied Mathematics, Building Science and Biomedical Engineering. Graduate enrolments have continued to increase, particularly in the Engineering Doctoral programs. Domestic and International enrolment in the Faculty-based graduate programs reached 490 graduate students in 2005/06. Also during this academic year, the number of Masters degree graduates in Engineering exceeded 100 for the first time.

## **Reputation**

Reputation enhancement is one of the key objectives of all of our strategic planning goals. Enhancement of the quality of our undergraduate and graduate programs, achieving professional accreditation status of these programs, strengthening the SRC productivity, establishing world-class research infrastructure facilities, developing and implementing new high quality, societally needed, peer-reviewed and endorsed undergraduate and graduate programs, enhancing student satisfaction and the related level of engagement in their academic programs, and the internationalization initiatives, will all strengthen the University's reputation. In the near future, this important objective will be measured by the increase in the quality and quantity of undergraduate and graduate program applications, by further high-level successes in SRC grant applications, and by the number of national and international prizes, and awards won by our students, graduates, and faculty members. We have already experienced significant rise in many of these parameters.

Stalin Boctor, Dean  
Faculty of Engineering, Architecture and Science

# THE G. RAYMOND CHANG SCHOOL OF CONTINUING EDUCATION

## ACADEMIC PLAN UPDATE

### Overview

The G. Raymond Chang School of Continuing Education believes in offering the highest quality learning experience to our students. Since the arrival of our new Dean, we've designed and implemented the following initiatives to build our reputation in the marketplace, create access to learning opportunities and broaden our reach.

### Quality Strategy

The G. Raymond Chang School of Continuing Education has embarked on a process of review and enhancement of quality in program development and delivery.

As part of the process, we have identified three pillars that will ensure the ongoing strength and stability of quality in The G. Raymond Chang School of Continuing Education. The primary goal of this initiative is to build on our reputation both internally and externally and to enhance our ability to attract adult learners thus, generating revenue for the university.

### **The Three Pillars**

#### **1. Renewal of Academic Policies and Procedures**

We implemented a revised policy on Certificate Education and updated procedures for reviewing the academic quality, currency, and societal need elements of our 70+ certificates.

Three new certificates will be offered in fall 2007:

- The Certificate in **Computer Programming Applications** represents the combination of two existing certificates into one in order to adjust to a reduced market and to streamline curriculum.
- The Certificate in **Environmental Public Health Leadership** speaks to the oft-repeated societal need for life long learning by providing public health practitioners with the opportunity to upgrade and refresh their knowledge and skills.
- The Certificate in **IBM Mainframe System Z Computing** fills an upcoming industry gap. Industry experts estimated that by 2010, more than 20,000 new mainframe-educated students will be required to sustain the workforce. This certificate represents a collaborative venture by Ryerson's Computer Science department and IBM Canada.

### **Certificates in Revision:**

Public Administration and Governance	Food Security
Psychology	Project Management
Psychology: Mental Health and Addicti	English as Additional Language (ESL)
Human Resources Management	Image Arts
Information Systems Development	Fashion
Telecommunications Management	Interior Design
Information Systems Management	Residential Care



**Course Series:**  
Academic Skills (ESL), Mandarin, Japanese

**New Course Series in Professional Development Programs:**  
Business Systems Analysis (professional program), Information Technology Studies

**New Course Series to extend Community Outreach:**  
Science Outreach (Academic Mentoring in the Applied Sciences), Community Collaboration in Support of Children and Youth

## **2. Academic Coordinator and Instructor Support**

The second pillar is the enhancement of strategies and processes for recruitment, induction, and professional growth of instructors as well as, the strengthening of the understanding and perception of the centrality of academic coordinators.

## **3. Collaborative Applied Research**

The third pillar is the investigation, assessment, and documentation of our ongoing experience with adult learners through applied research. Evaluating the impact of lifelong learning on the lives of our students is an essential pillar to ensure consistency and planned improvement in the quality of the post-secondary education opportunities we offer.

## **Student Engagement**

A strategy was developed to encourage students to participate in the President's Commission on Student Engagement. This led to one of the best-attended sessions, with input from Chang School learners. Plans are underway to implement elements of the National Survey of Student Engagement (NSSE) in our next student survey in Fall 2007.

## **Expanding our Reach**

### **Ontario-Wide Nursing Education**

We are exploring a collaborative project between The G. Raymond Chang School of Continuing Education, the Ontario Telemedicine Network, and the School of Nursing, Ryerson University to provide a hybrid (Internet and Classroom) Post-RN program to nurses in small and rural communities throughout Ontario. The objective is to improve access to higher education nursing courses and services to under-served communities to help alleviate short-term labour shortages and build greater levels of skill and knowledge in the Canadian health services sector.

## **India Initiative**

In January 2007, The G. Raymond Chang School of Continuing Education, along with Office of International Affairs, Faculty of Communication and Design and the President's office, participated in a business mission to India led by the Premier of Ontario. The goal of the mission was to build relationships and explore new opportunities. Ground work done by Ryerson University and Chang School staff in late 2006 led to the signing of agreements that will lead to future collaborative endeavors. Specific agreements, Memorandums of Understanding (MOU), involving program and curriculum development include the following:

- The Pearl Academy of Fashion – Ryerson University MOU
- The National Institute of Fashion Technology – Ryerson University MOU
- The Confederation of Indian Industries/ Canadian Manufacturers & Exporters – Ryerson University MOU

### **University of West Indies (UWI)**

On January 26<sup>th</sup>, 2007, a partnership with the University of West Indies (UWI) came to fruition, the first cohort of UWI Nursing students started taking courses via distance education program that would enable UWI to more effectively provide training to nurses throughout the Caribbean. The distance education program, designed by The G. Raymond Chang School of Continuing Education and the Ryerson School of Nursing, is developed for nurses already practicing their profession in the Caribbean and promotes regional retention of qualified graduates. The first cohort includes 67 nurses throughout Jamaica, St. Lucia, and Belize and will follow a 40-month schedule. By September 2007, the program will follow a 30-month schedule.

### **Distance Education/e-Learning Developments**

A hybrid format of course delivery combines classroom with internet/online instruction. It was first introduced at The G. Raymond Chang School of Continuing Education as a continuing education option in the 2006/07 academic year. As a result, the increase in total course enrollment can largely be attributed to the significant demand for the new hybrid and distance education formats.

### **Seniors' Programming**

A development strategy was initiated to increase reach of seniors programming and will continue through 2007 by working with The G. Raymond Chang School of Continuing Education constituencies associated with seniors programming: LIFE Institute, ACT II STUDIO, the Program Director and Director of Development, and University Advancement. Programming will offer a wide variety of offerings to engage the 50+ and enhance their personal growth and develop new skills. Last year, the following events were launched:

- First Annual Silver Screens Film Fest: a 3-day film festival in June 2006
- First Annual Shirley Shipman Memorial Lecture: a lecture in September 2006 that featured Canadian television, film, and stage actress and activist, Shirley Douglas

### **Programming for Internationally Educated Professionals (IEPs)**

Over the past five years, The G. Raymond Chang School of Continuing Education has worked with Ryerson faculty, professional associations, and regulatory bodies to secure Government of Ontario funding to create profession-specific bridging programs for immigrant professionals.

In 2006, The G. Raymond Chang School of Continuing Education submitted a number of proposals and received funding from the Government of Ontario to further expand our programs for Internationally Educated Professionals. As a result, several new initiatives will be launched in 2007:

- Professional-specific programs in accounting leading to licensure and employment (IEA)
- Profession-specific program in financial services (e.g. banking, insurance, investment counsel) leading to employment (IEF)
- Extension of the program in dietetics and nutrition (IDPP)
- Partnering with TRIEC for the creation and delivery of workshops to Small and Medium-sized Enterprise (SMW) employers to develop their capacity to access the immigration talent pool

### **Building Partnerships and Reputation**

The G. Raymond Chang School of Continuing Education has developed both internal and external relationships with government officials and has embarked on media relations initiatives on a per project basis.

