

SCHOOL OF GRADUATE STUDIES

REPORT TO ACADEMIC COUNCIL, SEPTEMBER 13, 2005

1. Review of Status of New Graduate Programs

- (i) Being implemented 2005/2006
- (ii) Planned for 2006/2007
- (iii) Envisaged 2007/2008

2. *Master of Science in Molecular Science (MSc)*

Motion

To approve the submission of the proposal for a *Master of Science in Molecular Science (MSc)* to the Ontario Council for Graduate Studies for Standard Appraisal.

3. *Master of Business Administration (MBA)*

Motion

To approve the submission of the proposal for a *Master of Business Administration (MBA)* to the Ontario Council for Graduate Studies for Standard Appraisal.

Submitted by:

Maurice Yeates, Dean
Chair, School of Graduate Studies

| Status of New Programs in Graduate Review Process (for programs planned for September, 2005) | | | | | | |
|---|--|--------------------------------------|--|-----------------------|---------------------|--|
| Approval or Action by | Responsibility | MA – Int Economics & Fin. | MA – Pub. Pol. & Administration | MN -- Nursing. | PhD Chem Eng | |
| Ryerson Review | | | | | | |
| Dean - SGS | Letter of Intent (LoI) – including initial analysis of financial viability | 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 | X | |
| Internal/External Consultant | An expert in the field from another university reviews the proposal. Sponsors re-draft if necessary. | X | X | X | X | |
| Provost | Discusses proposal with Dean, sponsor. | X | X | X | X | |
| P&P | Reviews draft OCGS brief in light of I/E report – recommends to Council SGS based on academic quality | X | X | X | X | |
| Council, SGS | Reviews proposal | X | X | X | X | |
| Academic Council | Reviews program proposal for academic quality and moves to proceed to OCGS | X | X | X | X | |
| Ontario Council on Graduate Studies Review | | | | | | |
| Appraisal Committee | 7 senior faculty from across Ontario + Exec. Dir read brief and comment to Ryerson. Univ can advertise program. | X | X | X | X | |
| External Consultants | 2 or 3 selected, visit Ryerson for a two day period. Prepare reports for submission to OCGS, which sends reports to Ryerson. | X | X | X | X | |
| Ryerson | Responds to report(s) | X | X | X | X | |
| Appraisal Committee | Reviews report and response and presents recommendation to OCGS (All graduate Deans in Ontario) | X | X | X | X | |
| OCGS Executive Director | Informs Ryerson of decision, provides letter required by Ministry for funding claim. OCGS meeting. | X | X | X | X | |
| Further Procedures | | | | | | |
| Board of Governors | Program is presented to Board of Governors for approval of financial viability. | X | X | X | X | |
| Ministry | The Program is presented to the Ministry for approval | X | X | X | | |
| Provost | Provost decides about implementation | X | X | X | X | |

| Status of New Programs in Graduate Review Process (for programs planned for September, 2006) | | | | | | |
|--|--|--------------|-----------------------|-----------------------------|--------------------|-----------------------|
| Approval or Action by | Responsibility | MA ECS | MSc – Biomed. Physics | MBA /MSc Inf Tech Mngmt | MBA Business Admin | MSc Molecular Science |
| Ryerson Review | | | | | | |
| 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 | X |
| Provost | Decides to proceed based on responses to LoI. Instructs sponsors to prepare OCGS program proposal. | X | X | X | X | X |
| Internal/External Consultant | An expert in the field from another university reviews the proposal. Re-draft if necessary. | X | X | X | X | X |
| Provost | Discusses proposal with Dean, sponsor. | X | X | X | X | X |
| P&P | Reviews draft OCGS brief in light of I/E report – recommends to Council SGS based on academic quality | X | X | X | X | X |
| Council, SGS | Reviews proposal | X | X | X | X | X |
| Academic Council | Reviews program proposal for academic quality and moves to proceed to OCGS | X | X | X | Sept 13, 2005 | Sept 13, 2005 |
| Ontario Council on Graduate Studies Review | | | | | | |
| Appraisal Committee | 7 senior faculty from across Ontario + Exec. Dir read brief and comment to Ryerson. Univ can advertise program. | X | X | X | | |
| External Consultants | 2 or 3 selected, visit Ryerson for a two day period. Prepare reports for submission to OCGS, which sends reports to Ryerson. | X | | Joint visit week of Sept 19 | | |
| Ryerson | Responds to report | X | | | | |
| Appraisal Committee | Reviews report and response and presents recommendation to OCGS (All graduate Deans in Ontario). | Oct 17, 2005 | | | | |
| OCGS Executive Director | Informs Ryerson of decision, provides letter required by Ministry for funding claim. OCGS Meeting. | | | | | |
| Further Procedures | | | | | | |
| 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 | | | | | |

