NOTICE OF MEETING
 Graduate Education Council

To: Members of Graduate Education Council
From: Jane Alderdice, Secretary, Graduate Education Council

This is your notice of the Graduate Education Council meeting on Tuesday, November 16, 2010, in the Council Chamber of the Galbraith Building (Room 202, 35 St. George Street).

If you have any questions or comments about the attached agenda, or wish to send regrets, contact Mr. Anil Purandaré, SGS Governance Officer, at 416 946-3427 or sgs.governanceofficer@utoronto.ca. If you would like to discuss any aspect of Council business, I would be pleased to hear from you at jane.alderdice@utoronto.ca.

[ORIGINAL SIGNED]
AGENDA
Graduate Education Council

Tuesday, November 16, 2010
3:10 p.m. – 6:00 p.m.
The Council Chamber, Galbraith Building
Room 202, 35 St. George Street

Refreshments will be served

Regrets only to Anil Purandaré, SGS Governance Officer: 416-946-3427 or sgs.governanceofficer@utoronto.ca

1 Minutes of the Graduate Education Council Meeting of October 19, 2010
   (Documentation attached)

2 Business Arising from the Minutes

3 Dean’s Remarks

4 Report of the Vice-Dean, Programs

5 Report of the Vice-Dean, Students

6 New Collaborative Master’s and Doctoral Program in Resuscitation Sciences
   (Documentation attached)

7 Program Closure: Collaborative Master’s Program in International Relations
   (Documentation attached)

8 Admission & Program Requirement Changes: Comparative Literature, MA, PhD
   (Documentation attached)

9 Program Requirement Changes:
   (Documentation attached)
   9.1 Law & Global Affairs, JD/MGA, Combined Program
   9.2 Statistics, MSc

10 Other Business

11 For Information: External Awards Success Rate Report
   (Documentation to be distributed at the meeting)
The Dean called the meeting to order and welcomed all members and visitors at 3:10 p.m.

**MOTION** *(duly moved and seconded)*

THAT the Graduate Education Council meeting of October 19, 2010 will adjourn no later than 5:00 p.m.

The motion was **CARRIED**.

**Approval of the Agenda of the Graduate Education Meeting of October 19, 2010**

**MOTION** *(duly moved and seconded)*

THAT the agenda of the Graduate Education Council meeting of October 19, 2010 be approved.

The motion was **CARRIED**.

1. **Minutes of the Graduate Education Council (GEC) Meeting of May 18, 2010**

The minutes of the May 18, 2010 meeting were distributed with the agenda.

**MOTION** *(duly moved and seconded)*

THAT the minutes of the Graduate Education Council meeting of May 18, 2010 be approved.

Seeing no discussion, the Dean called the question.

The motion was **CARRIED**.

2. **Business Arising from the Minutes**

2.1 **Subsequent Considerations of GEC-approved items**

**Environmental Science, PhD (new degree program)**

The new Environmental Science PhD program received final approvals, and commenced September 2010. It is housed in the Department of Physical and Environmental Sciences at UTSC, which has now been established as a graduate unit. Professor William Gough was appointed as its graduate chair under Summer Executive Authority of the Agenda Committee of Academic Board.
Detailed approvals: GEC (January 19, 2010), AP&P (March 2, 2010), P&B (March 3, 2010), Academic Board (March 23, 2010), Executive Committee of Governing Council (March 25, 2010); final approvals from Governing Council (April 8, 2010) and OCGS (June 18, 2010).

**Law, Global Professional Master of Laws (GPLLM) (new degree program)**

Final approvals are pending for the Global Professional Master of Laws (GPLLM) program. Detailed approvals: GEC (April 20, 2010); AP&P (May 11, 2010), P&B (May 5, 2010), Academic Board (pending); final approvals from Governing Council (pending) and OCGS (pending).

### 2.2 Other Business Arising

There was no other business arising from the minutes.

### 3 Dean’s Remarks

#### 3.1 Introductions

The Dean introduced the following people to GEC:

- Berry Smith, Vice-Dean Students
- Liz Smyth, Vice-Dean Programs
- Jane Alderdice, Director of Quality Assessment and Governance, and Secretary to Council
- Rodney Branch (absent), Director of Information Systems
- Jane Freeman (absent), Director of English Language and Writing Support
- Heather Kelly, Director of Student Services
- Christy Kim (absent), Director of Support Services
- Anil Purandaré, Governance Officer and Assistant Secretary to Council

#### 3.2 Orientation for GEC Members

The Dean explained to members that this is a year of transition. Governance and quality assurance processes are changing at the end of this calendar year. The Constitution and By-law amendments that will be presented later in this meeting indicate the direction of these changes. For now, however, GEC will continue with the current process, which he outlined to GEC.

New policies and regulations, changes to existing ones, and new program proposals of all kinds require GEC approval before going to higher levels of governance. New guidelines, and changes to existing ones, are brought to GEC for information/discussion only.

New program proposals are approved by the Faculty Councils before being presented here and will proceed to the Academic Policies and Programs Committee (AP&P), often the Planning and Budget Committee (P&B), Academic Board, and then Governing Council for final approval.

Admission and program regulation changes are proposed by graduate units; they must first be approved by Faculty Council before being reviewed for final approval by GEC.

The Dean stressed the importance of scrutiny, especially where approval is final. Members should expect clarity from documents being presented to GEC; it is important for members to question items where documentation or the regulatory environment around a proposal is not clear. It is not helpful to rewrite program decisions made at the Faculty level. Sending proposals back to the Faculty level, however, is a possibility. The Dean asked members to use their own good judgment, and explained that they are not representing a constituency even though they were elected by a constituency.

Jane Alderdice explained the types of documents that come before GEC for approval: policies, new programs, program changes and OCGS briefs. For items requiring approval, there will be a motion cover sheet. Aside from the motion itself, the motion sheet advises of previous governance action and
consultations, including a summary of discussion points that have occurred to date; it also identifies the approval route and the set of documents relevant for that item.

Routing and required approvals for all graduate governance items are found on the SGS website under the Governance and Policy tab, Governance Procedures drop-down. Any change requiring GEC approval, including any time of admission or program requirement change, is considered a “major” change - even if the change itself is considered “minor”.

Ms. Alderdice concluded by noting that more information, including the SGS Staff directory, is available on the SGS website, and that she, Anil Purandaré, and other SGS staff are available to answer questions that arise during the year.

There were no questions either for Ms. Alderdice or the Dean.

3.3 Quality Assurance Update

The Dean related to GEC that the University had been mandated to come up with a quality assurance plan (the University of Toronto Quality Assurance Process - UTQAP); the plan requires approval of the provincial Quality Council (QC), which will fulfill the role previously played by the Ontario Council on Graduate Studies (OCGS). These changes are expected to improve the quality assurance process. The QC begins its work this term. It is reviewing the UTQAP, which should be in effect by January 1, 2011, marking the transition from the old University quality assurance process to the new one; these changes will have a significant impact on the University governance process. Final discussions are underway regarding what will require approval by the QC versus what simply needs to be reported for information.

Under the new governance process SGS will have a consultative, advisory, and review role; SGS will not have a formal approval role in governance regarding programs. SGS will circulate information on the various plans and protocols that outline the new process when they are available.

3.4 Degree Level Expectations

The Dean expressed satisfaction that the QC will focus its activities on programs rather than on degrees; the matter of reviewing degrees has been dropped from the QC agenda.

3.5 Graduate Transcript Option

A numbered decanal memorandum was published September 9, 2010, and sent to graduate chairs and directors (and also available on the SGS website), advising that the new graduate transcript option is now operational. Students will have a choice about whether the transcript that is produced shows the full record at U of T, including undergraduate, or whether it shows only the graduate record.

3.6 Offers of Admission Conditional Upon Satisfying the English Language Facility Requirement

A numbered decanal memorandum was published September 9, 2010, and sent to graduate chairs, directors, coordinators and administrators (and also available on the SGS website), advising that graduate units now have the option in their admission procedures to make conditional offers of admission to students who have yet to satisfy the English language requirement.

3.7 Campus Affiliation

In an effort to streamline the process of student campus affiliation, the Change of Campus Affiliation form has been revised. Previously, the form contained information pertaining to both campus affiliation (which determines incidental fee assessment) and course union fees. However, the dual purpose of the form was confusing. The form now only collects information for the purpose of changing campus
affiliation. Students are automatically affiliated with a campus according to their program of study and campus affiliation is carried forward. The form is therefore to be completed only if a graduate student wishes to change campus affiliation. Students may choose a campus for affiliation for practical reasons, for example, in order to gain access to facilities on the campus where they spend most time.

Course union fees are the purview of the GSU and the GSU has been encouraged to use ROSI campus affiliation data for the purpose of allocating course union fees.

3.8 SGS Orientations
SGS held an orientation for new graduate chairs, directors and coordinators on October 5, 2010. SGS also held a general meeting for graduate administrators on October 6, 2010. Both orientations were well received, and SGS plans to continue them.

4 Report of the Vice-Dean, Programs
Vice-Dean Elizabeth Smyth reported on two projects in progress. The first is setting forth guidelines for the flexible-time PhD option. The second project deals with graduate faculty membership; guidelines and a more user-friendly process, similar to the Final Oral Exam online approval system, are being developed. Members can expect to hear more during the year; Vice-Dean Smyth invited members to direct questions and comments to her.

5 Report of the Vice-Dean, Students
Vice-Dean Berry Smith reported on a numbered decanal memo, dated and distributed October 18, 2010, (and available on the SGS website) regarding best practices concerning procedures for the termination of student registration. Over the past few years, SGS has seen a wide variation in practices in different parts of the University, no doubt due in part to the fact that terminations occur infrequently. The available advice seemed inadequate, so SGS has developed a revised website with clearer information. One point to be noted is that the process requires a letter to the Vice-Dean, Students; the revised website offers template letters. Feedback on the template letters is welcome.

Another numbered decanal memo published during summer (and available on the SGS website) outlined the replacement of the old Doctoral Completion Grant (DCG) with the new Doctoral Completion Award (DCA). The DCG was available upon application; the DCA is competitive. SGS recently received a student inquiry about how students are notified of new awards, policies, guidelines, etc. In addition to decanal memos, memos are also archived on the website from various SGS offices such as Student Services. Communications to students are different. In the past, SGS relied on departments to forward communication to students. SGS has now moved from individual announcements via e-mail to SGS E-News as the communication vehicle. It is not yet archived, but SGS is looking at doing so in the future.

A member asked whether the DCA is open to students who are still fully funded. The Vice-Dean responded that students had brought to the attention of SGS that there were some students still in the funded cohort receiving DCG, which was not the intent of the program. In this, the final year of the DCG program, SGS has restricted the DCG to those who are beyond the funded cohort only. The same restriction applies to the DCA. This year there is a committee reviewing DCG applications. It is not yet known how many DGAs will be awarded since the number will be based on the balance of funding left after the DCG students receive their funding this year. SGS will be looking at the general environment in which students are receiving funding. SGS is asking graduate units to rank their students who are applying for the DCA; the objective is to fund students of the DCA program who, usually through no fault of their own, must spend more time in the program than provided for by their funding package.
Another member asked whether there would be two application cycles per year for the DCA. Heather Kelly, SGS Director of Student Services replied that this was an unusual year since the award was being adjudicated in the fall. The plan will be fully implemented next year, and will see the award adjudicated once, in the spring, in order to catch students who will be registered in the fall. Vice-Dean Smith added that this was another change, as the DCG had allowed three windows of opportunity throughout the year in which to apply.

A member asked whether the DCA will be purely merit-based or whether there was a percentage of the awards set aside for international students. Vice-Dean Smith responded that there was no set percentage, but it was expected that meritorious international students will be able to make a good case in their applications.

Another member asked whether SGS E-News is sent to graduate units as well as students. Dr. Kelly replied that all graduate Chairs, Vice-Deans, Coordinators and administrators should be receiving a copy; if there are any oversights, graduate units should contact Yi Yang at SGS to be added to the distribution list. Vice-Dean Smith added that he hoped there would be a link to archived E-News issues on the SGS website soon.

In response to a question from a member who asked how much funding through the DCA was available for students leaving the funded cohort, what the demand was, and what would happen to students who did not receive funding, Vice-Dean Smith reported that the total funding pool is $4,000,000. He is uncertain if this amount will be the same in the future, as this is the amount that was allocated to the number of people who applied for the DCG and represents a snapshot in time. The average award is expected to be approximately $20,000; assuming a $4,000,000 pool, this works out to approximately 200 awards. The member asked how much need exists for the award; the Vice-Dean replied that the exact need was unknown but was certainly more than could be met. It was expected that better information on this would be available next year. The member explained that his graduate unit funds students in the year after they leave the funded cohort; the graduate unit sees it as protecting the investment already made in its students and their work. The Vice-Dean responded that no doubt many disciplines could justify funding students for an extra year, and that the adjudication committee deciding which students were to receive the awards faced an interesting and challenging task.