- Generated \$225,000 in bursaries over three years for Internationally Educated Professionals from the Lupina Foundation.
- Establishment the Ryerson/Chang School Financial Institutions Advisory Council (FIAC) with the aim to create ongoing dialog between financial sector leaders and the University to address present and future talent needs. Membership includes Canada's major banks, the Canadian division of several international banks (HSBC, State Bank of India), two of the world's largest insurance companies with operations in Canada, and other key FI stakeholders.
- Established a Mentoring Partnership with TRIEC, to engage mentors for Internationally Educated Professionals at Ryerson
- Built opportunities for Access and Transition Year Program through relationship building with community groups in Regent Park, St. Michael's Hospital Creative Gems Project, the YWCA Women in Shelters Project, etc.

### **Building Our Reputation in the Continuing Education Community Across Canada**

The G. Raymond Chang School of Continuing Education participated in a self-evaluation instrument, developed by the Adult Learner Friendly Institution (ALFI) Project, to assess the adult-friendliness of the institution. The project, undertaken with 12 other Canadian institutions of adult learning, assessed performance in eight principles of adult learning and provided feedback to the Canadian project team. The report was shared with peer institutions at the Canadian Association of Universities for Continuing Education (CAUCE) Annual Conference 2006 in Toronto.

In addition, The G. Raymond Chang School of Continuing Education was the host of the 53<sup>rd</sup> Annual CAUCE Conference, attracting more than 300 deans, faculty members, and instructors from continuing education universities across Canada. The conference theme was *Through the Eyes of Our Students: Looking Forward*.

## **Fostering Government Relations**

The G. Raymond Chang School of Continuing Education has continued to foster relationships with government contacts:

- Ministries of Health, Long-Term Care, and Citizenship and Immigration to position Ryerson University for ongoing funding
- HealthForce Ontario – to ensure Ryerson's participation in the development of a new health human resources strategy and to position our capacity to deliver on the government's Inter-Professional Education model
- Global Experience Ontario – worked with policy influencers in the ministry to ensure IEP project funding for the Gateway strategy is aligned/integrated with the ministry's interests and plans

## **Looking Ahead: Some of our Priorities for 2007-2008**

- Work with Associate Vice President, Planning, to develop a strategy for obtaining BIU funding for IEP students required to sustain programs beyond initial funding period.
- Continue to develop market and recruitment strategies to increase enrollments of continuing education students.
- Continue to identify and evaluate international opportunities (including India mission follow-up) to maximize return to the university while building local capacity.
- Review and re-aligning seniors' programming for expansion.
- Prepare for negotiations for the CUPE 3904, Unit 2, and collective agreement.

Anita Shilton, Dean  
The G. Raymond Chang School of Continuing Education

## **ACADEMIC PLAN UPDATE LIBRARY**

During the 2005-06 academic year, the Library demonstrated significant progress in meeting its six strategic goals. They are: strengthening collections; hiring, retaining and developing staff expertise; enhancing library space; service assessment; collaborative relationships; and ensuring the best organizational model for the University's changing needs. Highlights below summarize the Library's major accomplishments within the context of the University's four academic priorities: student engagement, graduate programming, SRC and reputation.

### **Student Engagement**

The Library's opening hours were increased by 25 hours per week, providing students with additional access to study space, collections and services. The Library also increased the number of student part-time jobs by 25%, an important indicator for student retention and success as demonstrated by the NSSE survey.

A highly successful collaboration with the Access Centre resulted in the hiring of an Access Services Librarian. Supportive services for students with disabilities were established to reduce time delays and improve access to material using appropriate technology.

Librarians collaborated with the Learning and Teaching Office and the Student Success Centre to develop workshops that integrate information literacy skills with study strategies, critical thinking and academic integrity.

A new satellite research office was planned and a service policy developed to meet the needs of students and faculty in the new Business Building on Bay. Discussions are underway with Student Success Services to enhance our initiative in the new building

Several Library service assessments began. The Library collaborated with the Human Resources Employee Development Office to implement a Customer Service Training program for staff. This is consistent with students' desire for friendlier customer services as expressed in the *President's Commission on Student Engagement*. A Website Usability Study was conducted and provided the basis for Library website enhancements. Planning began for the Library's participation in LibQUAL+, a survey intended to identify student satisfaction with Library services, collection access and space.

The first floor of the Library Building was returned to the Library allowing for the relocation of staff offices and creating 110 new study spaces on the 5<sup>th</sup> and 7<sup>th</sup> floors. The 8<sup>th</sup> floor was also renovated, adding more group study rooms, and new study carrels and provide power for high demand laptop use.

## **SRC/Graduate Studies**

SRC is primarily supported through Library Collection activities. The Library continued to be an active participant in the Ontario Council of University Library (OCUL) initiatives. OCUL worked with the Canadian Research Knowledge Network (CRKN) to put forward a major CFI proposal requesting \$50 million to support national licensing of scholarly journals in digital form. In addition, the Library invested \$330,000 to enhance journal back-files needed to support new graduate programs. A Digital Services Librarian was hired to ensure timely and seamless linking to this content through the Library's catalogue and Web pages.

Monographic acquisitions processes were streamlined to make purchasing more efficient and decrease the time between the purchase of books and their availability to borrowers.

The Library evaluated its collections and services as part of new program proposals submitted to the School of Graduate Studies Program and Planning process. In all cases, deficiencies were identified and remedies recommended. The University provided \$487,000 to enhance collections.

Collaboration with the Image Arts faculty resulted in four significant donations of photographic, print, film and image collections, including: the Kodak Canada Archives; the Graver Collection, the Mitchell Collection, and the MacInnis Collection. To process these materials the Library hired several Photographic and Preservation Graduate students on work placement. Planning is underway to provide Graduate Student study space adjacent to a new Special Collections area that will house these materials.

## **Reputation**

Space planning continues to preoccupy Library management. In October of 2005, the Library hosted a major talk from Scott Bennett, Yale Librarian Emeritus, and leader in the undergraduate library space revitalization movement. Faculty and staff were invited to a day long workshop to discuss "Library Space". Various themes emerged to form the basis of ongoing dialogue with users. The Library worked with Campus Planning to develop its Long Range Space Planning report, which articulated a 70% library space deficit. This report provided significant input to the University Master Plan. Infrastructure and space, along with operational budget increases, are necessary for appropriate Library growth and development and are key to the University's reputation.

Liz Bishop  
Acting Chief Librarian

**REPORT TO ACADEMIC COUNCIL ON SRC  
FOR THE PERIOD APRIL 2006 – MARCH 2007****1. Introduction**

This is the first SRC report submitted to Academic Council concurrently with the Provostial report. The founding Vice President, Research and Innovation of Ryerson University, Dr. Anastasios (Tas) Venetsanopoulos took up duties on October 1, 2006 succeeding the Associate Vice President, Academic, Dr. Judith Sandys. His first action was to announce his SRC goals through “Impact”, the Fall issue of the Alumni Magazine and the web. A summary of the goals announced follows:

**• Investing in new funding opportunities**

Our research funding must grow; we must have the equipment and resources to get to the leading edge and stay there. We are committed to securing a larger share of funding from the federal and provincial granting agencies and to tapping new sources of research revenue.

**• Propelling our ideas and innovations into the community and marketplace**

Ryerson has the ability to take a leadership role in increasing Ontario’s innovation capacity. We continue to look for other ways to move our research into the public arena in the form of innovative products, services and resources.

**• Developing more partnerships that share our wealth of knowledge with industry and the community**

Corporations, institutions and the community want to partner with Ryerson because our research is relevant and useful to society. Such partnerships establish us as good neighbours and a public asset. They keep our feet grounded in our mission of societal relevance.

**• Continuing to invest in the development of our graduate programs**

Our graduate programs are growing and fuelling the expansion of our research capacity. For Ryerson students, expanded research means better curriculum offerings, meaningful employment opportunities in paid research assistantships, and more opportunities for undergraduate involvement in research.

- **Promoting international research**

Forming relationships with universities outside Canada will be a crucial strategy in raising our research profile, increasing our research impact and putting Ryerson on the international map.

- **Creating a vision and administrative structure that supports SRC activities**

We attempt to create a framework that will help Ryerson to fulfil its SRC objectives. An SRC-focused environment will recognize the rich diversity of Ryerson's intellectual resources and the variations in perspective that are uniquely appropriate to this university. Its mission is to also convince others, not presently involved in SRC, to also contribute to this exciting transformation.