| Status of New Programs in Graduate Review Process (programs planned for September, 2007_1) | | | | | | |
|---|--|--|------------------------|----------------------|----------------------|---------------------------|
| Approval or Action by | Responsibility | PhD Aerospace Engin. (06 or 07) | MSW Social Work | MFA Doc Media | MJ Journalism | MArch Architecture |
| Ryerson Review | | | | | | |
| 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. | | X | | | |
| Provost | Discusses proposal with Dean, sponsor. | | X | | | |
| P&P | Reviews draft OCGS brief in light of I/E report – recommends to Council SGS based on academic quality | | | | | |
| Council, SGS | Reviews proposal | | | | | |
| Academic Council | Reviews program proposal for academic quality and moves to proceed to OCGS | | | | | |
| Ontario Council on Graduate Studies Review | | | | | | |
| Appraisal Committee | 7 senior faculty from across Ontario + Exec. Dir read brief and comment to Ryerson. Univ can advertise program. | | | | | |
| 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. OCGS meeting. | | | | | |
| Further Procedures | | | | | | |
| 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 | | | | | |

| Status of New Programs in Graduate Review Process (programs planned for September, 2007_2) | | | | | | |
|--|--|-----------------------------|--|--|--|--|
| Approval or Action by | Responsibility | Masters in Media Production | | | | |
| Ryerson Review | | | | | | |
| Dean - SGS | Letter of Intent (LoI) – including initial analysis of financial viability | X | | | | |
| SGS Program & Planning Comm | Reviews LOI to determine if program appears feasible. | | | | | |
| Provost | Decides to proceed based on responses to LoI. Instructs sponsors to prepare OCGS program proposal. | | | | | |
| Internal/External Consultant | An expert in the field from another university reviews the proposal. Sponsors re-draft if necessary. | | | | | |
| Provost | Discusses proposal with Dean, sponsor. | | | | | |
| P&P | Reviews draft OCGS brief in light of I/E report – recommends to Council SGS based on academic quality | | | | | |
| Council, SGS | Reviews proposal | | | | | |
| Academic Council | Reviews program proposal for academic quality and moves to proceed to OCGS | | | | | |
| Ontario Council on Graduate Studies Review | | | | | | |
| Appraisal Committee | 7 senior faculty from across Ontario + Exec. Dir read brief and comment to Ryerson. Univ can advertise program. | | | | | |
| 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. OCGS meeting. | | | | | |
| Further Procedures | | | | | | |
| 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. The School of Graduate Studies has reviewed the proposal for a *Master of Science in Molecular Science (MSc)* listed below, and submits it to Academic Council for its approval for it to be sent to the Ontario Council on Graduate Studies for external review ('standard appraisal'). Vol. I of the brief ('The Program') is available for review in the office of the Secretary of Academic Council, and Volumes I & II ('The Program', and 'Curricula Vitae') are available for review in the office of the Dean of the School of Graduate Studies (EPH 439). Vol. I of the brief ('The Program') is also available for review at www.ryerson.ca/gradstudies/temp. Username: gradstudies Password: 4ryerson

It is planned that the *Master of Science in Molecular Science (MSc)* will be implemented in Fall 2006.

Motion

To approve the submission of the proposal for a *Master of Science in Molecular Science (MSc)* to the Ontario Council for Graduate Studies for Standard Appraisal.