A member asked whether it would not be better to reduce the award amount, thus increasing the number of awards available. The Dean replied that this had been discussed last year. This funding is ultimately controlled by, and is a gift from, the Provost. It was the Provost’s intention that the funding be used in such a way that each award would be sufficient to allow a student to finish their program where academic need was demonstrated. The DCA had been designed to reflect that intention. There had been dissatisfaction expressed from students with the previous DCG system, which consisted of more numerous but smaller awards—awards so small they did not provide sufficient funds to live on. No matter how the number and size of awards is balanced, there will be winners and losers; no choice that would satisfy everyone is possible. The Dean added that the DCA can be seen as an experiment and may be modified in the future.

6  SGS Constitution and By-law Revision

6a)  SGS Constitution

The Dean reminded members that GEC had been informed many times last year that the SGS Constitution was being amended. He was happy to inform members that the amendments were now before them for consideration. The cover sheet provided describes the prior discussion for this item; the proposal has had much of feedback and considerable revision. If given GEC approval, it will be sent to
the Academic Board for approval, and to the Executive Committee or to Governing Council for final approval. This is expected to start a series of related constitutional changes in the Faculties.

There are many amendments arising from changes that have occurred over the years: changes to Centres and Institutes, governance changes, and housekeeping changes. The desire was to be as thorough as possible. The amendments clarify many issues and provide a lot of clean up. The result of all this work is a more concise and reader-friendly document.

The Dean called on Vice-Dean Smith to present the motion on the Constitution.

**MOTION (duly moved and seconded)**

**THAT** Graduate Education Council approve the proposal of the School of Graduate Studies to recommend to Academic Board that the *Constitution of the School of Graduate Studies* be amended as attached, effective January 1, 2011.

A member asked what the rationale was for amending clauses 7.2 and 7.4. The proposed amendments to these clauses transfer authority from GEC to the Dean of SGS for determining the number of divisions of SGS and for placing graduate units within SGS divisions. The Dean answered that changes to SGS divisions and the location of graduate units within them is seen as an administrative matter rather than something tightly coupled with academic activity. Such changes would be undertaken only with consultation, particularly in the case of any transfers of graduate units from one division to another; it was noted that such changes normally arise from a graduate unit’s request. Vice-Dean Smith added that the SGS divisions held greater significance prior to the last SGS Constitutional review and amendment in 2006. Prior to 2006 each division was led by one of four Associate Deans and each division was governed by an Executive Committee – this is no longer the case.

A member asked what the role of SGS would be in the development and review of graduate units, noting a change to clause (old) 4.3.d. The Dean explained that SGS ceased involvement in approving new units in 2005. SGS will remain involved in the development of new graduate programs, but in a review capacity rather than in a formal approval role.

In response to a question, the Dean clarified that clause 8.1, which refers to a graduate unit’s responsibility to “to maintain and improve its standards of instruction, research and examination”, refers to graduate activities only.

Seeing no further discussion, the Dean called the question.

The motion was **CARRIED**.

6b) **SGS By-laws**

The By-law revisions have been discussed within SGS, and have been reviewed by the Office of the Governing Council. GEC approval is final for By-laws. The Dean called on Vice-Dean Smith to present the motion.

**MOTION (duly moved and seconded)**

**THAT** Graduate Education Council approve the proposal of the School of Graduate Studies to amend and in some cases repeal the By-laws of the School of Graduate Studies and Graduate Education Council as follows:

- Amend the *By-laws of SGS Graduate Education Council (General)*.
- Amend By-law #1, *Rules of the Graduate Education Council*, as attached.
• Repeal By-law #2, Committee on Centre and Institute Programs (CCIP).
• Renumber By-law #5, Admissions and Programs Committee (A&P), to By-law #2 and amend it as attached.
• Repeal By-law #3, Standing Committee on Program Matters (CPM).
• Renumber By-law #6, Graduate Academic Appeals Board (GAAB), to By-law #3 and amend it as attached.
• Repeal By-law #4, Standing Committee on Student Matters (CSM).
• These changes are effective January 1, 2011.

A member asked for an explanation for the proposed repeal of certain by-laws. The Dean explained that By-law #2 (CCIP) was being repealed since SGS no longer has any Centres or Institutes. The repeal of By-laws #3 (CPM) and #4 (CSM) reflects administrative streamlining. These two committees are, in fact, advisory committees to the two Vice-Deans. They do not have legislative functions. As such, unlike the A&P committee which must report to Council since it is doing work delegated by Council, the advisory committees do not need to be standing committees of GEC. Both Vice-Deans have found them very useful and do not anticipate any changes in future. But if there were changes needed, the Vice-Deans would not need to bring them to GEC for approval. Vice-Dean Smith added that the CSM, which he has chaired for four years, has evolved into a very useful committee, with excellent discussions and good attendance; the intent is to keep the committee going. Vice-Dean Smyth also added that as their portfolios evolve, the Vice-Deans have identified areas where student and program matters intersect. The CPM, is not currently used as another level of scrutiny of curriculum proposals, but is a forum for discussions on substantive program matters.

A typographical error was noted by the member in the By-laws of SGS Graduate Education Council (General), clause e) under the heading “Standing Committees of Council—General”: “of the” should read, “The”. The Dean thanked the member for the correction.

Seeing no further discussion, the Dean called the question. The motion was CARRIED.

6.1 Admissions & Programs (A&P) Committee: 2010-11 Membership

A&P is a standing committee of Graduate Education Council. The Committee has the power to waive, or modify in individual students cases, the application of an SGS regulation concerning admissions, registration, or enrolment. It also considers petitions from graduate units on exemption from cases of non-standard admissions, leaves of absence, course extension deadlines, grading, program completion time limits, and posthumous degrees. The Committee is chaired by the Vice-Dean, Students, who is an ex officio member. The other members of A&P consists of the Vice-Dean, Programs (ex officio), one graduate faculty representative from each SGS division, one graduate student and one alternate, the Dean of SGS (ex officio), and the Director of SGS Student Services (ex officio).

The Dean called on Vice-Dean Berry Smith to present the motion.

MOTION (duly moved and seconded)

THAT Graduate Education Council approve the following appointments of divisional members to the Admissions and Programs Committee:

Division I: Professor Pascal Michelucci, Department of French Language and Literature (three year term effective Sept 1, 2010 to Aug. 31, 2013)
Division II: Professor Grace Skogstad, Department of Political Science (three year term effective Sept. 1, 2010 to Aug. 31, 2013)
Division III: Professor Markus Bussmann, Department of Mechanical and Industrial Engineering (three year term effective Sept. 1, 2010 to Aug. 31, 2013)
Division IV: Professor Linda Wilson-Pauwels, Institute of Medical Science (renewed for a one year term effective Sept. 1, 2010 to Aug. 31, 2011)

No discussion arose; the Dean therefore called the question.

The motion was CARRIED.

7 Admission & Program Requirement Changes: Information, PhD
The proposal was approved by the Faculty of Information Council on September 17, 2010. The Dean called on Vice-Dean Smyth to present the motions; the motions were considered separately.

MOTION (duly moved and seconded)
THAT Graduate Education Council approve the proposal of the Faculty of Information to change the admission requirements of the PhD in the Information program as follows:
• Remove the requirement of a bachelor’s degree or equivalent.
• Increase the admission requirements from an average of at least B+ to an average of at least A- in a master’s degree or equivalent.
• Remove the admission requirement that previously required the major subject for doctoral study to be supported by relevant courses taken at the master’s level including appropriate courses in research methods and statistics.
• Add a statement of research interest as a requirement.
• These changes are effective September 2011.

Professor Lynne Howarth was present to speak to the item; she related that the Faculty had engaged in broad consultation.
A member asked how consulted students had responded to the proposal, given the doubling of FCE requirements—while much of the increase seems to formalize practices in place, there still appears to be about 1.0 FCE above previous practice. Professor Howarth replied that students had made it known that they themselves had initiated taking courses outside of their requirements in order to be able to build a portfolio of scholarship. Students were welcoming of the proposed change.
Another member asked whether there would be an increase in tuition fees. The Dean explained that students paid a flat program fee and that increasing the FCE requirement would not therefore result in a tuition fee increase.
A member requested clarification on the issue of removing the requirement of a bachelor’s degree. Professor Howarth explained that the required degree is a master’s degree. Ms. Alderdice added that the change corrected an anomaly, as what is usually required is the degree that is the basis of admission; in this case, the master’s degree.
Seeing no further discussion, the Dean called the question.

The motion was CARRIED.
MOTION (duly moved and seconded)
THAT Graduate Education Council approve the proposal of the Faculty of Information to change the program requirements of the PhD in the Information program as follows:


• Replace INF 3004Y: Advanced Topics in Information Studies with INF 3006Y: Thesis Proposal Preparation, as a required course.

• Add courses INF 3007Y: Colloquium I and INF 3008Y: Colloquium II as required courses. This replaces the currently unweighted requirement to participate in the Colloquium Series of the Faculty and other research events.

• Replace the requirement of 1.0 FCE in a minor subject with a requirement to complete 1.5 FCE elective courses.

• Replace the requirement of a Determination of Research Readiness (written and oral) with the requirement to pass a qualifying exam.

• Add a requirement to present and defend a thesis research proposal.

• Remove reading knowledge of a language other than English as a possible requirement.

• As a result of the above changes, overall requirements increase from 3.0 FCE to 6.0 FCE.

• These changes are effective September 2011.

In response to a request for clarification about removing the language requirement, Professor Howarth explained that this formalized current practice in the program. If a student needs to study another language for their program, this is something they may pursue, and there were cases where students in the program had done so, but the Faculty does not want to make this a formal requirement. She added that she was not aware of language requirements in comparable programs in Canada.

Seeing no further discussion, the Dean called the question.

The motion was CARRIED.

8 Program Requirement Changes: Management, MBA (EMBA option)
The proposal was approved by the Rotman School of Management Faculty Council on February 10, 2010. All affected students were informed of and agreed to the proposed retroactive change.

The Dean called on Vice-Dean Smyth to present the motion.

MOTION (duly moved and seconded)
THAT Graduate Education Council approve the proposal of the Rotman School of Management to change the program requirements of the MBA (Executive MBA option) in the Management program by replacing MGT 5010H, Industry Analysis Project, with MGT 5291, Foundations of Integrative Thinking, as a required course, effective September 2010.

Ms. Anna Hoy (General Manager of the EMBA) was present to speak to the item. She explained that participants in the program are working under the assumption that the proposed change will take
place. They were given this information at the beginning of the year. The Dean noted that while there was some slippage in the timing of the proposal, students had been properly informed.

A member noted that the Calendar entry attached to the proposal showed a change in program length from 18 to 13 months. Ms. Hoy explained that this was correcting a typographical error in the Calendar and that the program is, and always had been, 13 months in length.

Seeing no further discussion, the Dean called the question.

The motion was CARRIED.

9 Other Business
There was no other business.

10 For Information:

10.1 GEC Fall 2010 By-election Report
The report was distributed on yellow paper at the start of the meeting.

10.2 Graduate Academic Appeals Board (GAAB) 2009-10 Annual Report
The report was distributed with the agenda. A member noted that the report said that there had been seven doctoral cases, but only six were listed in the chart. Ms. Alderdice will investigate and make any corrections necessary.

10.3 GEC 2009-10 Annual Report on Approvals under Delegated Authority
The report was distributed with the agenda.

10.4 GEC Membership List (Revised) and Meeting Schedule
The revised membership list was distributed on yellow paper at the start of the meeting; the meeting schedule was distributed with the agenda.

11 Adjournment
The meeting adjourned at 4:25 p.m.

[ORIGINAL SIGNED] _____________________
Jane Alderdice, Secretary

November 8, 2010 ____
Date
Appendix to the Minutes

UNIVERSITY OF TORONTO
Record of Attendance
GRADUATE EDUCATION COUNCIL
October 19, 2010

Present (Voting & Non-voting Members)

Corman, Brian (Chair)
Baker, Robert
Bayat Movahed, Hanif
Bina, Bardia
Campbell, Elizabeth
Campbell, Malcolm
Capotorto, Arianna
Crapo, Adleen
Damaren, Chris
De Nil, Luc
Desai, Aatmi
Gaitana, Gianina
Joseph, Jemy
Julian, Stephen
Keith, Alison
Lee, Jack
Litvack, Andrea
MacKay, Gillian
Martini, Pauline
Mount, Howard
O’Hogan, Cillian
Papangelakis, Vladimiros
Piccardo, Enrica
Smith, Berry
Smyth, Elizabeth
St-Amour, Michelle
Stiles, David
Tsao, Eugenia
Williams, Charmaine
Williams, David
Yip, Christopher

In Attendance (Guests & SGS Staff)

Godwin, Michael
Howarth, Lynne
Hoy, Anna
Hurlihey, Victoria
Kelly, Heather
Makarovsky, Vesna
Rutchinski, Steve
Yee-Sloan, Lily

Absent

Pirraglia, Daniela
Tannock, Rosemary

Alderdice, Jane (Secretary to Council)
Purandarê, Anil (Assistant to Secretary)
MOTION
Graduate Education Council
Tuesday, November 16, 2010

ITEM 6

Proposal for the following **new Collaborative Program:**
**Resuscitation Sciences, master’s and doctoral levels**
Lead Faculty: Faculty of Medicine

**MOTION**

THAT Graduate Education Council approve the proposal of the Faculty of Medicine for a new graduate Collaborative Master’s and Doctoral Program in Resuscitation Sciences, to be housed within SGS Division IV (Life Sciences) for administrative purposes, and with the Faculty of Medicine as the program’s lead Faculty, effective September 2011.