The detailed goals announced to the Board of Governors in late February 2007 were:

- Articulation and active advancement of SRC vision
- Continued building of Ryerson strength and uniqueness as a developing SRC centre renowned for scholarship, innovation, entrepreneurship, and transformative creativity
- Emphasis on Knowledge Transfer, Commercialization, and Careers
- Active development of strategic international relationships
- Focus on research that has direct relevance to the needs of society, industry, business, and culture
- Continuing support for the arts, culture and the life sciences
- Funds to Stimulate Faculty Initiatives with Deliverables
- Interdisciplinary Funds
- Postdoctoral and Research Associate Funds
- Fulfill our commitments to CRC, CFI and other grants
- Aim for a few large Collaborative Grants
- Mentoring of New Researchers
- Decentralization of Research Services
- Strengthen research profile in Physical/Life Sciences
- Collaborate with the Provost to enhance the teaching/research environment
- Pursuing additional linkages with granting agencies, hospitals, foundations, industry and community
- Continue to strengthen graduate education and Highly Qualified Personnel (HQP) production
- Establish strategic centres and institutes in key areas (e.g., energy, environment, life sciences, culture, biomedical, psychology, media, gaming, business, etc.)
- Improve national and international exposure

- Increase national and international awards and recognition
- Strengthen research-industry exchanges
- Enhance entrepreneurship, technology transfer and commercialization
- Discuss, update and implement Research Strategic Plan
- Establish angel investor events
- Enhance co-op and international exchanges
- Reorganize to better meet our goals

## 2. SRC Metrics and Progress

Usual SRC metrics are listed below:

- a) Publications, Creative Works
  - Publication of books, monographs, articles in refereed journals, book chapters, conference proceedings, creative works, exhibitions
- b) Knowledge Exchange
  - Contributions to public policy, editorial and refereeing duties, innovative contributions to professional practice, scholarly presentations at conferences, seminars and workshops, technology transfer
- c) Research Grants
  - For the individual: grant awards, follow up grants, dissemination of results
  - For the organization: total dollar value, funding sources, percentage of faculty members receiving SRC support
- d) Awards and Honours
  - Rank of award, type and number of honours
- e) Graduate Students
  - Number and quality of students

Ryerson has recently included among its performance indicators the total external research funding, the value of peer-adjudicated research grants per eligible faculty member and the number of peer-adjudicated research grants per eligible faculty member. Additional performance indicators will be included in the future.

The current level of the total external research funding is \$12.2M (2005-06), the value of peer-adjudicated research grants per eligible faculty member is \$6,248 (2005-2006), and

the number of peer-adjudicated research grants per eligible faculty member is 0.278 (2005-06).

In future reports, our progress will be evaluated vis a vis a broad collection of research metrics. Presently available information indicates that SRC has grown significantly at Ryerson both in terms of the total amount of external research funding and with respect to graduate student enrolment. In this report, we present two figures (Figure 1 and 2) demonstrating our progress in acquiring SRC funds and in attracting graduate students.

Figure 1

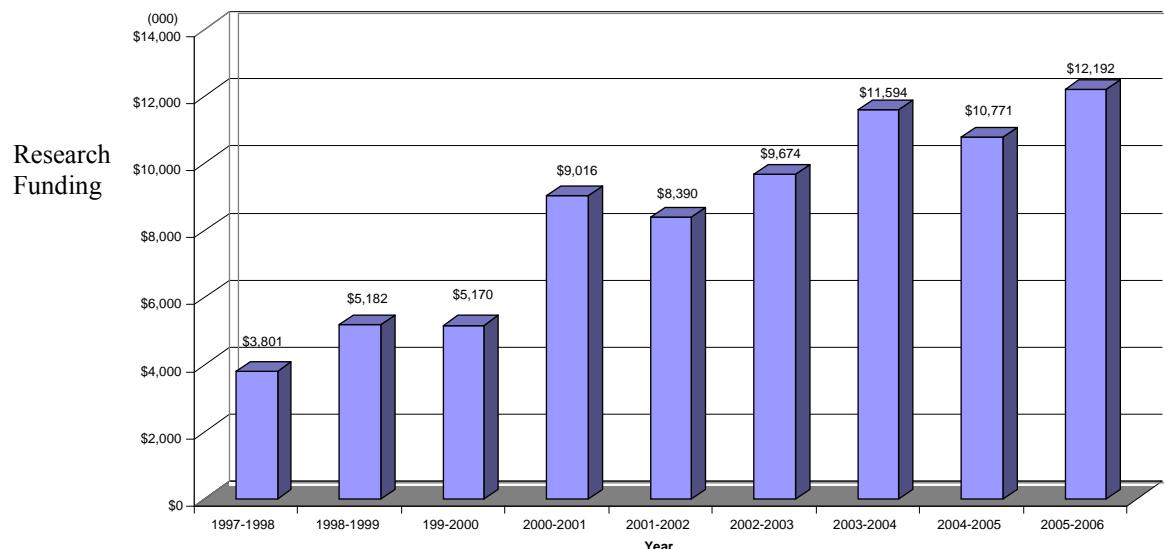
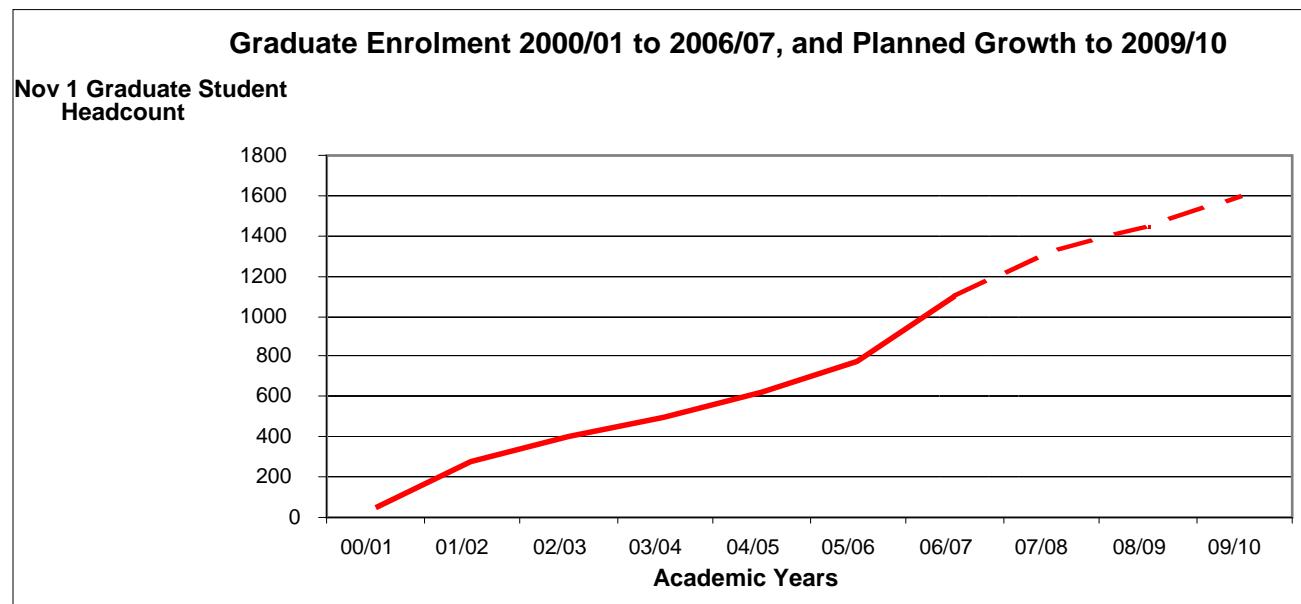


Figure 2



## 2.1 Canada Research Chairs

### Tier 1 Chairs

- Professor Irene Gammel, Department of English, Canada Research Chair in Modern Literature and Culture, focuses on the ways in which avant-garde cultures are used and appropriated by mainstream cultures, forging connections among print, performance and visual culture.
- Professor Ling Guan, Department of Electrical Engineering, Canada Research Chair in Multimedia and Computer Technology, is developing effective ways for searching, managing and transmitting digital media over internet/wireless networks, and applying the findings to real-world applications such as distance education, telemedicine and e-entertainment.
- Professor Souraya Sidani, School of Nursing, Canada Research Chair in Design and evaluation of Health Interventions, is developing strategies for medical treatments that patients from diverse cultural, social, religious and economic backgrounds will find more suitable.