Note: Once a program is approved by OCGS, it is presented to the Board of Governors for approval. The Provost has final authority to determine whether a program may proceed.

RYERSON UNIVERSITY

Master of Science in Molecular Science (MSc)

EXECUTIVE SUMMARY

Molecular Sciences encompasses the unfolding scientific revolutions that have tied the genetics of heredity to the composition and structure of the deoxyribonucleic acid (DNA) molecule, linked biochemical metabolism to protein expression at the genomic level, developed unique materials through design strategies which mimic Nature's own, and seen the direct imaging and manipulation of individual molecules on surfaces. All these discoveries have one thing in common – a fundamental recognition of the importance of events at the molecular level. Molecular Science studies the composition, structure, function, expression, interaction and imaging of molecules using theories and methodologies in the chemical and biological sciences.

The modern economy is based on innovations and technology arising from interdisciplinary scientific advances and discovery. Toronto has a large number of chemical, biological, biochemical, pharmaceutical, and biotechnological industries all of which require personnel skilled in techniques and concepts at the interface of the biological and chemical sciences. There is a demonstrated increasing demand for science graduates from the biotechnology industry, the environmental sector and chemical/pharmaceutical companies. North American projections indicate an 18% increase in demand for highly trained workers in scientific areas over the next 6 to 10 years and recent data from the Association of Universities and Colleges of Canada suggests the demand for university degrees is growing even faster than predicted. The importance of science to society has also been recognized by government through commitments to increased support of research and training of graduate students. In short, the career prospects for graduates are excellent.

The proposed Master of Science Programme in Molecular Science is designed to provide a high quality, interdisciplinary and research-based graduate education. It will be a source of

the highly qualified personnel required to fill the need for interdisciplinary expertise in careers at the interface of chemistry, biochemistry and biology. Furthermore, the proposed programme is aligned with Ryerson's mandate of applied professional education, and complements the new undergraduate Contemporary Science platform scheduled for roll out in fall 2005. Enhanced undergraduate and graduate science education and research in Molecular Science, will ensure our ability to attract and retain the best students and faculty and to ensure excellence in our professional programs.

The programme meets all the requirements documented in Ryerson's Academic Plan (2003-2008) and it is aligned with Ryerson's strategic plan to develop as a comprehensive university, one that has traditional strength in undergraduate programming and a spectrum of relevant masters and doctoral programs. The program is designed (i) to provide opportunity for post-graduate study in Molecular Science through an interdisciplinary research-focused programme, (ii) to provide students with the opportunity to further their professional development in research, critical thinking, and scientific communication, (iii) to provide highly qualified personnel to fill the need for interdisciplinary expertise at the interface between chemistry, biochemistry and biology with experience in advanced microscopy, analytical investigations and biotechnological applications, and (iv) to foster interactions with other partners in universities, industries, and government institutes within the country and internationally through research collaborations, student co-supervisions and faculty/student exchanges.

The close proximity of Ryerson to a wide array of industries, educational and research institutions with which partnerships can be built will provide exceptional opportunities for students compared to programmes in other Canadian locations. Further, the programme will not place any significant financial burden on the University as evident by the core faculty's capacity to support graduate students through research grant revenues and the ability of the Department of Chemistry and Biology to offer graduate assistant positions.

The requirement for the MSc in Molecular Science is successful completion of 3 semester courses, a seminar course and a research thesis. The courses are selected from a set of offerings (see table) which will ensure that all students are exposed to a cross section of concepts and techniques from both the biological and chemical sciences. This maximizes the interdisciplinarity that is the central feature of this novel programme. Students will enroll in the seminar course throughout the two academic years of their normal 24 month tenure in the programme. Students will be obligated to attend seminars as well as to present two of their own: one on their research topic and one on an unrelated topic. In addition, the seminar course will contain a module, to be run each academic year, training students in scientific communication. The students' supervisory committee and supervisor will consult with the student on course selection.