See attached documents:
- Governance Form E
- U of T Submission document
- OCGS Brief, Vol. I (includes the Calendar entry as Appendix III)

Prior Approvals and Discussion

The proposal was approved by Faculty of Medicine Graduate Curriculum Committee (GCC) on October 14, 2010. At the GCC meeting the committee discussed what the options were for the collaborative program after the five year CHIR/National Institutes of Health (US) grant expires. The program director is currently investigating other sources of income for the program which may include renewal of the current grant. It was pointed out that resuscitation research is a priority for CIHR and the Heart and Stroke Foundation of Canada so funding may come from either of those sources.

Further Governance

GEC approval is the final University of Toronto approval. It will be sent for information to the Academic Policy and Programs Committee of Academic Board in SGS’s annual report. The proposal will be submitted to OCGS for approval.
Governance Form E:  
New Program

Name of Proposed Graduate Program:
Collaborative Master's and Doctoral Program in Resuscitation Sciences

Faculty Affiliation:
Medicine (lead faculty)

Name of Graduate Unit involved, if any:
N/A (Collaborative Program)

Brief Summary of Proposal:
The goal of the Collaborative Program in Resuscitation Sciences is to train scientists pursuing research in the optimal care of the acutely ill and injured patient and, ultimately, to create leaders in the discipline who will supervise others providing this level of scientific inquiry. The program will appeal to students from a wide variety of backgrounds with an interest in any aspect of resuscitation science.

Resuscitation science includes a number of medical areas such as trauma, critical care, emergency medicine, neurotrauma, anaesthesia, shock, sepsis, acute coronary syndrome, paediatric care, cardiovascular, peripheral vascular and rehabilitation medicine. Many non medicine disciplines such as engineering, basic science, public health among others as well as allied health professions such as nursing, pharmacy, and paramedicine will find synergies in the resuscitation science program. Research programs can use methodologies ranging from molecular medicine and genomics, through clinical trials and outcomes, to engineering, health administration, and health prevention strategies. Resultant advances in knowledge will ultimately be applied to the clinical setting.

The following programs have agreed to participate in the Collaborative Program in Resuscitation Science:

- Biomedical Engineering Program, MASc, PhD, The Institute of Biomaterials and Biomedical Engineering
- Clinical Engineering Program, MHS, The Institute of Biomaterials and Biomedical Engineering
- Community Health Program, MScCH, Dalla Lana School of Public Health
- Health Policy, Management and Evaluation Program, MSc, PhD, Department of Health Policy, Management and Evaluation
- Immunology Program, MSc, PhD, Department of Immunology
- Laboratory Medicine and Pathology Program, MSc, PhD, Department of Laboratory Medicine and Pathobiology
- Mechanical and Industrial Engineering Program, MASc, MEng, PhD, Department of Mechanical and Industrial Engineering
- Medical Science Program, MSc, PhD, Institute of Medical Science
- Nursing Science, MN, PhD, The Lawrence S. Bloomberg Faculty of Nursing
- Pharmaceutical Sciences Program, MSc, PhD, The Leslie Dan Faculty of Pharmacy
- Pharmacology Program, MSc, PhD, The Department of Pharmacology and Toxicology
- Physiology Program, MSc, PhD, Department of Physiology
- Public Health Sciences Program, MPH, MSc, PhD Dalla Lana School of Public Health

Prior Approvals/Actions and Comments:

Spring 2009 - Rescu Investigators (Andrew Baker, Paul Dorian, Laurie Morrison, Avery Nathans, Don Redelmeier and Ori Rotstein) submit a grant application to NIH/CIHR which includes a proposal to develop a training program in resuscitation sciences. Rescu is a research program of the Keenan Research Centre, Li Ka Shing Knowledge Institute, St. Michael's Hospital. The collaborative program's administrative office will be housed at Rescu.
November 2009 - Rescu received notification that they had been granted the NIH/CIHR grant to develop the training program with funding to flow January 2011 for 5 years. The investigators begin meeting to identify program purposes and structure and decide to work with the Faculty of Medicine to establish a collaborative program for graduate students at the University of Toronto

January 2010 - Ori Rotstein, as Director of IMS, was fully in favour of the project and in January of 2010, Laurie Morrison and Ori Rotstein consulted with the Faculty of Medicine’s office of Vice Dean, Graduate Affairs to discern the Faculty’s interest and seek advice on procedure. Andrea Sass-Kortsak and Jennifer Francisco and Laurie Morrison met and reviewed the preliminary draft of the program proposal and made changes and decided on course of action and best process balancing success with efficiency.

March 2010 – Proposal reviewed by IMS Curriculum Committee (March 5) Questions regarding the core course were addressed. The Executive Committee approved the program and agreed to support the program. (March 26).

April 2010 - Administrative staff appointment associated with the program is conducted and a Program Coordinator is hired.

May 2010 - Laurie Morrison and Ori Rotstein accompanied by the Vice Dean, Graduate Affairs, Faculty of Medicine met with representatives from the the School of Graduate Studies Vice Provost, Academic Programs Office to consult with them on procedure and answer specific questions regarding program content. SGS gave the ‘green light’ to proceed with program development.

Summer 2010 - Meetings with all potential participating programs. Program chairs were provided with executive summary information and the meetings were an opportunity to receive feedback from the potential participants on proposed content and structure of the program. Minor revisions to the program plan were made in response and all eleven programs approached agreed to participate. See appendix 1 of the University of Toronto Submission document for a list of these meetings.

Summer 2010 – Informal interviews were conducted with both past, present, and potential future trainees in the area of resuscitation science to gather information on their interest in the proposed program. See appendix 2 of the University of Toronto Submission document for a list of these trainees.

Sept – Nov 2010 – Meet with IMS Curriculum Committee (October); IMS Executive Committee (October); Faculty of Medicine Graduate Curriculum Committee (October) and SGS Graduate Educational Council (November)

Proposed Effective Date: September 2011

Chair/Director Name and Contact Information:
Dr. Laurie J. Morrison
Rescu, St Michaels Hospital
30 Bond St.
Toronto ON M5B 1W8

Faculty Dean Name and Contact Information:
Andrea Sass-Kortsak
Vice Dean, Office of Graduate Affairs
Faculty of Medicine

Date: 28 September, 2010
UNIVERSITY OF TORONTO

Proposal for

Collaborative Master’s and Doctoral Program
in Resuscitation Sciences

Faculty of Medicine (lead faculty)

September, 2010
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1 Executive Summary

Despite the large number of patients who are resuscitated from a life threatening illness or injury every day out-of-hospital and in-hospital and the associated morbidity and mortality, there is very little research in this area. Major funding agencies such as the Heart and Stroke Foundation and CIHR have identified resuscitation as a priority area of research. Rescu, a research program of the Keenan Research Centre, Li Ka Shing Knowledge Institute, St. Michael’s Hospital, is one of only 2 research programs in Canada focused on resuscitation; and has successfully attracted key funding from NIH/CIHR and is a key participant in the international Resuscitation Outcomes Consortium (ROC). Rescu has successfully attracted experienced investigators from a variety of disciplines and recognizes the critical need to build research capacity in this multidisciplinary field. There are currently no existing graduate training programs that focus on resuscitation in North America.

The goal of the Collaborative Program in Resuscitation Sciences is to train scientists pursuing research in the optimal care of the acutely ill and injured patient and, ultimately, to create leaders in the discipline who will supervise others providing this level of scientific inquiry. The program will appeal to graduate students from a wide variety of backgrounds with an interest in any aspect of resuscitation science. The following programs will participate:

- Biomedical Engineering Program, PhD, The Institute of Biomaterials and Biomedical Engineering (IBBME)
- Clinical Engineering Program, MHSc, The Institute of Biomaterials and Biomedical Engineering (IBBME)
- Community Health Program, MScCH, Dalla Lana School of Public Health (PHSCI)
- Health Policy, Management and Evaluation Program, MSc, PhD, Department of Health Policy, Management and Evaluation (HPME)
- Immunology Program, MSc, PhD, Department of Immunology (IMM)
- Laboratory Medicine and Pathology Program, MSc, PhD, Department of Laboratory Medicine and Pathobiology (LMP)
- Mechanical and Industrial Engineering Program, MASc, MEng, PhD, Department of Mechanical and Industrial Engineering (MIE)
- Medical Science Program, MSc, PhD, Institute of Medical Science (IMS)
- Nursing Science, MN, PhD, The Lawrence S. Bloomberg Faculty of Nursing (NURS)
- Pharmaceutical Sciences Program, MSc, PhD, The Leslie Dan Faculty of Pharmacy. (PHM)
- Pharmacology Program, MSc, PhD, The Department of Pharmacology and Toxicology (PCL)
- Physiology Program, MSc, PhD, Department of Physiology (PSL)
- Public Health Sciences Program, MPH, MSc, PhD, Dalla Lana School of Public Health (PHSCI)

The program is proposed to begin in September 2011 and will attract approximately 10-20 students in the first year, increasing steadily to a projected steady state of approximately 75 new and registered students by year 5. Students are expected from all participating units, although it is also anticipated that not all units will necessarily have students in the program every year, and some units do not anticipate any students enrolling until the program has established itself and been promoted to potential students.
By undertaking a specialized program of study, including a core course in resuscitation science research, and actively participating in specialized seminars, students will develop expertise in resuscitation science. In addition, each trainee will receive research supervision by an established investigator and additional support from clinical mentors and young investigators affiliated with Rescu. A program committee will track individual progress towards thesis completion, course completion, and involvement in other career enhancing activities.

Rescu has received initial funding to support this program through a 5-year CIHR/NID (US) grant. All administrative needs, including space, will be borne by Rescu. Future funding will be sought through funding agencies and contributions by participating graduate units.

2 Academic

2.1 Description and rationale for the proposal

2.1.1 Description of proposed program

The goal of the Collaborative Program is to train academic specialists in optimal care of the acutely ill and injured and, ultimately, to create leaders in the discipline who will supervise others providing this care, and to conduct research focused on improving treatment.

The Collaborative Program in Resuscitation Science will be a “bench to bedside to curbside” training program and will focus on the development and delivery of time-sensitive interventions directly affecting patients in the prehospital and in-hospital settings. This highly translational program will have impact on identification of at-risk individuals, targeted resuscitation strategies, and improvement of systems, care, and therapies that can be deployed in prehospital and in-hospital resuscitation. This program will foster cross-disciplinary interactions and strengthen research and teaching in resuscitation science.

By undertaking a specialized program of study, including a core course in resuscitation science research and actively participating in specialized seminars, students will truly become specialists in the field. In addition, they will be mentored not only by their research supervisor, but also by clinical mentors who will provide additional advice, advocacy, and encouragement that specifically pertains to short and long term career planning, time management, professional and personal balance, promotional issues, etc. The Program Committee will convene regularly to track progress toward thesis completion, course completion, publications, presentations, networking opportunities, integrate research and clinical enrichment activities, and identify resources and supplemental training required.

2.1.2 Rationale for proposal

The critical prerequisite for becoming an independent and innovative thinker in any field is complete familiarity and mastery of the discipline. This requires immersion in the field for a concentrated period of time, with ample opportunities to exchange knowledge and skills with health professionals (physicians, paramedics, nurses, pharmacists, etc). Resuscitation science includes a number of medical areas such as trauma, critical care, emergency medicine, neurotrauma, anaesthesia, shock, sepsis, acute coronary syndrome, cardiovascular, peripheral vascular, and rehabilitation medicine. Many non-medicine disciplines such as engineering, basic science, public health, as well as allied health professions such as nursing, pharmacy,
and paramedicine, will find synergies in the resuscitation science program. Research programs in the field may utilize methodologies ranging from molecular medicine and genomics, through clinical trials and outcomes, to health administration and health prevention strategies.

Currently in Canada there are only 2 dedicated programs of research in resuscitation: one at the University of Ottawa in partnership with the University of British Columbia, and one at (Rescu) at the University of Toronto. Both in-hospital and out-of-hospital resuscitation research tends to be interdisciplinary, including areas such as critical care, emergency medicine and trauma. There is a compelling need to develop research capacity in this area across complementary disciplines in medicine, science and related disciplines, particularly with respect to advanced skills in research methodology and study design.