### Tier 2 Chairs

- Associate Professor Michael Kolios, Department of Physics, Canada Research Chair in Biomedical Applications of Ultrasound, is examining how ultrasound can be used to determine whether cancer treatment is effective and how it can be used as a therapeutic tool.
- Associate Professor Krishna Kumar, Department of Aerospace Engineering, Canada Research Chair in Space Systems Engineering, is developing ways to launch miniature satellites into space that can “talk” to each other and transmit data back to Earth. This work could pave the way for low-cost space satellites.
- Associate Professor Mohamed Lachemi, Department of Civil Engineering, Canada Research Chair in Sustainable Construction, is finding ways to reduce the negative environmental impacts of using traditional concrete, which is a major contributor to greenhouse gases.
- Associate Professor Guan Jun Liu, School of Aerospace Engineering, Canada Research Chair in Control Systems and Robotics, is investigating unique ways to design and control robot and aircraft systems, which may help solve common programs that Canada’s aerospace industry encounters.
- Associate Professor Gideon M. Wolfaardt, Department of Chemistry and Biology, Canada Research Chair in Environmental Interfaces and Biofilms, is studying biofilms, microorganisms that adhere to various substances, and how microbial structures interact and behave.

- In addition, Ryerson has been notified of the success of two more Tier 2 Canada Research Chairs, details will be posted on the VPRI and ORS websites once the Chairs Program has made the public announcement.

### 3. Overall Progress

Overall progress in SRC has been experienced in the following domains:

- Success in CFI programs
- Success in CRC programs
- Success in ORCP (Ontario Research Commercialization Program)
- Growth of graduate programs
- Growth in research funds
- Participation in “CONCERT” a consortium for the Arts
- Progress in the preparation of a major “Gaming” proposal
- Some successful partnering up in International Affairs
- Networking with the research and artistic communities
- Announcement of our SRC Enhancement programs
- Ethics Review Program expanded
- Work on a Memorandum of Understanding between Ryerson University and the Toronto Region Conservation Authority (TRCA) on collaborative Strategic Partnership on Research and Development in Sustainable Energy and Community.
- Attendance and contribution to a number of conferences and workshops, such as The Ontario Economic Summit, The Conference Board of Canada National Forum on University Research, The 2007 APAIE Conference and Exhibition, The Information Technology New Generations Conference, the SB07 Toronto Regional Sustainable and Construction Conference.

### 4. SRC Accomplishments and ORS Activities – some highlights

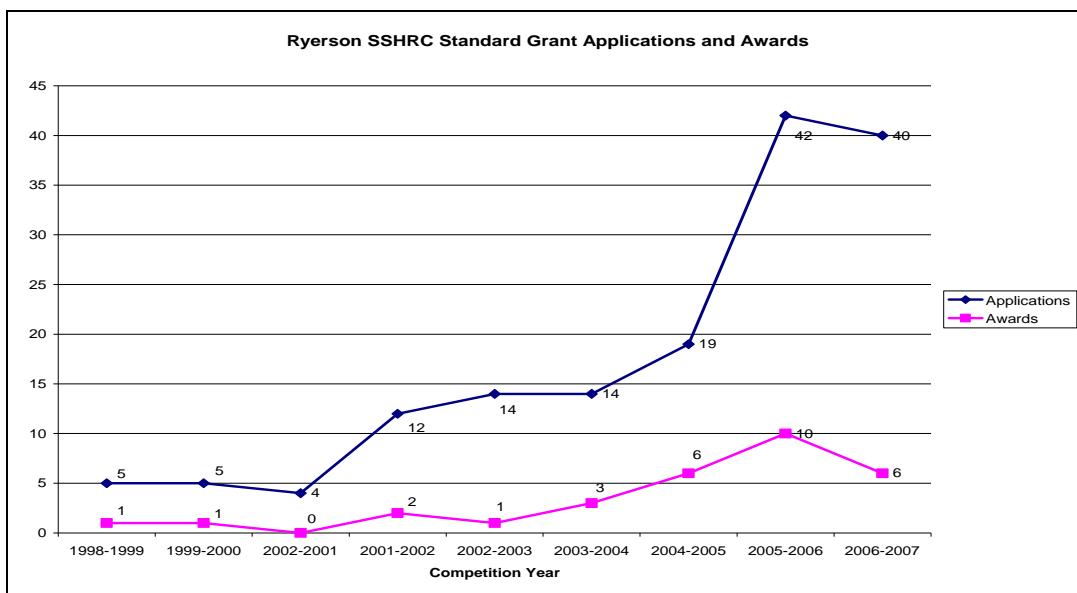
Total external research revenue received by the University reached an all time high of \$12.2 million in 05-06.

- 3 new Canada Research Chairs were awarded in the period covered by this report:  
Professor Souraya Sidani – Tier 1 CIHR CRC Nursing  
2 Tier 2 Chairs have been awarded – details will be released at the time of the public announcement by the CRC Program Directorate
- Of our 6 CFI Leading Edge and New Initiatives Funds applications, 5 were recommended for funding by the expert review panels and 3 were awarded funding:  
Professor Michael Kolios – Physics \$428,843

Professor Ling Guan – Electrical and Computer \$650,000  
Professor Tony Hernandez – CSCA \$392,225

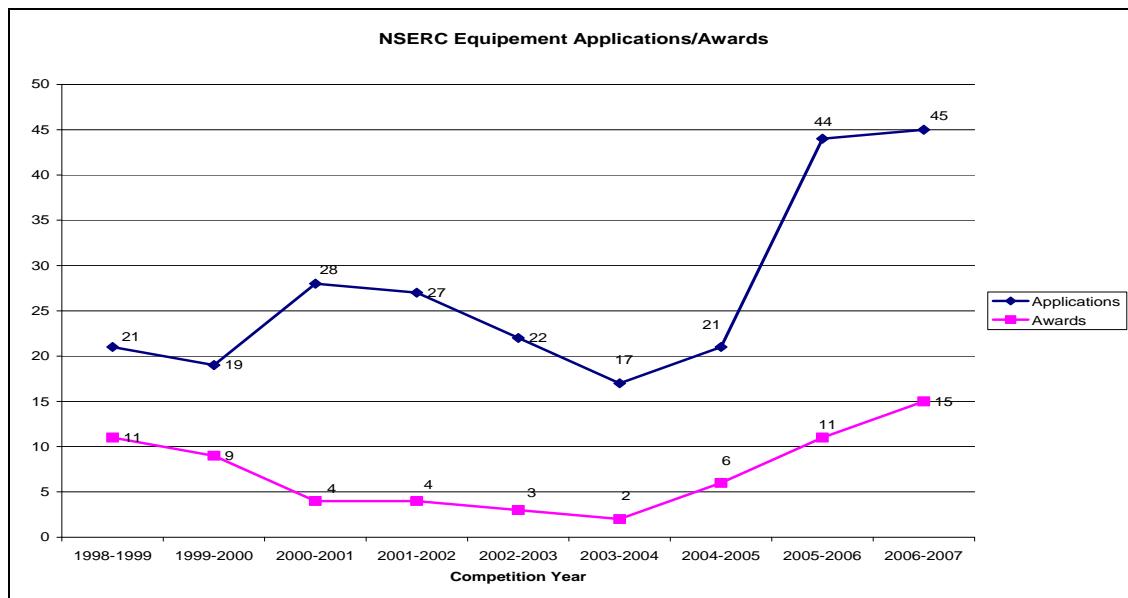
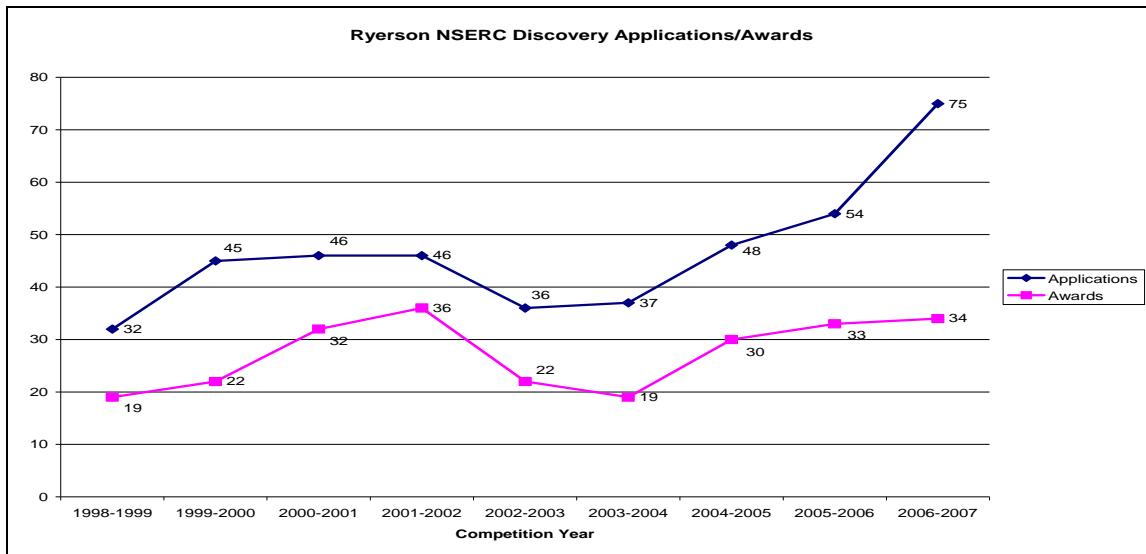
An award announcement for matching funding by the Province of Ontario is pending.

