

SCHOOL OF GRADUATE STUDIES

REPORT TO SENATE, JANUARY 26, 2010

1. *PhD in Computer Science*

Motion

That the Senate approve the submission of the proposal for a *PhD in Computer Science* to the Ontario Council on Graduate Studies for Standard Appraisal.

2. *PhD in Biomedical Physics*

Motion

That the Senate approve the submission of the proposal for a *PhD in Biomedical Physics* to the Ontario Council on Graduate Studies for Standard Appraisal.

3. *PhD in Molecular Science*

Motion

That the Senate approve the submission of the proposal for a *PhD in Molecular Science* to the Ontario Council on Graduate Studies for Standard Appraisal.

4. *PhD in Economics*

Motion

That the Senate approve to commence the proposal for a *PhD in Economics*.

5. Complex Program Changes – *Documentary Media* (for information)

6. Complex Program Changes – *Applied Mathematics* (for information)

Submitted by:

Maurice Yeates, Dean
Chair, School of Graduate Studies Council

1. The School of Graduate Studies has reviewed the proposal for a *PhD in Computer Science* listed below, and submits it to Senate 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 Senate, 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 (YDI-1109). Vol. I of the brief ('The Program') is also available for review at www.ryerson.ca/graduate/temp.

Username: gradstudies Password: 4ryerson

Motion

That the Senate approve the submission of the proposal for a *PhD in Computer Science* to the Ontario Council on 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 *PhD in Computer Science*

EXECUTIVE SUMMARY

The Department of Computer Science proposes the creation of a Doctor of Philosophy degree program in Computer Science. The program falls within the norms of Computer Science graduate education within the province of Ontario. However, more importantly, the creation of this program will serve to promote Ryerson's mission and address the growing needs of our society for effective graduate education at the doctoral level. In addition, the program should help mitigate the inability of existing programs to fill the demand for graduates.

The proposed program contains the fields of "Intelligence and Robotics" in addition to "Computer Communication Networks". It is nominally three-years long, is thesis-based and requires participants to take four one-term graduate courses (two from each field) as shown in the table below.

Intelligence and Robotics	Networks
CP8206 Soft Computing and Machine Intelligence CP8303 Collaborative Computing CP8305 Knowledge Discovery CP8306 Presence CP8307 Image Analysis CP8311 Genetic Programming CP8308 Visualization	CP8201 Algorithms and Computability CP8301 Secure Computing CP8304 Distributed Systems CP8303 Collaborative Computing CP8202 Advanced Software Engineering CP8203 Advanced Database Systems

In addition, students must take one “research methods” course, one “method of instruction” course and a mandatory non-credit seminar. Candidates must also pass written and oral qualifying exams. Students must be full-time residents within the program for at least two years.

The program has the objective of providing scientific research experience to participating students in the field of Computer Science.

Located on the second floor of a new state-of-the-art computing and engineering building, the program will have access to generous research and office space highlighted by five labs equipped with CFI funding.

Additional urban search and rescue (US&R) research and testing facilities are available for use through the Ontario Provincial Police at their Provincial (OPP) Emergency Response Team (PERT) headquarters in Bolton, Ontario, where approximately two acres of purpose-built urban disaster simulations are available for research in computational public safety through a memorandum of understanding between the OPP and Ryerson.

Building on the strength of the highly successful Master of Science program in Computer Science, a complement of 22 faculty members will present courses and supervise graduate students within the program. They will support a proposed yearly intake of five students who meet or exceed Ryerson’s admission standards. All of the faculty members have supervisory experience from other graduate programs in other departments and universities. It is the intent of the program to financially support each domestic student with at least \$22k/year of funding from all sources for a maximum of three years.

2. The School of Graduate Studies has reviewed the proposal for a *PhD in Biomedical Physics* listed below, and submits it to Senate 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 Senate, 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 (YDI-1109). Vol. I of the brief (‘The Program’) is also available for review at www.ryerson.ca/graduate/temp.

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Motion

That the Senate approve the submission of the proposal for a *PhD in Biomedical Physics* to the Ontario Council on Graduate Studies for Standard Appraisal.

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