There are no other existing programs of study that focus on this important area of research. While there are three sites in the US which train scientists in resuscitation research, they are not linked to graduate studies and more commonly train physicians in a fellowship year.

Research in resuscitation has been named a priority by a number of key funding agencies, including CIHR, The Heart and Stroke Foundation of Canada, the American Heart Association, and the Laerdal Foundation in Norway. When the Heart and Stroke Foundation of Canada recently called for proposals for operating grants for research in this area, they received only 9 letters of intent. Of those 9 LOIs, only 3 went forward as full proposals. So few qualified applications indicates a severe shortage of research capacity in the area. While a number of agencies have actively prioritized research in resuscitation sciences, Canada currently lacks research capacity to meet this identified need. This program aims to address this need.

2.2 Pedagogical and other academic issues, including expected benefits of the proposed program

Instructors for this program will be drawn from a variety of backgrounds and will be experts in the field. The core course will be coordinated by the Program Director; but the presentations and lectures will be delivered by top experts in their particular field creating a truly interdisciplinary learning experience.

Academic objectives of the program include:
- To train scholars whose primary goal is to contribute original research in resuscitation sciences
- To prepare students who will specialize in resuscitation sciences, with an emphasis on innovative interdisciplinary research and scholarship;
- To provide students interested in resuscitation sciences with a common learning experience, and a network of mentors and peers;
- To develop and enrich educational and research opportunities in bioethics for students within the disciplines represented by the participating graduate units;
- To provide experience in multidisciplinary, interdisciplinary and inter-professional education and research.

Graduates of this program will be:
- Better positioned to be considered for personal support awards and peer-reviewed grant funding; thus enhancing research in the field;
- Well-trained for faculty appointments or further graduate study to continue building research
capacity in this field;
- Important contributors to public health agencies in Canada concerned with improving health education and emergency health services;
- Important partners for EMS and Fire Services in pursuit of trials in out-of-hospital settings;
- Valuable collaborators and potential employees for the biomedical and pharmaceutical industries working on timely interventions and life-saving devices.

2.3 Projected student demand

In the past five years the core research group of investigators at the University of Toronto collaborating in this field (Andrew Baker, Paul Dorian, Laurie Morrison, Avery Nathans, Arthur Slutsky, Don Redelmeir and Ori Rotstein) have mentored a number of students and young investigators in the field of resuscitation sciences (see appendix 2).

Demand for this collaborative program was firstly assessed from noting the challenges these students faced in acquiring a fundamental understanding of this field in the normal course of their studies. Secondly, informal survey interviews with some of these students and with additional potential students were conducted (see appendix 3). Additionally, conversations were held with representatives of each of the collaborating units and departments to assess probable student demand (see appendix 4).

Finally, Dr. Morrison and Dr. Rotstein have both participated in various international forums, most notably the ROC (Resuscitation Outcomes Consortium) and the International Liaison Committee on Resuscitation, through which they have gleaned a good sense of the likely local and international demand for this type of program. Our discussions with collaborating units and departments have resulted in the following projections of student demand:

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<tr>
<th>Participating Program</th>
<th>Projected NEW REGISTRATIONS in Participating Programs for Seven Years</th>
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<td>Community Health</td>
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<tr>
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### Master’s Students

Projected NEW REGISTRATIONS in Participating Programs for Seven Years

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1 A number of participating departments anticipate student enrolment in the program beginning in the 2012-13 academic year. And a number of participating departments estimate approximately one interested student every other year. The program expects an average intake of 15-18 master’s students a year by year 5.

### Doctoral Students

Projected NEW REGISTRATIONS in Participating Programs for Seven Years

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A number of participating departments anticipate student enrollment in the program beginning in the 2012-13 academic year. A number of participating departments estimate approximately one interested student every other year. The program expects an intake of 15 doctoral students a year by 2017-18.

2.4 Impact on the Department’s and Division’s program of study, including impact on other divisions

The Collaborative Program in Resuscitation Sciences will be the only graduate level program in the world offering a specialized, multidisciplinary, research-oriented training experience in resuscitation sciences. The collaborative program will enhance the degree programs of the participating departments involved by offering an exceptionally unique learning opportunity which could, in time, result in increased international acclaim and ability to attract students. The collaborative program’s goals align with those outlined in the Faculty of Medicine’s 2007 Strategic Plan and the most recent Dean’s Report, namely to strengthen the Faculty’s presence in its community, including the affiliated hospitals, to promote leadership among its students, and to continue its commitment to innovation and excellence and multi-professional and interdisciplinary collaboration among its academic communities.

2.5 Evidence of consultation with other affected divisions

Investigators collaborating on research projects at Rescu over the past years have mentored a number of students from a variety of faculties and programs. This experience led them to explore the notion of establishing a graduate learning experience that would develop and build research capacity that is sorely needed in this important field. In 2009, a funding proposal developed by primary investigators, Andrew Baker, Paul Dorian, Laurie Morrison, Avery Nathans, Arthur Slutsky, Don Redelmeir and Ori Rotstein, was accepted by NIH/CIHR.

Ori Rotstein, as Director of IMS, was fully in favour of the project and in January of 2010, Laurie Morrison and Ori Rotstein consulted with the Faculty of Medicine’s office of Vice Dean, Graduate Affairs to discern the Faculty’s interest and seek advice on procedure.

In July and August of 2010 consultation meetings were held with each participating unit. These meetings were an opportunity for departments to provide feedback and suggestions as to the proposed program (see appendix 4).

Following these face-to-face meetings, a final draft of the program proposal was distributed to each department for their input, and their signatures were then acquired on a Memorandum of Agreement.

2.6 Appropriateness of the name and designation of the new program

The name “Collaborative Program in Resuscitation Sciences” is a concise reflection of the program offerings in terms of courses, faculty expertise, and program-related activities.
2.7 Program description and requirements, course titles/numbers, and faculty members

2.7.1 Program description and requirements

Admission Requirements

Master’s level
Applicants to the Collaborative Program in Resuscitation Sciences must apply to and be accepted in a graduate degree program in one of the participating graduate units.

Applicants for the Collaborative Program must forward the following to the Program Committee:

- a resume or curriculum vitae
- a personal statement explaining how their program of study and specific research interests relate to resuscitation science
- a letter of recommendation from a faculty member, usually the person who would be the thesis supervisor in a thesis-based graduate program, commenting on the student’s academic abilities, and likelihood for research success in the field of resuscitation sciences.

Doctoral level
Doctoral level students must meet the same admission criteria as Master’s-level students. If Master’s students continue on to a Doctoral degree after completing the degree they must make separate application to the doctoral degree program and to the collaborative program.

Program Requirements

Master’s program requirements:
All master’s students in the collaborative program will:
- take the .5 FCE core course – Foundations in Resuscitation Science Research MSC4001H
- attend at least 75% of the Resuscitation Sciences Graduate Seminar Series SRM3333H over two consecutive sessions
- complete a thesis, comprehensive paper or practicum (whichever is included in their program of study) in the area of resuscitation sciences under the supervision of a faculty member affiliated with the program.
- students must present their research at the annual CPRS Scientific Meeting at least once; and attend the annual Scientific Meeting each year of their enrolment in the program.

Doctoral program requirements:
All doctoral students in the collaborative program will:
- take the .5 FCE core course – Foundations in Resuscitation Science Research MSC4001H (doctoral students who have already taken this course as part of their master’s program will be exempted)
- take Advanced Seminar in Resuscitation Science Research, MSC4002H (.5 FCE)
- complete a thesis in the area of resuscitation sciences, under the supervision of a faculty member affiliated with the program.
- attend at least 75% of the Resuscitation Sciences Graduate Seminar Series SRD4444H over two consecutive years.
- students must present their research at the annual CPRS Scientific Meeting at least twice; and attend the annual Scientific Meeting each year of their enrollment in the program.

**Completion of program requirements**
All students enrolled in the collaborative program must complete the requirements of the collaborative program, in addition to those requirements for the degree program in their home graduate unit. The collaborative program Director is responsible for certifying the completion of the collaborative program requirements. The home graduate unit is solely responsible for the approval of the student’s home degree requirements.

### 2.7.2 Course titles/numbers

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<tr>
<th>Course Number</th>
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<tbody>
<tr>
<td>MSC 400IH</td>
<td>Foundations in Resuscitation Science Research</td>
</tr>
<tr>
<td><strong>Synopsis:</strong></td>
<td>This 0.5 credit course is aimed at enhanced understanding of the breadth of research in resuscitation science. The syllabus will ensure that students with disparate fields of research enquiry will assemble to discuss common areas of research interest, thereby further reinforcing a spirit of interdisciplinary research. Topics include bioethical issues particular to resuscitation research; health services research with high risk groups; outcomes research in critical illness; and knowledge translation.</td>
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<td></td>
<td><em>Doctoral students who completed MRS 3001 as part of a master’s program will not be required to re-take the course.</em></td>
</tr>
<tr>
<td>MSC4002H</td>
<td>Advanced Seminar in Resuscitation Science Research</td>
</tr>
<tr>
<td><strong>Synopsis:</strong></td>
<td>This 0.5 credit CR/NCR seminar series (A type 2 graduate seminar series) is for doctoral students who have completed their program coursework and who are in the later stages of their doctoral theses. Students are expected to have their own data to work with, ideally from their own thesis projects, or from other or past research. The seminar is a forum for presentation and discussion of thesis work, and for deeper exploration of methodological, theoretical and professional development issues. Topics include publication and grant writing, policy &amp; evidence issues, applied research/uses. Designed to counter the isolation of late-stage thesis work, this seminar will assist students in establishing contact with like-minded colleagues, set the stage for establishing on-going collaborative work groups that continue after completion of the course, facilitate the timely completion of projects and prepare students about to enter academic and other fields. All students will be required to present their research projects. Students will be evaluated on this presentation as well as attendance and participation in class.</td>
</tr>
<tr>
<td>SRM3333H and SRD4444H</td>
<td>Resuscitation Sciences Graduate Seminar Series</td>
</tr>
</tbody>
</table>
Synopsis: This CR/NCR seminar series, requiring attendance only over 2 consecutive sessions, will provide all students in the program an opportunity to meet, network, and hear from expert researchers in the field of resuscitation sciences. Local and international investigators will share current research projects and experiences.

2.7.3 Faculty members

See Appendix 1.

3 Planning and Budget

3.1 Resource implications

Initial funding for this program has been provided through a 5-year CIHR/NIH (US) grant to the Rescu Office, at St. Michael's Hospital. (67,000 per year) Rescu is the research program in resuscitation at the Keenan Research Centre, Li Ka Shing Knowledge Institute, St. Michael's Hospital. The Director of the Collaborative Program will apply for ongoing program support.

3.1.1 Staffing

The administration of the Collaborative Program will largely be provided by Rescu in consort with graduate administration in IMS. The Program Committee initiates and recommends the appointment of a new Director to the Dean of SGS, after consultation with chairs/directors of participating graduate units and with the current collaborative program director. The Dean of the School of Graduate Studies approves appointments of directors of collaborative programs; the term is normally up to five years. An appointment is renewable upon recommendation of the Program Committee in consultation with the chairs/directors of participating graduate units, and approval of the Dean of SGS. It is proposed that Dr Laurie Morrison will be the Program Director for the initial term.

The core course will be taught by the core faculty, coordinated by Dr. Morrison.

3.1.2 Space

The administrative office for the Resuscitation Science Collaborative Program will be located within the Rescu Office in St. Michael's Hospital. Space, including dedicated meeting space and audiovisual support will be provided by Rescu. No additional research space is required. Students enrolled in this program are provided with space and facilities through their home graduate units.

3.1.3 Libraries

N/A

3.1.4 Computing facilities

N/A. Student’s facilities in their home departments.
3.1.5 Enrolment/admissions

The expected steady state of the CP is approximately 75 students by 2015. Existing available resources are adequate to accommodate anticipated student enrolment for the first five years.

3.1.6 Revenues/costs

Funds for the first five years of the program have been secured via a CIHR/NIH grant to establish this training program.

Proposed Budget:

<table>
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<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
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<td>$66,682</td>
<td>$66,827</td>
<td>$67,007</td>
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</tbody>
</table>

Notes to Budget:
- Benefits calculated at 18% (standard amount for staff at St. Michael’s Hospital)
- Materials & Supplies calculated at $15,000 per FTE
- Scholarships will be awarded for such things as travel to present primary papers; awards at the annual scientific meeting; tuition support
- Seed money awarded to assist with student research projects
- Seminars are budgeted at 8 per year @ $500 each with an additional $2000 to pay for 2 annual networking events and the annual Scientific Meeting

3.1.7 Financial aid:

Financial support for graduate students enrolled in collaborative programs is administered through the student’s home graduate unit. There are limited funds available in the Program’s budget to provide some funding to support students in their research endeavors.