We continue to experience some difficulty in the NSERC Discovery and SSHRC Standard Grants competitions. However, there has been a marked increase in the number of applications which is a necessary precursor to success.



In 2005-2006 two applications submitted to the Standard Grant Program, while unsuccessful in this program, were subsequently funded from another SSHRC program.

In 2006-2007 SSHRC was able to maintain the overall budget for the Standard Grants Program. However, the forward commitments from grants awarded in previous years resulted in fewer awards overall. Consequently, the success rate nation wide in the Standard Grants competition dropped from an historical average of 40% to 33%.



The increase in the number of Equipment applications in 2005-2006 corresponds to the introduction of the internal NSERC equipment grant incentive program

SSHRC Knowledge Impact in Society – Program guidelines stipulated that only one award could be made per institution with a total of 11 awards. Of the 5 proposals submitted by Ryerson 2 were ranked in the fundable category but due to the restriction on the number of awards per institution only the top ranked proposal, the *Canadian research network for care in the community*, Professor Janet Lum, Department of Politics, PI, was funded.

SSHRC Community University Research Alliance (CURA) – all 3 Ryerson Letters of Intent were invited to submit full proposals.

Ryerson has been awarded its first NSERC Industrial Research Chair. This is the first award of this kind for Ryerson. Details will be available at the time of the NSERC public announcement.

Professor Bruce Elder received the **Governor General's Award in Visual and Media Arts** from the Canada Council for Arts.

Professor Michael Kolios, Department of Physics received the first Ryerson led NSERC/CIHR Collaborative Health Research Award.

Ryerson is the lead institution for Ontario Partnership for Innovation and Commercialization (OPIC). OPIC is a partnership of 7 Ontario university tech transfer offices. OPIC has been awarded \$1.6 million from the Province under the Ontario Research Commercialization Program (ORCP). This award contains \$600,000 for a Proof of Principal fund for which contract details are being finalized at this time. The award from the Province builds on a previous \$1.1 million NSERC/CHIR Intellectual Property Mobilization award. The other OPIC universities are: Brock University, Lakehead University, Laurentian University, Nipissing University, Trent University and University of Ontario Institute of Technology. OPIC will also be partnering with the CEO Fusion Centre to deliver programming for the ORCP project.

ORS continues to offer around 20 workshops a year on a variety of topics. A complete listing of topics is available on the ORS website.

ORS, OIA, Financial Services and Human Resources have formed a working committee to tackle problems in award administration.

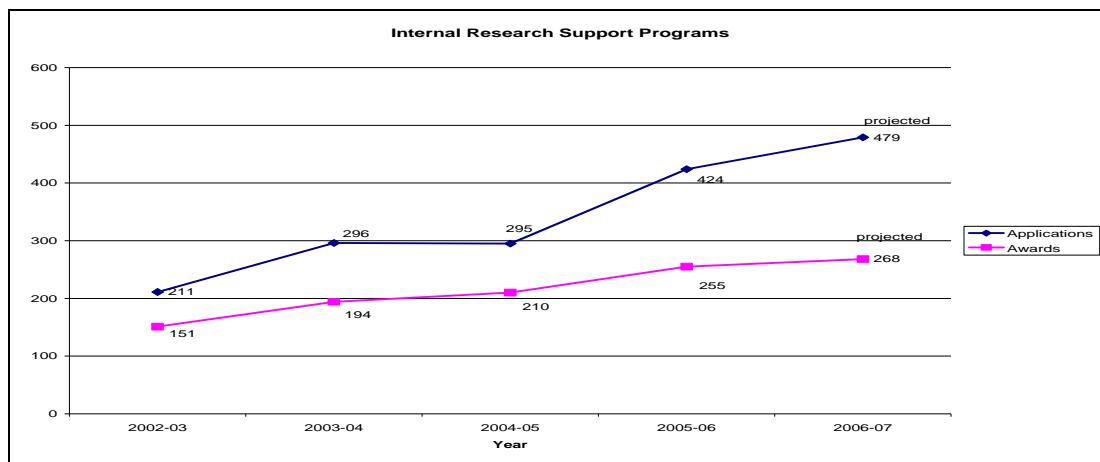
## **Internal Programs**

ORS provides administrative support for a variety of internal competitive SRC support programs. These include:

- SSHRC Institutional Grant (SIG) for Research – funded by SSHRC with additional funding provided by the VPRI – for research in the social sciences and humanities
- SSHRC Institutional Grant for Travel – The last competition for this program was conducted in the spring of 2006 in order to concentrate resources on the SIG Research program
- SRC New Faculty Development Fund – This fund provides start-up funding on a competitive basis for new junior faculty in the Faculties of Arts, Business, Communication and Design, Community Services and the Department of Architectural Science who are within the first two years of their appointment.
- Creative Fund – This fund provides support for faculty engaged in creative activities in the fine arts
- Research Assistants Program – This program provides funding to support the hiring of full-time undergraduate Ryerson students with proven financial need in career-oriented, academically-relevant, Ryerson research programs

- Internal NSERC Equipment Fund – Applications submitted to the NSERC Equipment Grant program are reviewed for internal funding.

All programs are run on a competitive, peer review basis. Administrative support for the competitions and the peer review process is handled by ORS. ORS with the cooperation of the Digital Media Projects office has developed online application systems to support the application and review process in a cost effective manner. The chart below outlines the number of applications and awards for these programs.



## Accountability

As the Office responsible for financial liaison with external funding organizations, ORS provides a critical monitoring function for financial transactions. With the increased focus on financial accountability and controls there has been increasing reliance on audits and monitoring visits by both external parties, Ryerson Internal Audit and Ryerson's own external auditors. In the last six years the number of monitoring visits/audits has grown from one or two annually to ten to twelve.

## 5. Communications and Public Advocacy

During the period of April 2006 – March 2007, two issues of *Impact Magazine* were published.

Developed a strong working relationship with University Advancement to facilitate SRC related press releases and media alerts.

A special issue of the *Alumni Magazine* was published in Winter of 2007 highlighting SRC, entitled “Big Ideas”.

Numerous e-mails were sent to *Researchnet* announcing research events and competitions.

The Research Opportunities Newsletter is published 10 times per year and provides faculty members with details on upcoming research funding opportunities.

We have continued to compile and circulate the SRC accomplishments of our faculty members.

In March 2007, the winner of the **2006 Sarwan Sahota – Ryerson Distinguished Scholar Award**, Dr. Phil Bergerson, made a presentation on *Shards of America, Before and After*.