Strategic new faculty hires (*vide infra*) would integrate into these broadly based courses to further enrich and to expand the range of expertise within in these areas.

Curriculum

| COURSES |
|--|
| Advanced Analytical Chemistry |
| Advanced Microscopy and Imaging in Molecular Sciences |
| Environmental Biotechnology |
| Genomics and Proteomics |
| Interfacial Phenomena in Chemical and Biological Systems |
| Molecular Recognition in Chemical and Biological Systems |
| Materials Science |
| Molecular Virology |

It is anticipated that the programme will accept its first students in fall 2006 and will have a steady-state enrollment of 20. To be accepted into the programme applicants must have completed their undergraduate degree in an appropriate discipline with a B+ or better average in their last two years of study. This is somewhat higher than the normal criterion of the School of Graduate Studies but is based on the recommendation of an external reviewer of the programme proposal.

The OCGS brief lists 13 tenure and tenure-track core faculty for the programme, all in the Department of Chemistry and Biology, 1 tenured core faculty from the Department of Chemical Engineering, 2 tenured core faculty members from the Department of Nutrition and 1 from the Department of Physics. Over the next several years, the faculty resources in the Department of Chemistry and Biology in support of the new programme will increase by an additional 5 professors. One will come from the replacement of a retiring non-core faculty member and the remaining 4 are expected as part of the new Contemporary Science undergraduate program at Ryerson. The normal teaching workload of the faculty members is 3-4 courses per academic year, one of which may be a one-semester graduate course.

In summary, this new and viable programme is a natural evolution for the Department of Chemistry and Biology at Ryerson, fuelled by the significant research investments and successes of our faculty, and a growing societal need for highly qualified personnel with expertise at the interface of the chemical and biological sciences.

3. The School of Graduate Studies has reviewed the proposal for a *Master of Business Administration (MBA)* listed below, and submits it to Academic Council for its approval for it to be sent to the Ontario Council on Graduate Studies for external review ('standard appraisal'). Vol. I of the brief ('The Program') is available for review in the office of the Secretary of Academic Council, and Volumes I & II ('The Program', and 'Curricula Vitae') are available for review in the office of the Dean of the School of Graduate Studies (EPH 439). Vol. I of the brief ('The Program') is also available for review at www.ryerson.ca/gradstudies/temp. Username: gradstudies Password: 4ryerson

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RYERSON UNIVERSITY *Master of Business Administration (MBA)*

EXECUTIVE SUMMARY

Ryerson University proposes to establish an MBA with four fields – international business, marketing, human resources and retail and commercial development. The proposed degree requires: 14 semester courses completed over 12 months for those students with an undergraduate degree in Business (or similar) and two years appropriate work experience; or, 20 semester courses for those students with a four year undergraduate degree, and two years appropriate work experience. This proposed program is designed to meet the demonstrated societal need for managers with the ability to integrate and apply their knowledge and skills in both national and international business environments.

Although there are many MBA programs in Canada, the tremendous population growth in the GTA area provides sufficient demand for an accessible program. In addition, the proposed program responds to some of the criticisms that have been leveled at graduate management education through recognition of: the need for an international orientation; the requirement for inclusion in an environment of diversity; the need for ethical business leadership; and, the need for integrating theory with application.

The MBA program involves 36 faculty members from all four schools in the Faculty of Business at Ryerson (Business Management, Retail Management, Information Technology Management, Hospitality and Tourism Management) as well as various departments in the Faculty of Arts. The breadth of expertise and experience of faculty involved within the program provide it with a strong foundation for academic excellence. Not only are they academically qualified, most have extensive experience with business that will enrich the student experience. The faculty involved with the program will increase in number from among the 20 new hires anticipated in 2005/6. Ryerson's central location within the GTA provides an opportunity for the proposed program to have an immediate positive impact on the region. Ryerson's Faculty of Business is among the

largest in the country yet the only one of its size without a graduate program. The proposed program will establish Ryerson as an academic and professional leader in Management. It will create a venue for collaboration between industry and academia, as many applied projects will facilitate links between students, faculty members, and organizations in the region. The program also supports the development of multidisciplinary research alliances within Ryerson and builds on the strengths of the existing research centers and institute – the Centre for the Study of Commercial Activity; the Institute for Technology Management; the Institute for Diversity, Technology and Management; the Centre for Learning Technologies; and, the Centre for Voluntary Sector Studies.