4 Space and Facilities

4.1 Requirements for physical facilities
All necessary collaborative program space and facility requirements (e.g. seminar room) will be provided by Rescu.

4.2 Capital projects for approvals
None.

5 Students

5.1 Student affairs and services
All the usual services of SGS and U of T are available to Collaborative Program students, usually via their home graduate unit.

5.2 Student conduct and discipline
All of the usual policies, codes, and procedures of SGS and U of T apply to Collaborative Program students.

5.3 Financial Support
Student financial support is the responsibility of the student’s home department. There are limited funds available in the Program’s budget to provide some funding to support students in their research endeavors.

5.4 Student registration and information systems
Applicants must apply to and be admitted to both a graduate degree program in one of the collaborating graduate units, and to the collaborative program. Once admitted, students must meet all the requirements of the collaborative program. The usual registration regulations and services apply to collaborative program students, most of which are administered through the student’s home graduate unit.
6 Appendices

6.1 Appendix 1

Core Faculty Research Synopses

The following is a list of the collaborative program’s core faculty:

*Note: Resuscitation science is a recent and emerging field, consequently not all core faculty listed have published extensively and/or specifically in this area. Sample publications have been listed for all Program Committee members and other selected faculty. All faculty listed have expressed interest in participating in the Collaborative Program as Core Faculty.

The Institute of Biomaterials and Biomedical Engineering

Tom Chau – Program Committee Member

Publications:


Other Faculty:
- Joseph Cafazzo
- Christopher Calderone
- Anthony Easty
- Howard Ginsberg
- Shafique Keshavjee
- Milos Popovic
- Kaveh Shojania
- Patricia Trbovich

Department of Health Policy, Management and Evaluation

Don Redelmeier – Program Committee Member

Publications:


Laurie Morrison

Publications:


Avery Nathans

Publications:


Other Faculty:

- Anna Gagliardi
- Andreas Laupacis
- Michael Schull
- Sharon Straus
- Jack Tu

Department of Immunology

Michael Ratcliffe – Program Committee Member

Publications:


Department of Laboratory Medicine and Pathobiology

Nades Palaniyar – Program Committee Member

Publications:


**Department of Mechanical and Industrial Engineering**

**Michael Carter – Program Committee Member**

**Publications:**


**Birsen Donmez**

**Publications:**


**Timothy Chan**

**Publications:**


**Dionne Aleman**

**Publications:**


**Other Faculty:**
- Mark Chignell
- Paul Milgram

**The Institute of Medical Science**

**Ori Rotstein – Program Committee Member**

**Publications:**


**Andrew Baker**

**Publications:**


**Laurie Morrison**

**Publications:**

See entry under Health Policy, Management and Evaluation

**Gordon Rubenfeld**

**Publications:**


James Lavery

Publications:


Kumaraswamy Nanthakumar

Publications:


Sandro Rizoli

Publications:


Arthur Slutsky

Publications:


**Other Faculty:**

- Christopher Calderone (also appointed in The Institute of Biomaterials and Biomedical Engineering)
- Cyril David Mazer
- Paul Dorian (also appointed in the Department of Pharmacology and Toxicology)
- Michael Fehlings
- Gregory Hare (also appointed in the Department of Physiology)
- Brian Kavanagh
- Thomas Lindsay
- John Marshall
- Vivek Rao
- Emil Schemitsch
- Subodh Verma

**The Lawrence S. Bloomberg Faculty of Nursing**

**Louise Rose – Program Committee Representative**

**Publications:**


**Michael McGillion**

**Publications:**


**Monica Parry**

**Publications:**


Other Faculty
• Elizabeth Peter

The Leslie Dan Faculty of Pharmacy

Muhammad Mamdani – Program Committee Member

Publications:


Department of Pharmacology and Toxicology

Paul Dorian – Program Committee Member

Publications:


Department of Physiology

Greg Hare – Program Committee Member


Dalla Lana School of Public Health

Paul Corey – Program Committee Member

Publications:

Strug, L., Rohde, C. and Corey P. An Introduction to Evidential Sample Size Calculations The American Statistician Vol 61 August 2007 207-212


Susan Bondy

Publications:


Michael Cusimano

Publications:


Lorraine Ferris

Publications:


James Lavery

See entry under Institute of Medical Science

Richard Glazier

Publications:


6.2 Appendix 2

Graduated Independent Clinician Scientists now active in resuscitation sciences research:

- Damon Scales - HPME PhD graduate supervised by Don Redelmeier
- Steve Brooks – University of British Columbia MSc graduate in clinical epidemiology
- Sandro Rizoli - PhD graduate supervised by Ori Rotstein
- Homer Tien – HPME MSc graduate supervised by Don Redelmeier
- Lorraine Tremblay – A. Slutsky, supervisor. PhD in IMS in 1998 on Molecular mechanisms of ventilator-induced lung injury
- Gerald Keirzak - PhD graduate in law and bioethics (France) supervised by Laurie Morrison
- Carolyn Snider – MSc Public Health graduate supervised by Avery Nathans

Graduated research scientists now active in resuscitation sciences research:

- Blair Bigham - L. Morrison, supervisor. MSc in IMS in 2009 on Evaluating the Implementation and Effectiveness of the 2005 American Heart Association CPR and ECG Guidelines for Out of Hospital Cardiac Arrest
- Valeria Rac - S. Lye, supervisor. PhD in IMS in 2007 on Meloxicam and Preterm Birth
- Katie Dainty – L. Morrison, supervisor. Exploring Collaborative Networks for Knowledge Translation and Clinical Trials. PhD in IMS in progress on knowledge translation (defense scheduled Autumn 2010)
- Andrew Ramadeen – P. Dorian supervisor. PhD in Pharmacology (expected Autumn 2010)

Current Trainees conducting research in the field of resuscitation sciences:

- Katie Allen – P. Dorian, supervisor. PhD in IMS in progress
- Barbara Hass – A. Nathens, supervisor. PhD in IMS in progress
- Leeanne Douglas – L. Morrison, supervisor. MSc in progress in Public Health Sciences (BSc in Paramedicine)
- Andrea Rigamonti – A. Nathens, supervisor. MSc Clinical Epidemiology in progress (MD)
- Steve Lin – L. Morrison, supervisor. MSc in progress in HPME (MD Clinician Scientist Program)
- Jason Buick – L. Morrison, supervisor. MSc in progress in HPME.
- David Gomez Jaramillo – A. Nathens, supervisor. PhD in IMS in progress.
- Leah Szadkowski – MSc Biostatistics in Public Health in progress.
6.3 Appendix 3

Selected list of theses related to resuscitation sciences recently completed at the University of Toronto.

Austin, James. Molecular mechanisms of Fas mediated cell death in oligodendrocytes. MSc.

Bigham, Blair. Evaluating the implementation and effectiveness of the 2005 American Heart Association CPR and ECC guidelines for out-of-hospital cardiac arrest. MSc.

Butler, Erin. Critical dependence on timing of cardiac injection for retention of endothelial progenitor cells and functional benefit post-myocardial infarction. MSc.

Cantelmi, David. Direction of Covert Attention after Cerebellar Damage. MSc.

Crnko, Naomi Tadea. Neutrophil activation and apoptosis in traumatic brain injury patients following pre-hospital resuscitation with hypertonic saline dextran. MSc.

DiCiano-Oliveira, Caterina. Signaling pathways linking osmotic stress to adaptive responses: roles for RHO family GTPases. PhD.

Ebrahim, Shanil. Outcomes of children receiving in-hospital resuscitation. MSc.

Fazel, Shafie. Cardiac repair and not regeneration after myocardial infarction: the role and therapeutic utility of the c-kit/sof pathway. PhD.

Jaecklin, Thomas. Soluble factors contribute to ventilator-induced lung injury. MSc.

Khadaroo, Rachel G. The cellular and molecular mechanisms regulating oxidative stress-induced priming of the macrophage: the role of the Src family of tyrosine kinases. PhD.

Miriuka, Santiago. Effects of immunosuppressants on endothelial progenitor cells. MSc.


Parr, Ann. Transplantation of adult neural stem/progenitor cells and bone marrow derived mesenchymal stromal cells in the injured adult rat spinal cord. PhD.


Santone, David Joseph. Assessing the role of mast cells in cardiac contractile dysfunction following hemorrhagic shock and resuscitation. MSc.

Siddiq, Ishita. Upregulation of VEGF-A using engineered zinc finger protein gene therapy increases cell survival after lateral fluid percussion injury in rats. MSc.

Smith, Cameron Reid. Ibutilide as a firstline antiarrhythmic drug in a porcine model of out-of-
hospital cardiac arrest. MSc
Steele, Sherri. The Role of Fas-Mediated Apoptosis in the Pathophysiology of Acute Traumatic Spinal Cord Injury. PhD.

Tawadros, Patrick. The Role of Ceramide in Oxidant-mediated Priming of Macrophages for LPS Signaling. PhD

Tepperman, Elissa. The vascular effects of immunosuppression: Tacrolimus preserves vasomotor function and maintains vascular homeostasis. MSc

Yu, Anna. The Role of Prothrombotic Factors in the Ocular Manifestations of Abusive and Non-Abusive Head Trauma. MSc.
6.4 Appendix 4

Student consultations:

Current Trainees conducting research in the field of resuscitation sciences:

- Katie Allen – P. Dorian, supervisor. PhD in IMS in progress
- Barbara Hass – A. Nathens, supervisor. PhD in IMS in progress
- Leeanne Douglas – L. Morrison, supervisor. MSc in progress in Public Health Sciences (BSc in Paramedicine)
- Andrea Rigamonti – A. Nathens, supervisor. MSc Clinical Epidemiology in progress (MD)
- Steve Lin – L. Morrison, supervisor. MSc in progress in HPME (MD Clinician Scientist Program)
- Jason Buick – L. Morrison, supervisor. MSc in progress in HPME.
- David Gomez Jaramillo – A. Nathens, supervisor. PhD in IMS in progress.
- Tyrone Perriera – S. Strauss, supervisor. PhD in HPME in progress
- Leah Szadkowski – MSc Biostatistics in Public Health in progress
- Ivan Diamond, PhD in HPME in progress (Wales & Feldman, supervisors)

Additional students that have been identified as potentially interested but have not yet been interviewed include:

- Danielle Dunwoody, PhD, Nursing
- Carlo Santaguida, PhD, IMS (Andrew Baker, supervisor)
- Andrea Hill, PhD (A. Nathans, supervisor)
- Sanjay Sharma, MSc (A. Nathans, supervisor)
- Craig Dale, PhD, Nursing
- Orla Smith, PhD, Nursing
- Sheila O'Keefe McCarthy, PhD, Nursing
6.5 Appendix 5

Summary of Departmental Consultation Meetings

Department of Mechanical and Industrial Engineering, July 12, 2010.
Dept. representatives: Dr. Jean Zu and Dr. Michael Carter
Program representatives: Dr. Laurie Morrison and Sandy Iverson

Faculty of Nursing, July 13, 2010.
Dept. representatives: Dr. Sioban Nelson
Program representatives: Dr. Laurie Morrison and Sandy Iverson

Department of Public Health, July 13, 2010.
Dept. representatives: Dr. Paul Corey
Program representatives: Dr. Laurie Morrison and Sandy Iverson

Dept. representatives: Dr. Richard Hegele
Program representatives: Dr. Ori Rotstein and Sandy Iverson

Department of Biomedical Engineering, July 26, 2010.
Dept. representatives: Dr. Paul Santerre and Dr. Tom Chau
Program representatives: Dr. Ori Rotstein and Sandy Iverson

Dept. representatives: Dr. Louise Lemieux-Charles
Program representatives: Dr. Laurie Morrison and Sandy Iverson

Department of Pharmacology & Toxicology, July 30, 2010.
Dept. representatives: Dr. Denis Grant and Dr. Peter McPherson
Program representatives: Dr. Ori Rotstein and Sandy Iverson

Department of Immunology, August 6, 2010.
Dept. representatives: Dr. Michael Ratcliffe
Program representatives: Dr. Ori Rotstein and Sandy Iverson

Department of Physiology, August 12, 2010.
Dept. representatives: Dr. Patricia Brubaker
Program representatives: Dr. Ori Rotstein and Sandy Iverson

Department of Pharmacy, August 16, 2010.
Dept. representatives: Dr. Henry Mann, Dr. Heather Boon and Dr. Muhammad Mamdani
Program representatives: Dr. Laurie Morrison and Sandy Iverson
UNIVERSITY OF TORONTO

Brief for the Standard Appraisal

of the

Graduate Collaborative Master’s and Doctoral Program in Resuscitation Sciences

Faculty of Medicine

Submitted to the
Ontario Council on Graduate Studies
November, 2010
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6. Administration ......................................................................................................................... 9
7. Resource Issues ..................................................................................................................... 10
8. Registration Information/Enrolment Projections ................................................................ 11

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1. Introduction and Rationale

Despite the large number of patients who are resuscitated from a life threatening illness or injury every day out-of-hospital and in-hospital and the associated morbidity and mortality, there is very little research in this area. Major funding agencies such as the Heart and Stroke Foundation and CIHR have identified resuscitation as a priority area of research. Rescu, a research program of the Keenan Research Centre, Li Ka Shing Knowledge Institute, St. Michael’s Hospital, is one of only two research programs in Canada focused on resuscitation; and has successfully attracted key funding from NIH/CIHR and is a key participant in the international Resuscitation Outcomes Consortium (ROC). Rescu has successfully attracted experienced investigators from a variety of disciplines and recognizes the critical need to build research capacity in this multidisciplinary field. There are currently no existing graduate training programs that focus on resuscitation in North America.