The VPRI had an opportunity to address various government policies and issues, such as the Strategic Plan of the Ministry of Research and Innovation, the Federal Budget, the Provincial Budget and the Study Evaluating the Federal Research Councils, the Mitchell Committee Report on the review of NSERC and SSHRC, etc.

The Research and Innovation web pages were revised and are constantly updated.

In corporation with the School of Graduate Studies and the Ryerson NSERC Representative, the Office of Research Services has operated the Graduate Student Research Article Competition. The competition encourages graduate student researchers to hone their communications skills so that they may become effective communicators and ambassadors to the general public. Since the founding of the program, ORS has coordinated the review process for 115 articles resulting in 20 prizes to deserving graduate students.

## 6. **Main Activities of the SRC Representatives Group**

The SRC Representatives Group met 8 times since October 2006, namely, October 16 and 30, November 20 and December 4, 2006 and January 15 and 29, February 12 and March 12, 2007.

The following were discussed:

- The Role of SRC Representatives
- Establishment of an Awards Committee
- Fundraising to stimulate SRC at Ryerson University
- MRI Strategic Plan
- Sarwan Sahota Award (Rating Guide)
- VPRI's presentation to the Board of Governors
- Mitchell Report – Review of NSERC and SSHRC

- Planning and review of trip to India, Economic Summit, Visit to Ottawa, trip to Singapore
- Review of Policies
- Review of Federal and Provincial Budgets and responses to the Budgets

## 7. **The SRC Committee of Academic Council**

The Committee met on March 22, 2007 and discussed a strategy for reviewing three policies.

## 8. **Industry Liaison and Technology Transfer**

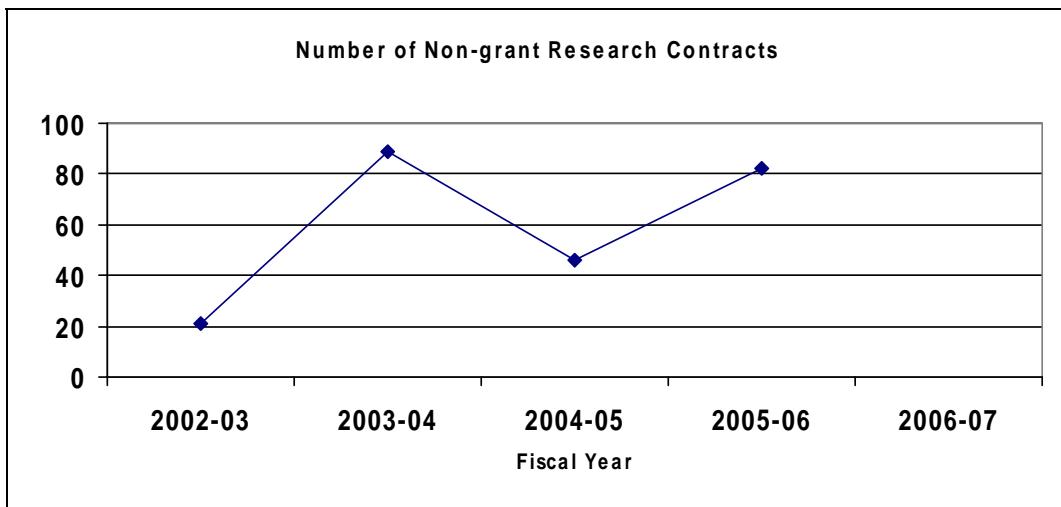
### **Industry Liaison**

The Industry Liaison group functions within the Office of Research Services to provide services and advice to the Ryerson community to enhance innovation and commercialization at Ryerson. Services are focused on existing opportunities brought forward by members of the Ryerson community and strategic forward looking projects. This includes providing support and advice for forming research collaborations, negotiating and implementing contracts and inter-institutional relationships, invention and intellectual property management and various network activities. Additionally, proactive activities are offered to educate, inspire and facilitate an entrepreneurial culture where researchers look beyond the esoteric applications of their work and into the practical applications of interest to industry and society.

### **2006-07 Highlights**

#### **Contracts and Awards**

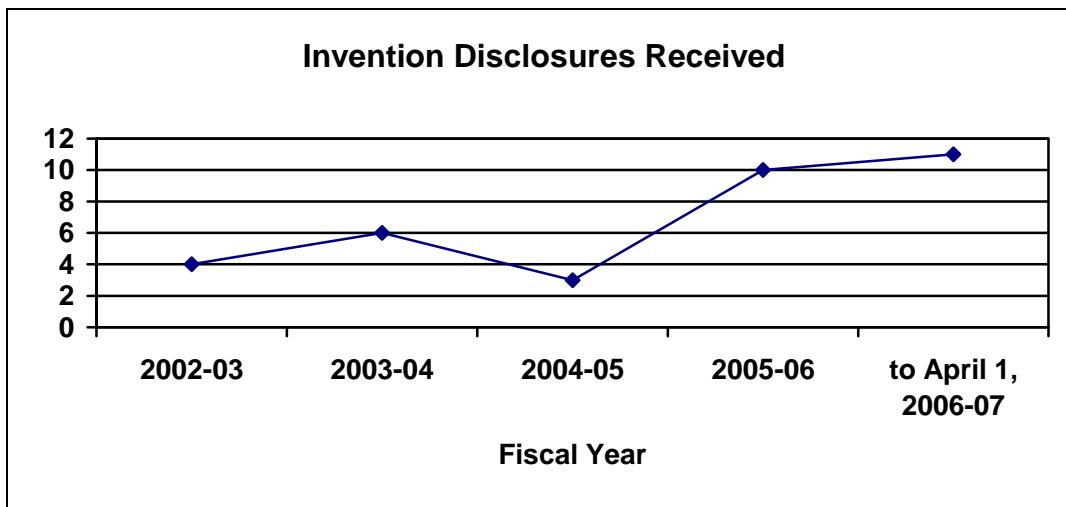
- Worked with other members of the ORS team in consultative manner to implement research agreements for new industrial relationships, including collaborative research awards
- Implemented the Universial Biological Material Transfer Agreement to streamline the exchange of research materials between Ryerson faculty members and 320 academic and non-profit institutions in North America
- Implemented a new service contract template for non-research activities sponsored by industry



- Initiated new program to provide extra support in development and review of large collaborative and strategic network grant applications.

### Technology Transfer

- Participated broadly in technology transfer networks including OPIC and BioDiscovery Toronto, including attaining funding for 4 seed-stage projects and 2 travel grants for industrial/collaborative purposes
- The number of invention disclosures has increased this year, including 2 patents filed and ongoing management of the intellectual property portfolio



- Initiated discussions with a network of Canadian Universities regarding participation in a Knowledge Mobilization strategy in the area of health/policy consultations.

## **Business Development and Entrepreneurship**

- Attended conferences and colloquia to promote Ryerson research interests and capacity under the banner of Research and Innovation
- Developed and delivered workshops to faculty members on “How to Market your Research to Industry” and “Writing Collaborative Grant Applications.” These workshops were so well received by Ryerson faculty, they are being adopted by several other Ontario Universities
- Launched a program to support applicants to the NSERC Strategic Program Award competition. Professor Victor Yang, Department of Physics, and Deborah Fels, School of Information Technology Management, were each subsequently successful in their applications, this represents a marked improvement in our track record with NSERC Strategic grants
- Worked with individual researchers to solidify relationships with industrial partners and apply for collaborative research funding. Successes in this area include: PRECARN award to industrial partner that includes work to be conducted at Ryerson, an augmentation to an NSERC CRD award and one new CRD award pending formal announcement
- Initiated relationships with third-pillar organizations within Ontario (e.g. Innovation-Synergy Centre Markham) to respond to industrial partner requirements for research expertise and consultations. This feeds into applications for collaborative research funding and research contract work to be performed at Ryerson.
- Enhancement of student entrepreneurship
- Sponsored and administered an internal award for selection of a student proposal for the NSERC Innovation Challenge Awards competition, one that rewards creativity in considering commercial applications for research conducted by graduate students
- Provided support to the Ryerson student Advancing Canadian Entrepreneurship (ACE/SIFE) chapter activity coordinators, who were supervised by faculty advisors Professors Steve Gedeon, Dave Valliere and Neil Wolf. ACE Ryerson coordinates and runs many student entrepreneurship activities, and competed in the ACE Financial Education Competition taking 2nd Place at the Central Regionals.