This program aligns closely with Ryerson's academic plan.

The program:

- has a particular focus on societal need, career/professional relevance
- has innovative program features;
- builds on established strengths of the university and contributes to the university's strategic goals;
- has high potential to contribute to the future enhancement of both SRC and undergraduate program strength (including increasing the number and quality of research proposals; generate new opportunities for students to be involved with SRC projects; and increase the number of research partnerships within Ryerson and with external organizations);
- will be a major factor in attracting and retaining faculty;
- will not place a financial burden on the University.

The program will initially be offered full-time but can be adapted easily part-time learners. It is anticipated that the first cohort of graduate students would begin the program in September 2006, with anticipated initial enrolments of 60 full-time students. A steady state enrolment of 80 full-time students would be achieved in the 2007-2008 academic year.

The MBA curriculum has a structure similar to other MBAs across Canadian business schools, while reflecting the Faculty's unique strengths:

The twelve month program (commencing September 1 of an academic year) includes:

Term 1:

- MBA 7 Socially Responsible and Ethical Management
- MBA 7A Legal, Regulatory and Governance Issues
- MBA 8 Strategy in an International Business Environment
- MBA 9 Accounting and Finance for Today's Managers
- MBA 10 Logistics and Supply Chain Management in an Interconnected World
- MBA 11 Diversity in Human Resources Management
- MBA 12 Advanced International Marketing

In Term 2, candidates for the MBA degree take 5 electives concentrating their study in one of the four fields.

Term 3: includes

- An integrated applied project (3 credits) OR

- A thesis (3 credits) OR
- Study Abroad with a reflective paper (3 credits)
- Intensive language training plus paper (3 credits)

To summarize the twelve month curriculum:

| | | |
|--|--|---|
| Term I An International Perspective on Business (6 credits) | Term II Specialization (5 credits) | Term III Integration and Application (3 credits) |
|--|--|---|

The Foundation Term for non-business graduates to be offered in Term 3 (Spring/Summer semester, except Spring/Summer 2006) includes:

- MBA 1 Issues and Functions in an International Business Environment
- MBA 2 Quantitative Methods and Information Systems
- MBA 3 Marketing in an International Environment
- MBA 4 Accounting in an International Environment
- MBA 5 Finance for Managers in an International Environment
- MBA 6 Economics in an International Environment

There are 13 core faculty members with expertise in the International Management field, 7 in the Human Resources Management field, 8 in the Marketing field and 4 in the Retail and Commercial Development field with one new hire anticipated in 2004/5. Another 4 faculty will be involved in teaching the core modules. It is anticipated that there will be a significant increase in the number of core faculty involved with the program over the next few years.

The core faculty has a mix of senior scholars and younger scholars. In the 2003-2004 year, more than \$1.2 million in research funding was obtained from granting agencies such as NSERC, SSHRC, and CFI, and from other peer-reviewed, government and contract sources. Many of the faculty members have international reputations in their fields, and have published in top journals including the California Management Review, Marketing Science, Canadian Journal of Administration, Journal of Marketing and Public Policy.

Students in the program have access to a full range of academic and infrastructure support, including computing facilities, library access, and research laboratories. The program will be housed in the new 210,000 sq. ft. Faculty of Business building at Bay St. and Dundas St. in the heart of the city's business district.

This graduate program will be administered by the MBA Director, appointed by an Appointments Committee with representation from each participating academic unit, and chaired by the Associate Dean, Academic, of the Faculty of Business. The Director will also serve as the Program Director reporting to the School of Graduate Studies. The Director will be part of the Faculty of Business Management Team and also report to the Dean of Graduate Studies on related issues. He or she will receive appropriate administrative support through the Faculty of Business and the School of Graduate Studies.