The goal of the Collaborative Program in Resuscitation Sciences is to train scientists pursuing research in the optimal care of the acutely ill and injured patient and, ultimately, to create leaders in the discipline who will supervise others providing this level of scientific inquiry. The program will appeal to graduate students from a wide variety of backgrounds with an interest in any aspect of resuscitation science.

The critical prerequisite for becoming an independent and innovative thinker in any field is complete familiarity and mastery of the discipline. This requires immersion in the field for a concentrated period of time, with ample opportunities to exchange knowledge and skills with health professionals (physicians, paramedics, nurses, pharmacists, etc). Resuscitation science includes a number of medical areas such as trauma, critical care, emergency medicine, neurotrauma, anaesthesia, shock, sepsis, acute coronary syndrome, cardiovascular, peripheral vascular and rehabilitation medicine. Many non-medicine disciplines such as engineering, basic science, public health, as well as allied health professions such as, nursing, pharmacy and paramedicine, will find synergies in the resuscitation science program. Research programs in the field may utilize methodologies ranging from molecular medicine and genomics, through clinical trials and outcomes, to health administration and health prevention strategies.

There are no other existing programs of study that focus on this important area of research. While there are three sites in the US which train scientists in resuscitation research, they are not linked to graduate studies and more commonly train physicians in a fellowship year.

The Collaborative Program in Resuscitation Science will be a “bench to bedside to curbside” training program and will focus on the development and delivery of time-sensitive interventions directly affecting patients in the prehospital and in-hospital settings. This highly translational program will have impact on identification of at-risk individuals, targeted resuscitation strategies, and improvement of systems, care, and therapies that can be deployed in prehospital and in-hospital resuscitation. This program
will foster cross-disciplinary interactions and strengthen research and teaching in resuscitation science.

The following programs have agreed to participate in the Collaborative Program in Resuscitation Science:

- Biomedical Engineering Program, PhD, The Institute of Biomaterials and Biomedical Engineering (IBBME)
- Clinical Engineering Program, MHSc, The Institute of Biomaterials and Biomedical Engineering (IBBME)
- Community Health Program, MScCH, Dalla Lana School of Public Health (PHSCI)
- Health Policy, Management and Evaluation Program, MSc, PhD, Department of Health Policy, Management and Evaluation (HPME)
- Immunology Program MSc, PhD, Department of Immunology (IMM)
- Laboratory Medicine and Pathology Program, MSc, PhD, Department of Laboratory Medicine and Pathobiology (LMP)
- Mechanical and Industrial Engineering Program, MASc, MEng, PhD, Department of Mechanical and Industrial Engineering (MIE)
- Medical Science Program, MSc, PhD, Institute of Medical Science (IMS)
- Nursing Science, MN, PhD, The Lawrence S. Bloomberg Faculty of Nursing (NURS)
- Pharmaceutical Sciences Program, MSc, PhD, Leslie Dan Faculty of Pharmacy (PHM)
- Pharmacology Program, MSc, PhD, The Department of Pharmacology and Toxicology (PCL)
- Physiology Program, MSc, PhD, Department of Physiology (PHY)
- Public Health Sciences Program, MPH, MSc, PhD Dalla Lana School of Public Health (PHSCI)

2. Objectives and Added Value

The goal of the Collaborative Program is to train academic specialists in optimal care of the acutely ill and injured and, ultimately, to create leaders in the discipline who will supervise others providing this care, and to conduct research focused on improving treatment.

Academic objectives of the program include:

- To train scholars whose primary goal is to contribute original research in resuscitation sciences;
- To prepare students who will specialize in resuscitation sciences, with an emphasis on innovative interdisciplinary research and scholarship;
• To provide students interested in resuscitation sciences with a common learning experience, and a network of mentors and peers;
• To develop and enrich educational and research opportunities in bioethics for students within the disciplines represented by the participating graduate units;
• To provide experience in multidisciplinary, interdisciplinary and inter-professional education and research

Currently in Canada there are only two dedicated programs of research in resuscitation: one at the University of Ottawa in partnership with the University of British Columbia, and one (Rescu) at the University of Toronto. Both in-hospital and out-of-hospital resuscitation research tends to be interdisciplinary, including areas such as critical care, emergency medicine and trauma. There is a compelling need to develop research capacity in this area across complementary disciplines in medicine, science and related disciplines, particularly with respect to advanced skills in research methodology and study design.

There are no other existing programs of study that focus on this important area of research. While there are three sites in the US which train scientists in resuscitation research, they are not linked to graduate studies and more commonly train physicians in a fellowship year.

Research in resuscitation has been named a priority by a number of key funding agencies, including CIHR, The Heart and Stroke Foundation of Canada, the American Heart Association, and the Laerdal Foundation in Norway. When the Heart and Stroke Foundation of Canada recently called for proposals for operating grants for research in this area, they received only nine letters of intent. Of those nine LOIs, only three went forward as full proposals. So few qualified applications indicates a severe shortage of research capacity in the area. While a number of agencies have actively prioritized research in resuscitation sciences, Canada currently lacks research capacity to meet this identified need. This program aims to address this need.

Graduates of this program will be:
• Better positioned to be considered for personal support awards and peer-reviewed grant funding; thus enhancing research in the field;
• Well-trained for faculty appointments or further graduate study to continue building research capacity in this field;
• Important contributors to public health agencies in Canada concerned with improving health education and emergency health services;
• Important partners for EMS and Fire Services in pursuit of trials in out-of-hospital settings;
• Valuable collaborators and potential employees for the biomedical and pharmaceutical industries working on timely interventions and life-saving devices.
By undertaking a specialized program of study, including a core course in resuscitation science research and actively participating in specialized seminars, students will truly become specialists in the field. In addition, they will be mentored not only by their research supervisor, but also by clinical mentors who will provide additional advice, advocacy, and encouragement that specifically pertains to short and long term career planning, time management, professional and personal balance, promotional issues, etc. The Program Committee will convene every six months to track progress toward thesis completion, course completion, publications, presentations, networking opportunities, integrate research and clinical enrichment activities, and identify resources and supplemental training required.

In the past five years the core research group of investigators at the University of Toronto collaborating in this field (Andrew Baker, Paul Dorian, Laurie Morrison, Avery Nathans, Arthur Slutsky, Don Redelmeir and Ori Rotstein) have mentored a number of students and young investigators in the field of resuscitation sciences. (see appendix 5 and 6)

Demand for this collaborative program was firstly assessed from noting the challenges these students faced in acquiring a fundamental understanding of this field in the normal course of their studies. Secondly, informal survey interviews with some of these students and with additional potential students were conducted (see appendix 7). Additionally, conversations were held with representatives of each of the collaborating units and departments to assess probable student demand (see appendix 8).

Finally, Dr. Morrison and Dr. Rotstein have both participated in various international forums, most notably the ROC (Resuscitation Outcomes Consortium) and the International Liaison Committee on Resuscitation, through which they have gleaned a good sense of the likely local and international demand for this type of program.

3. Admission Requirements

Master’s level
Applicants to the Collaborative Program in Resuscitation Sciences must apply to and be accepted in a graduate degree program in one of the participating graduate units.

Applicants for the Collaborative Program must forward the following to the Program Committee:

- a resume or curriculum vitae
- a personal statement explaining how their program of study and specific research interests relate to resuscitation science
- a letter of recommendation from a faculty member, usually the thesis supervisor in a thesis-based graduate program, commenting on the student’s academic abilities, and likelihood for research success in the field of resuscitation sciences.
Doctoral level
Doctoral level students must meet the same admissions criteria as master’s-level students. If master’s students continue on to a doctoral degree after completing the degree, they must make separate application to the doctoral degree program and to the collaborative program.

4. Program Requirements and Common Learning Experience

Master’s program requirements:

All master’s students in the collaborative program will take the following new core course(s), seminars, etc.:

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSC4001H</td>
<td>Foundations in Resuscitation Science Research</td>
</tr>
</tbody>
</table>

**Synopsis:**
This 0.5 credit course is aimed at enhanced understanding of the breadth of research in Resuscitation Science. This syllabus will ensure that students with disparate fields of research enquiry will assemble to discuss common areas of research interest, thereby further reinforcing a spirit of interdisciplinary research. Topics include bioethical issues particular to resuscitation research; health services research with high risk groups; outcomes research in critical illness; and knowledge translation.

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRM3333H</td>
<td>Resuscitation Sciences Graduate Seminar Series</td>
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</table>

**Synopsis**
This CR/NCR seminar series, requiring 75% attendance only, over 2 consecutive sessions, will provide all students in the program an opportunity to meet, network, and hear from expert researchers in the field of resuscitation sciences. Local and international investigators will share current research projects and experiences.

Other program requirements at the master’s level are:
- complete a thesis, comprehensive paper or practicum (whichever is included in their program of study) in the area of resuscitation sciences under the supervision of a faculty member affiliated with the program.
- students must present their research at the annual CPRS Scientific Meeting at least once; and attend the annual Scientific Meeting each year of their enrolment in the program.

Doctoral program requirements:

All doctoral students in the collaborative program will take the following core course(s), seminars, etc.:
<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Name</th>
<th>Synopsis</th>
</tr>
</thead>
</table>
| MSC4001H      | Foundations in Resuscitation Science Research   | This 0.5 credit course is aimed at enhanced understanding of the breadth of research in Resuscitation Science. This syllabus will ensure that students with disparate fields of research enquiry will assemble to discuss common areas of research interest, thereby further reinforcing a spirit of interdisciplinary research. Topics include bioethical issues particular to resuscitation research; health services research with high risk groups; outcomes research in critical illness; and knowledge translation.  

*Doctoral students who completed MSC4001H as part of a master’s program will not be required to re-take the course.*                                                                                                                                                                                                                                                                                                                                                                           |
| SRD4444H      | Resuscitation Sciences Graduate Seminar Series  | This CR/NCR seminar series, requiring 75% attendance only, over 2 consecutive years, will provide all students in the program an opportunity to meet, network, and hear from expert researchers in the field of resuscitation sciences. Local and international investigators will share current research projects and experiences.                                                                                                                                                                                                                                                                                                                                                                                   |
| MSC4002H      | Advanced Topics in Resuscitation Science Research | This 0.5 credit CR/NCR seminar series (A type 2 graduate seminar series) is for doctoral students who have completed their program coursework and who are in the later stages of their doctoral theses. Students are expected to have their own data to work with, ideally from their own thesis projects, or from other or past research. The seminar is a forum for presentation and discussion of thesis work, and for deeper exploration of methodological, theoretical and professional development issues. Topics include publication and grant writing, policy & evidence issues, applied research/uses. Designed to counter the isolation of late-stage thesis work, this seminar will assist students in establishing contact with like-minded colleagues, set the stage for establishing on-going collaborative work groups that continue after completion of the course, facilitate the timely completion of projects and prepare students about to enter academic and other fields. All students will be required to present their research projects. Students will be evaluated on this presentation as well as attendance and participation in class. |

Other program requirements at the doctoral level are:

- complete a thesis in the area of resuscitation sciences under the supervision of a faculty member affiliated with the program.
students must present their research at the annual CPRS Scientific Meeting at least twice; and attend the annual Scientific Meeting each year of their enrollment in the program.

Completion of program requirements

All students enrolled in the collaborative program must complete the requirements of the collaborative program, in addition to those requirements for the degree program in their home graduate unit. The collaborative program Director is responsible for certifying the completion of the collaborative program requirements. The home graduate unit is solely responsible for the approval of the student’s home degree requirements.

5. Participation of Home Graduate Programs

The collaborative program’s core faculty members are available to students in the home program as advisors or supervisors. If a student’s program includes a thesis, it is expected that a core faculty member in the student’s home department will be involved in thesis supervision. Core faculty members may also contribute to the collaborative program through teaching of the core course/s and participating in the delivery of seminar series and other common learning elements. Some faculty may teach courses in the subject area of the collaborative program in the home program. Not all core faculty members are active in the collaborative program every year and, in many cases, simply may remain available to interested students. The list of core faculty members is available in Appendix 2. Each participating degree program contributes to the collaborative program through student enrolments, although not necessarily every year.

6. Administration

The Collaborative Program has a Director, a Program Committee, and a Program Administrator.