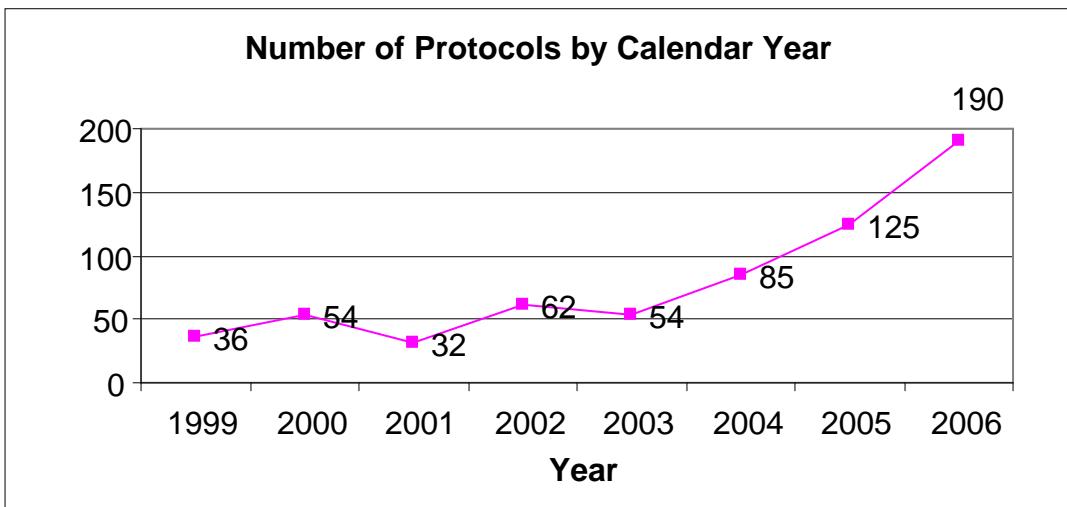
## **9. Research Ethics**

### **a) Research Ethics Board**

Over the past years, the number of protocols requiring ethics review has increased dramatically mainly as a result of two factors:

1. A large number of faculty members have been hired with a stated mandate to conduct research. This is due to academic expansion as a direct result of growth, attrition, and retirement.

2. There has been a large growth in the number of graduate programs with a resulting increase in graduate student applicants.



There has been a 52% increase in protocols from calendar 1995 to calendar 1996.

b) **Animal Care Committee**

Animal research at Ryerson is still in its infancy and all faculty research involving animals is currently conducted off campus at other research facilities (housed at other institutions). Currently, there are four active protocols in place. This is, however, expected to increase over time and it will be necessary to revise the animal review support infrastructure at Ryerson on an ongoing basis.

c) **SRC Integrity Advisory Committee**

The Scholarly, Research and Creative (SRC) Integrity Advisory Committee has been established to monitor issues relating to research integrity and ethics at the University. The committee reports to the VPRI and includes the following members:

- Liz Krivonosov, Radiation/Chemical/Biological Safety Officer, Centre for Environmental Health and Safety Management
- Jane Burns, Grants/Contracts Officer (Social Sciences and Humanities, Canada Research Chairs, Canadian Institutes of Health Research), Office of Research Services
- Susan Haggis, Grants/Contracts Officer (Physical and Life Sciences), Office of Research Services
- Paul McArthur, Grants/Contracts Officer (Infrastructure Programs), Office of Research Services
- Mike Leroux, Acting Academic Integrity Officer, Academic Integrity Office
- Marsha McEachrane Mikhail, Director, Office of International Affairs

- Terry McAfee, Coordinator, School of Graduate Studies
- Alex Karabanow, Research Ethics Coordinator

The committee has been working on a draft of a new SRC Integrity Policy which should be ready for presentation to the VPRI in June 2007. The policy will be based on a harmonized model which will be implemented at the University of Toronto, Ryerson University and York University. The VPRI will then propose the policy to the SRC Committee of Academic Council.

d) **Ethics Online Submission and Review System**

The online system developed by the Computing and Communications Services (CCS) Department at Ryerson has generated a lot of interest in the research ethics community. The system was launched in November 2004 and has been a great success. Enhancements and fixes have been introduced almost on an annual basis to address operational issues and suggestions from the research community. In January 2006, a presentation of the system was made at the Canadian Association of University Research Administrators (CAURA) Ontario conference in Niagara Falls. Work on the system will be part of a session entitled "Technology Initiatives and Solutions" at the upcoming Annual General Meeting of the Canadian Association of Research Ethics Boards (CAREB) which will be chaired by the Research Ethics Coordinator.

The response by the research ethics community was very positive and presentations were subsequently made to St. Michael's Hospital, the University Health Network, McMaster University, Brock University, the Ontario Institute for Cancer Research, the University of Ontario Institute of Technology, the Innovation Institute of Ontario, the Bloorview Research Institute, and York University. CCS has made the system available to interested parties under an open source agreement.

10. **International Affairs**

a) **OIA's 2006-2007 Highlights**

During the 2006/2007 academic year, the Office of International Affairs (OIA), which previously reported to the Associate VP Academic, became an integral component of the portfolio of the newly created position of Vice President, Research and Innovation (VPRI). During that period, OIA supported Ryerson's academic units and service departments to develop international initiatives with Canadian and international partners that provided opportunities for students and faculty involvement in international activities. The Office also supported the university's involvement in national and international events on and off campus, and provided on going administrative support and direction, for externally funded international development projects.

Highlights of the OIA's activities for this period include the following:

- Identification of the Ryerson's interests in establishing new partnerships with Indian academic institutions and industry, and support to the University delegation lead by the President, which participated in the Premier of Ontario's mission to India in January 2007
- The design and coordination of the 2006 Ryerson International Summer Experience Fund (RISEF). The initiative, which was funded by the Provost, enabled sixty Ryerson students to participate in a wide variety of international experiences related to their programs of study. This program has been renewed with funding from the VPRI
- The development of four (three new) student programs with funding of \$200K from the VPRI, to encourage increased student participation in international education and learning activities
- The launch of a new OIA website which improved information services to the Ryerson community, and showcases the university's international initiatives
- The provision of ongoing administrative support and management services for four CIDA funded projects with partner institutions in developing countries

b) **OIA's Achievements in the Approved Strategic Priority Areas**

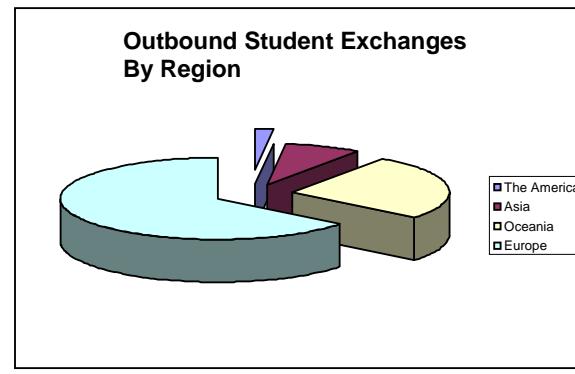
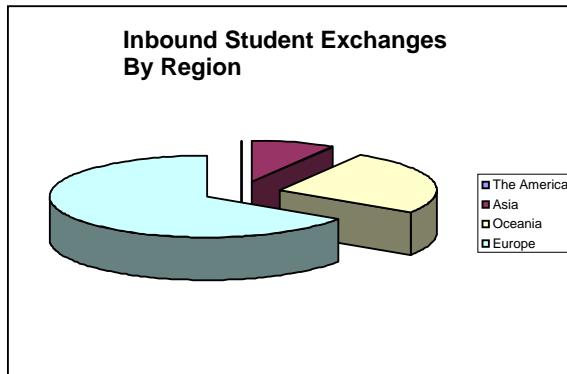
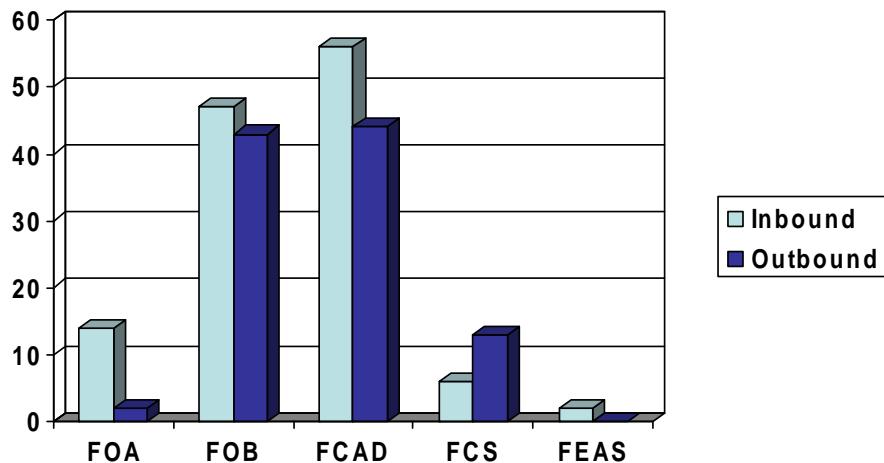
In 2003, the OIA in consultation with the AVPA and the International Reps Committee established four focus areas for the period 2003- 2008. Following is a summary of key activities carried out in these areas during the 2006-2007 academic year:

1. **Student Engagement and Development**

- ***Student Mobility Programs:*** OIA's collaboration with academic units resulted in the establishment of five new bilateral exchange agreements, two of which includes Ryerson's MBA programs. Memoranda of understanding and agreements negotiated were in new geographic regions and countries such as Ireland, Chile, India and the Czech Republic.

OIA also funded Ryerson's membership in two regional student exchange programs with Rhone-Alps, France and Baden-Wurttemberg, Germany. In collaboration with other service departments, OIA enhanced tools to support Ryerson's mobility programs. One important example is the new risk assessment instrument developed jointly with the Centre for Environmental Health and Safety Management, used by students and faculty in determining the level of risk involved in Ryerson authorized international activities. The outcome of the assessment informs the decisions made by the students and academic administrators regarding personal safety plans.

## 2006-2007 Student Exchanges by Academic Faculties



- **Experiential Learning:** OIA participated in the planning, coordination and co-funded, on a cost-sharing basis with the academic units of, on and off campus international experiential learning opportunities for students including charettes and field camps.
- **Graduate Research:** The marked increase in scholarly and research activities, and graduate programs at Ryerson, resulted in the need for OIA to negotiate a number of agreements to facilitate the exchange of visiting graduate students and researchers with international partner institutions. Agreements signed included those between Konkuk University, Korea and the Department of Aerospace Engineering for the admission of PhD candidates, and for the attachment of three PhD candidates from Egypt to the Department of Civil Engineering. In both instances, the international scholars received funding from their respective governments.
- **Celebrating Student International Achievements:** In spring 2006, the OIA hosted the first annual Ryerson event, to acknowledge the international achievements of Ryerson students and in particular those

who secured internal and/or external funding to undertake international activities. The second event was held in March 2007. In the fall of 2006, the Office hosted a reception for all ‘inbound’ and ‘outbound’ exchange students, to which representatives of the diplomatic community in Toronto, from countries where Ryerson has bilateral academic agreements, were also invited. These opportunities to showcase the international achievements of Ryerson’s and international students participating in exchange programs have been positively received by the Ryerson community, and especially the students. Due to the success of both events, OIA will continue to host these in future years.

## 2. Faculty Engagement and Development

The OIA collaborated with academic units and individual faculty members on the development of a range of international initiatives.

- ***The Ryerson International Initiatives Fund RIIF:*** In 2003, the OIA established the Ryerson International Initiatives Fund RIIF, to provide seed funding to support the development of international projects. An OIA evaluation of the program in 2006, to measure the impact of the funding disbursed in three competitions over the last four years, indicates that faculty used the university’s investment of \$36K to secure \$2,321,391 in external funding. This represents an impressive leverage factor of approximately 64.2. This funding has served to position Ryerson as the lead Canadian university in a number of initiatives - four funded by CIDA, one HRSDC-funded North American student mobility program, an international student internship program funded by Ontario Exports Inc., and one international conference funded by SSHRC.
- ***The Ryerson International Research Fund RIRF:*** Jointly established with the Office of Research Services ORS in 2004, the RIRF has been less successful. The aim of the program was to increase the ability of Ryerson academic units to undertake externally funded international research initiatives. Two grants of \$30K each were awarded in the 2004/05 competition and, in the 2005/06 round, it was the selection committee’s opinion that none of the proposals received met the criteria for funding. While the recipients of grants awarded in the 2004/05 competition have expanded their international research program, meeting the requirements of the RIRF program has been more challenging for Ryerson faculty than anticipated. Therefore, the OIA and ORS made recommendations to the VPRI for the reallocation of funding to other programs, which can more effectively respond to the needs of the academic units.
- ***Support for Externally Funded Initiatives:*** Information sessions and workshops on relevant programs and services provided by external funding agencies were organized by OIA, as well as, internal sessions involving faculty to provide a forum for the sharing of best practices and lesson learned, in the successful development of international project

proposals and the management of such initiatives. OIA staff also worked with individual faculty and students on the development and review of proposals to external funding agencies, and on the negotiation of contracts and agreements with the funding agencies.

### 3. Improved OIA Internal and External Relations

A number of steps were taken to increase awareness of the OIA among faculty, students and staff. Working with University Advancement, an



OIA logo was created to brand the office. This logo appears on the OIA Bulletin and on other OIA material. The Bulletin, distributed both electronically and on paper features articles on the international achievements of Ryerson faculty and students.

The new OIA website went live as of mid-September 2006 and is far more user friendly than its predecessor. OIA continued to provide information on funding opportunities and relevant issues through regular postings the [oia-infoline@ryerson.ca](mailto:oia-infoline@ryerson.ca) and [researchnet@ryerson.ca](mailto:researchnet@ryerson.ca) listservs.

Two of the International Affairs Student Assistants were responsible for the bi-weekly production of the OIA's in-house student e-newsletter Xperience Xchange. This publication was well received by both students and staff, and has enabled the OIA to maintain a connection with both inbound and outbound exchange students.



### 4. Operation of OIA

- **OIA Financial Analyst:** Due to the steady increase in the number of faculty-based international initiatives supported by the OIA, Financial Services was not able to provide its usual high standard of efficient and timely financial administrative support to OIA. In particular, OIA on behalf of Ryerson was not able to meet reporting deadlines to the funding agencies. As a result, in 2006 Financial Services requested that OIA hire a dedicated Financial Analyst to work with the OIA Financial Advisor, OIA staff and Faculty Project Directors, to correct this problem. In January 2007 the VPRI approved limited funding for a term position, until a more long-term solution can be identified.
- **Personnel Development:** During the 2006-2007 academic year, all OIA staff had the opportunity to participate in networking opportunities, conferences and workshops related to their responsibilities, and were encouraged to participate in professional development activities organized by Ryerson and other institutions and organizations.

- **OIA Cost-Effectiveness:** The OIA has effectively operated with funds provided by the university augmented by limited revenues earned from some international projects. Overall, the OIA has achieved the goals in the priority areas of its 3-5 year program established in 2003. Therefore, under the leadership of the VPRI, the OIA is ready to revisit its priorities based on current needs of the academic units, and will consult with the Ryerson community to establish university-wide guiding principles for the strengthening of the University's international programs and enhance its international reputation.

## 11. Priority Plans for 2007-2008

Our priority plans for the next year include:

- Implementation of an improved Research Information System available to all researchers and outside agencies
- Substantial completion of our new CFI projects
- Development of an expertise database of faculty
- Implementation of new SRC enhancement programs
- In cooperation with HR and Financial Services, creation of new user friendly reports for PIs
- 20% increase in the number of applications submitted to external funders
- 20% increase in funding received
- Development of an SRC mentoring program
- Carefully reconsider and start revision of our IP policy
- Preparation of the Principles under which our International Affairs work
- Beginning of decentralization by placing some business officers in selective Faculties
- Implementation of a comprehensive awards nomination program
- Active engagement in issues of public policy affecting SRC
- Active involvement in SRC communications
- Simplify access to SRC accounts

Submitted by:



Anastasios (Tas) Venetsanopoulos  
Vice President, Research and Innovation

April 17, 2007