The Program Committee has a faculty representative from each participating graduate unit; and the Director is chair. The Program Committee initiates and recommends the appointment of a new Director to the Dean of SGS, after consultation with chairs/directors of participating graduate units and with the current collaborative program director. The Dean of the School of Graduate Studies approves appointments of directors of collaborative programs; the term is normally up to five years. An appointment is renewable upon recommendation of the Program Committee in consultation with the chairs/directors of participating graduate units, and approval of the Dean of SGS.

The Director and the Program Committee are responsible for the approval of admissions to the collaborative program, and are responsible for approving each student’s completion
of collaborative program requirements, including the granting of the collaborative program designation. The Committee and Director recommend changes to the program, as required, approve advertising, etc.

Under the direction of the Program Director, the Program Administrator ensures the effective operations of the collaborative program.

**Director (proposed)**

Dr. Laurie Morrison, Institute of Medical Science, Full Member (2011-2016)

**Program Committee members**

- Michael Carter - Department of Mechanical and Industrial Engineering
- Tom Chau - The Institute of Biomaterials and Biomedical Engineering (IBBME)
- Paul Corey - Dalla Lana School of Public Health
- Paul Dorian - The Department of Pharmacology and Toxicology
- Greg Hare - Department of Physiology
- Muhammad Mamdani - The Leslie Dan Faculty of Pharmacy
- Nades Palaniyar - Department of Laboratory Medicine and Pathobiology
- Michael Ratcliffe - Department of Immunology
- Don Redelmeier - Department of Health Policy, Management and Evaluation (HPME)
- Louise Rose - The Lawrence S. Bloomberg Faculty of Nursing
- Ori Rotstein - Institute of Medical Science

**Program Administrator**

Sandy Iverson

7. **Resource Issues**

The administrative office for the Resuscitation Science Collaborative Program will be located within the *Rescu* Office. *Rescu* is the research program in resuscitation at the Keenan Research Centre, Li Ka Shing Knowledge Institute, St. Michael’s Hospital. Space, including dedicated meeting space and audiovisual support, will be provided by *Rescu*. No additional research space is required. Students enrolled in this program are provided with space and facilities through their home graduate units.

Initial funding for this program has been provided through a five-year CIHR/NIH (US) grant to the *Rescu* Office, at St. Michael’s Hospital. ($67,000 per year) The Director of the Collaborative Program will apply for ongoing grant support.
8. Registration Information/Enrolment Projections

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<sup>1</sup>A number of participating graduate units anticipate student enrolment in the program beginning in the 2012-13 academic year. And a number of participating units estimate approximately one interested student every other year. The program expects an average intake of 15-18 master’s students a year by year 5.
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<sup>1</sup> A number of participating graduate units anticipate student enrolment in the program beginning in the 2012-13 academic year. A number of participating units estimate approximately one interested student every other year. The program expects an intake of 15 doctoral students a year by 2017-18.
APPENDIX I – Collaborative Program Requirements and Degree
Program Requirements

In all programs requiring a thesis or major research paper, the topic should be in the area
of the collaborative program. Additional Collaborative Program requirements will not
lengthen the student’s program.

THE INSTITUTE OF BIOMATERIALS AND BIOMEDICAL ENGINEERING

MHSc in Clinical Engineering

MHSc Requirements: 2.5 FCEs required courses
1.5 FCEs electives

The core course may be met through elective room in the home program, with the
exception of the seminar course requirement.

PhD in Biomedical Engineering

PhD Requirements: 1 FCEs required courses

At the discretion of the student’s supervisory committee, the core courses may be met
through elective room in the home program, with the exception of the seminar course
requirement.

DEPARTMENT OF HEALTH POLICY, MANAGEMENT AND EVALUATION

MSc in Health Policy, Management and Evaluation

MSc Requirements vary according to the particular field of study the student undertakes.

Field – Clinical Epidemiology and Health Care Research (Thesis option):
1.5 FCEs required courses
1.5 FCEs elective courses

(Note: that it is expected that the majority of HPME students enrolling in the
Collaborative Program will come from this stream)

The core course may be met through elective room in the home program, with the
exception of the seminar course requirement.

Field – Clinical Epidemiology and Health Care Research (Course work only option):
2.0 FCEs required courses
3.0 FCEs elective courses
The core course may be met through elective room in the home program, with the exception of the seminar course requirement.

### Field - Health Service Research
- 2.0 FCEs required courses
- 1.0 FCE elective courses

The core course may be met through elective room in the home program, with the exception of the seminar course requirement.

### Field - Health Technology Assessment and Management
- 3.0 FCEs required courses

Collaborative program requirements are in addition to the home program requirements.

#### PhD in Health Policy, Management and Evaluation

**PhD Requirements:**
- 4 FCEs required courses
- 1 FCE electives

Subject to the recommendation of the student’s supervisor, core courses may be met through elective room in the home program, with the exception of the seminar course requirement.

#### DEPARTMENT OF IMMUNOLOGY

### MSc in Immunology

**MSc Requirements:**
- 1.5 FCEs required courses

The core course may be met through elective room in the home program, with the exception of the seminar course requirement, with the recommendation of the student’s supervisor and approval of the department.

### PhD in Immunology

**PhD Requirements:**
- 2 FCEs required courses
- .5 FCE electives

Core courses may be met through elective room in the home program, with the exception of the seminar course requirement with the recommendation of the student’s supervisor and approval of the department.
DEPARTMENT OF LABORATORY MEDICINE AND PATHOBIOLOGY

MSc in Laboratory Medicine and Pathobiology

MSc Requirements: 1.5 FCE required courses

Collaborative program requirements are in addition to the home program requirements.

PhD in Laboratory Medicine and Pathobiology

PhD Requirements: 2.0 FCEs required courses
1.0 FCEs elective courses

Core courses may be met through elective room in the home program, with the exception of the seminar course requirement, at the discretion of the student’s supervisor and approval of the department.

DEPARTMENT OF MECHANICAL AND INDUSTRIAL ENGINEERING

MASc in Mechanical and Industrial Engineering

MASc Requirements: 2.5 FCEs elective courses

The core course may be met through elective room in the home program, with the exception of the seminar course requirement.

MEng in Mechanical and Industrial Engineering

MEng Requirements: 5.0 FCEs courses or
3.5 courses plus a supervised project

The core course may be met through elective room in the home program, with the exception of the seminar course requirement.

PhD in Mechanical and Industrial Engineering

PhD Requirements: 2.5 FCEs elective courses

Core courses may be met through elective room in the home program, with the exception of the seminar course requirement.
INSTITUTE OF MEDICAL SCIENCE, FACULTY OF MEDICINE

MSc in Medical Science

MSc Requirements:  
1.0 FCE required courses  
1.0 FCE elective courses

The core course may be met through elective room in the home program, with the exception of the seminar course requirement.

PhD in Medical Science

PhD Requirements:  
1.0 FCE required courses  
1.0 FCE electives

Core courses may be met through elective room in the home program, with the exception of the seminar course requirement.

THE LAWRENCE S. BLOOMBERG FACULTY OF NURSING

MN in Nursing Science

MN Requirements:  
4.0-4.5 FCEs required courses  
(number of courses depends on field of study)  
.5-1.0 FCE elective courses

The core course may be met through elective room in the home program, with the exception of the seminar course requirement.

PhD in Nursing Science

PhD Requirements:  
1 FCE required courses  
4 FCE elective courses

Core courses may be met through elective room in the home program, with the exception of the seminar course requirement.

THE LESLIE DAN FACULTY OF PHARMACY

MSc in Pharmaceutical Sciences
MSc Requirements: The normal requirement is 2.0 FCE elective courses but 1.0 FCE is the min course load required. Course requirements are determined by the student’s supervisor and advisory committee.

The core course may be met through elective room in the home program, with the exception of the seminar course requirement.

PhD in Pharmaceutical Sciences

PhD Requirements: The normal requirement is 2 FCE elective courses. Course requirements are determined by the student’s supervisor and advisory committee.

Core courses may be met through elective room in the home program, with the exception of the seminar course requirement

THE DEPARTMENT OF PHARMACOLOGY AND TOXICOLOGY

MSc in Pharmacology

MSc Requirements: 2.0 FCE Additional course work may be required and is determined by the student’s supervisory committee.

Collaborative program requirements are in addition to the home program requirements.

PhD in Pharmacology

PhD Requirements: 2.0 FCE required courses 1.0 FCE electives courses

Core courses may be met through elective room in the home program, with the exception of the seminar course requirement, as determined by the student’s supervisory committee.

THE DEPARTMENT OF PHYSIOLOGY

MSc in Physiology

MSc Requirements: 1.5 FCE electives (Physiology courses only)
.5 FCE elective

The core course may be met through elective room in the home program, with the exception of the seminar course requirement.

**PhD in Physiology**

**PhD Requirements:**
- 1.5 FCE electives (Physiology courses only)
- 1.0 elective

Core courses may be met through elective room in the home program, with the exception of the seminar course requirement.

**DALLA LANA SCHOOL OF PUBLIC HEALTH**

**MScCH in Community Health**

**MScCH Requirements:**
- 3.5 FCE required courses
- 1.5 FCE electives

The core course may be met through elective room in the home program, with the exception of the seminar course requirement.

**MPH in Public Health Sciences**

**MPH Requirements:**
- 10.0 FCEs in total
- 1.5 – 4 FCEs required courses (varies depending on field of study)
- 6–8.5 FCEs electives (varies depending on field of study)

The core course may be met through elective room in the home program, with the exception of the seminar course requirement.

**MSc in Public Health Sciences**

**MSc Requirements (Thesis option)**
- 4.0 FCEs required courses

With recommendation from the supervisor and permission of the Division Head, the core course may be met through elective room in the home program, with the exception of the seminar course requirement.

**MSc Requirements (Course only option)**
- 4.0 FCEs required courses
1.0 FCE electives

The core course may be met through elective room in the home program, with the exception of the seminar course requirement.

**PhD in Public Health Sciences**

**PhD Requirements:**

3.5 – 4.0 FCEs required

(varies depending on the field of study).

Core courses may be met through elective room in the home program, with the exception of the seminar course requirement.
APPENDIX II – Core Faculty Research Synopses

The following is a list of the collaborative program’s core faculty:

*Note: Resuscitation science is a recent and emerging field, consequently not all core faculty listed have published extensively and/or specifically in this area. Sample publications have been listed for all Program Committee members and other selected faculty. All faculty listed have expressed interest in participating in the Collaborative Program as Core Faculty.

The Institute of Biomaterials and Biomedical Engineering

Tom Chau – Program Committee Member

Publications:


Other Faculty:

• Joseph Cafazzo
• Christopher Calderone
• Anthony Easty
• Howard Ginsberg
• Shafique Keshavjee
• Milos Popovic
• Kaveh Shojania
• Patricia Trbovich

Department of Health Policy, Management and Evaluation

Don Redelmeier – Program Committee Member

Publications:


**Laurie Morrison**

Publications:


**Avery Nathans**

Publications:


**Other Faculty:**
- Anna Gagliardi
- Andreas Laupacis
- Michael Schull
- Sharon Straus
- Jack Tu

**Department of Immunology**

Michael Ratcliffe – Program Committee Member
Publications:


Department of Laboratory Medicine and Pathobiology

Nades Palaniyar – Program Committee Member

Publications:


Department of Mechanical and Industrial Engineering

Michael Carter – Program Committee Member

Publications:


Birsen Donmez

Publications:


**Timothy Chan**

Publications:


**Dionne Aleman**

Publications:


**Other Faculty:**
- Mark Chignell
- Paul Milgram

**The Institute of Medical Science**

**Ori Rotstein – Program Committee Member**

Publications:


**Andrew Baker**

Publications:


**Laurie Morrison**

Publications:

See entry under Health Policy, Management and Evaluation

**Gordon Rubenfeld**

Publications:


**James Lavery**

Publications:


**Kumaraswamy Nanthakumar**

Publications:


**Sandro Rizoli**

Publications:


**Arthur Slutsky**

Publications:


Other Faculty:
- Christopher Calderone (also appointed in The Institute of Biomaterials and Biomedical Engineering)
- Cyril David Mazer
- Paul Dorian (also appointed in the Department of Pharmacology and Toxicology)
- Michael Fehlings
- Gregory Hare (also appointed in the Department of Physiology)
- Brian Kavanagh
- Thomas Lindsay
- John Marshall
- Vivek Rao
- Emil Schemitsch
- Subodh Verma

The Lawrence S. Bloomberg Faculty of Nursing

Louise Rose – Program Committee Representative

Publications:


Michael McGillion

Publications:


Monica Parry

Publications:


Other Faculty
- Elizabeth Peter

The Leslie Dan Faculty of Pharmacy

Muhammad Mamdani – Program Committee Member

Publications:


Department of Pharmacology and Toxicology

Paul Dorian – Program Committee Member

Publications:


**Department of Physiology**

**Greg Hare – Program Committee Member**


**Dalla Lana School of Public Health**

**Paul Corey – Program Committee Member**

Publications:


**Susan Bondy**

Publications:


**Michael Cusimano**

Publications:


**Lorraine Ferris**

Publications:


**James Lavery**

See entry under Institute of Medical Science

**Richard Glazier**

Publications:

Collaborative Program in Resuscitation Sciences

Overview
The goal of the Collaborative Program in Resuscitation Sciences is to train scientists pursuing research in the optimal care of the acutely ill and injured patient and, ultimately, to create leaders in the discipline who will supervise others providing this level of scientific inquiry. The program will appeal to students from a wide variety of backgrounds with an interest in any aspect of resuscitation science.

Resuscitation Science includes a number of medical areas such as trauma, critical care, emergency medicine, neurotrauma, anesthesia, shock, sepsis, acute coronary syndrome, paediatric care, cardiovascular, peripheral vascular and rehabilitation medicine. Many non-medicine disciplines such as engineering, basic science, public health among others as well as allied health professions such as nursing, pharmacy and paramedicine will find synergies in the resuscitation science program. Research programs can use methodologies ranging from molecular medicine and genomics, through clinical trials and outcomes, to engineering, health administration, and health prevention strategies. Resultant advances in knowledge will ultimately be applied to the clinical setting.

Interested students must first apply to and be accepted in one of the participating graduate programs listed above, and then apply to the collaborative program. Students must follow a course of study acceptable to both the home unit and the Collaborative Program. Upon successful completion of the requirements of the host department and the program, the student receives the degree from their home unit and the following notation “Completed the Collaborative Program in Resuscitation Sciences” on their transcript.

Contact and Address

Web: www.rescu.ca
E-mail: cprsinfo@smh.ca
Telephone: (416) 864 6060 x7843
Fax: (416) 864 8934

Collaborative Program in Resuscitation Sciences
Administrative office: c/o Rescu, St. Michaels Hospital
30 Bond St.
Toronto, Ontario M5B 1W8
Canada

Master’s Level

Admission Requirements
Collaborative programs are administered under the auspices of the School of Graduate Studies. Applicants must be accepted for admission to a participating graduate unit and comply with the admission procedures of that unit before applying to the Collaborative Program in Resuscitation Sciences.

Applicants must submit the following to the Program Committee of the Collaborative Program in Resuscitation Sciences:

- A resume or curriculum vitae
- A personal statement explaining how their program of study and specific research interests relate to resuscitation science
- A letter of recommendation from a faculty member, usually the thesis supervisor in a thesis-based graduate program, commenting on the student’s academic abilities, and likelihood for research success in the field of resuscitation sciences.

Program Requirements

- Students must register in the master’s degree program through one of the participating home graduate units. They must meet all respective degree requirements of the School of Graduate Studies and their participating home graduate unit.
- In addition to meeting the home graduate unit program requirements, students will be required to:
  - Take the core course – Foundations in Resuscitation Science Research MSC4001H
  - Attend at least 75% of the Resuscitation Sciences Graduate Seminar Series SRM3333H over two consecutive sessions
  - Complete a thesis, comprehensive paper or practicum ( whichever is included in their program of study) in the area of resuscitation sciences under the supervision of a faculty member affiliated with the program.
- Students must present their research at the annual CPRS Scientific Meeting at least once; and attend the annual Scientific Meeting each year of their enrolment in the program.

Doctoral Level

Admission Requirements

- Collaborative programs are administered under the auspices of the School of Graduate Studies.
- Applicants must be accepted for admission to a participating graduate unit and comply with the admission procedures of that unit before applying to the Collaborative Program in Resuscitation Sciences.
- Applicants must submit the following to the Program Committee of the Collaborative Program in Resuscitation Sciences:
  - A resume or curriculum vitae
  - A personal statement explaining how their program of study and specific research interests relate to resuscitation science
  - A letter of recommendation from a faculty member, usually the thesis supervisor in a thesis-based graduate program, commenting on the student’s academic abilities, and likelihood for research success in the field of resuscitation sciences.

Program Requirements

- Students must register in the degree program through one of the participating home graduate units. They must meet all respective degree requirements of the School of Graduate Studies and their participating home graduate unit.
- In addition to meeting the home graduate unit program requirements, students will be required to:
  - Take the core course – Foundations in Resuscitation Science Research MSC4001H (doctoral students who have already taken this course as part of their master’s program will be exempted)
  - Take Advanced Topics in Resuscitation Science Research, MSC4002H, a type 2 graduate seminar series
  - Complete a thesis in the area of resuscitation sciences.
  - Attend at least 75% of the Resuscitation Sciences Graduate Seminar Series SRD4444H over two consecutive years.
- Students must present their research at the annual CPRS Scientific Meeting at least twice; and attend the annual Scientific Meeting each year of their enrolment in the program.

Courses

MSC4001H Foundations in Resuscitation Science Research
MSC4002H Advanced Resuscitation Science Research (PhD students only)
SRM3333H / SRD4444H Resuscitation Sciences Graduate Seminar Series
Program Committee

Carter, Michael – PhD - Department of Mechanical and Industrial Engineering
Chau, Tom – PhD - The Institute of Biomaterials and Biomedical Engineering
Corey, Paul – PhD - Dalla Lana School of Public Health
Dorian, Paul – MD MSc - The Department of Pharmacology and Toxicology
Greg Hare – MD, PhD - Department of Physiology
Mamdani, Muhammad – MPH, MA, PharmD - The Leslie Dan Faculty of Pharmacy
Ratcliffe, Michael – PhD – Department of Immunology
Redelmeier, Don – MD, MSHSR - Department of Health Policy, Management and Evaluation
Rose, Louise – MN, PhD - The Lawrence S. Bloomberg Faculty of Nursing
Rotstein, Ori – MD MSc - Institute of Medical Science
Palaniyar, Nades – MSc, PhD – Department of Laboratory Medicine and Pathobiology
APPENDIX IV  – New Course/s

Governance Form C:  
New Course  
2009-2010, revised March 2010

SECTION A: Required information

<table>
<thead>
<tr>
<th>Course designator/code (three letters):</th>
<th>Course Number and Weight (four digits + H or Y):</th>
<th>Start Session:</th>
<th>Course Format (lecture/ seminar/ readings, distance delivery, etc.):</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSC</td>
<td>4001H</td>
<td>Sept 2011</td>
<td>Lecture</td>
</tr>
</tbody>
</table>

Course Title:  
*Foundations in Resuscitation Science Research*

Abbreviated Course Title (maximum 30 characters and/or space or punctuation)

F O U N D A T I O N S  R E S U S C I T A T I O N  S C I

Department:  
Institute of Medical Science

Instructor/course coordinator (including any other lecturers/instructors, if applicable; indicate responsibility of each instructor):

Laurie Morrison – Course coordinator.  
Other lecturers include: Arthur Slutsky; Paul Dorian; Julie Spence; Avery Nathens; Don Redelmeier;

This 0.5 credit course is aimed at enhanced understanding of the breadth of research in resuscitation science. This syllabus will ensure that students with disparate fields of research enquiry will assemble to discuss common areas of research interest, thereby further reinforcing a spirit of interdisciplinary research. Topics include bioethical issues particular to resuscitation research; health services research with high risk groups; outcomes research in critical illness; and knowledge translation.

Academic Relevance – state the reason for creating the course, and its place in your program (required, elective, etc.):

As the required course for the Collaborative Program in Resuscitation Science, this course ensures that each student, regardless of their home unit and prior learning, receives a common foundation of the topics and issues particularly relevant to designing and conducting research in this particular field.

<table>
<thead>
<tr>
<th>Enrolment Projection (estimate):</th>
<th>Prerequisite (if any):</th>
<th>Co-requisites/ exclusions/ enrolment restrictions (if any):</th>
<th>Regular/continuing/ extended (indicate one below)*:</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>None</td>
<td>Students must be enrolled in the Collaborative Program in</td>
<td></td>
</tr>
</tbody>
</table>
Number of Contact Hours Per Week:
2 (every other week over 2 sessions)

Resuscitation Sciences in order to register for this course.

Grading Scheme (indicate letter grade or credit/no credit (CR/NCR) designation):
___x__ Letter grades
_____ CR/ NCR

List components of course and percentage value for each component (no single component should have a value of more than 80% of the final grade; class participation is normally limited to no more than 10% and may not exceed 20%):
45% - Essay on a relevant aspect of bioethics in resuscitation research
45% - Essay or Special Project on a topic relevant to the student’s intended research
10% - Participation

Schedule of evaluation of course components
This half course will be spread over the Fall and Winter terms. The first essay will be evaluated at the end of the Fall term; the second will be evaluated at the end of the Winter term.

List graduate units where significant similarity or overlap may occur (confirm endorsement by those units of this new course; attach documentation as appropriate; indicate “None” if no overlap):
None

Indicate resources required for delivery of course (instructor/teaching assistant/lab equipment, computing resources, distance delivery elements, etc.) and indicate whether requirements will be met through existing resources or whether additional resources will be required:
Instructor; space; audiovisual supports. All elements of the course will be met with existing resources.

Confirm that course proposal has been approved by a graduate unit committee (provide committee name and meeting date):
TBA by the Institute of Medical Science, Curriculum Committee, Dec 2010

Chair/Director Name and Contact Information:
(Name of Chair/Director of Graduate Unit, or designate; include title)
Dr. Ori Rotstein, Director of the Institute of Medical Science

Faculty Dean Name and Contact Information:
(Provide e-mail address, telephone number, etc.)
Andrea Sass-Kortsak, Vice Dean Graduate Affairs
a.sass@utoronto.ca
416 946 7617

Date: December , 2010
### Governance Form C:
#### New Course
2009-2010, revised March 2010

#### SECTION A: Required information

<table>
<thead>
<tr>
<th>Course designator/code (three letters):</th>
<th>Course Number and Weight (four digits + H or Y):</th>
<th>Start Session:</th>
<th>Course Format (lecture/seminar/readings, distance delivery, etc.):</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSC</td>
<td>4002H</td>
<td>Sept 2012</td>
<td>Type 2 Graduate Seminar Series</td>
</tr>
</tbody>
</table>

**Course Title:**

**Advanced Topics in Resuscitation Science Research**

**Abbreviated Course Title** (maximum 30 characters and/or space or punctuation):

ADVANCED RESUSCITATION SCI

**Department:**

Institute of Medical Science

**Instructor/course coordinator** (including any other lecturers/instructors, if applicable; indicate responsibility of each instructor):

Laurie Morrison – Course coordinator.

**Course Description** (approximately 100-150 words; may include further description of format of course presentation, e.g., lectures, seminars, readings, etc.):

This 0.5 credit CR/NCR seminar series (a type 2 graduate seminar series) is for doctoral students who have completed their program coursework and who are in the later stages of their doctoral theses. Students are expected to have their own data to work with, ideally from their own thesis projects, or from other or past research. The seminar is a forum for presentation and discussion of thesis work, and for deeper exploration of methodological, theoretical and professional development issues. Topics include publication and grant writing, policy & evidence issues, applied research/uses. Designed to counter the isolation of late-stage thesis work, this seminar will assist students in establishing contact with like-minded colleagues, set the stage for establishing ongoing collaborative work groups that continue after completion of the course, facilitate the timely completion of projects and prepare students about to enter academic and other fields. All students will be required to present their research projects. Students will be evaluated on this presentation as well as attendance and participation in class.

The typical class format will be consist of two parts 1) a guided instructor-led discussion of core methodological, theoretical and analytical matters related to the practical stages and issues of thesis completion; and 2) students’ presentation of their work and class discussion. Depending on the numbers, over the term, students will each have at least one half-class (1.5 hrs) to themselves to discuss their research, and additional time later on in the term in which they can do such things as try out a conference presentation, a job search interview, discuss journal sites for publication of particular papers etc. Although the focus in these student-centred sessions will be on the substance of the individual project at hand, generic issues of broad relevance to students will be pulled out by the instructors so that all discussions will have general usefulness.

Students will be evaluated on their presentations as well as attendance and participation in class.
**Academic Relevance** – state the reason for creating the course, and its place in your program (required, elective, etc.).

Focusing on the practical matters and issues of thesis completion and academic success in the emerging field of Resuscitation Sciences at the doctoral level, this student-centred seminar is designed to ensure that each student receives the support and guidance necessary to successfully complete their doctoral work.

<table>
<thead>
<tr>
<th>Enrolment Projection (estimate):</th>
<th>Prerequisite (if any):</th>
<th>Co-requisites/ exclusions/ enrolment restrictions (if any):</th>
<th>Regular/continuing/ extended (indicate one below)*:</th>
</tr>
</thead>
</table>
| 5                                | MSC 4001H              | Students must be enrolled in the Collaborative Program in Resuscitation Sciences at the doctoral level in order to register for this course. | ___x_ Regular  
___ Continuous  
___ Extended |

**Enrolment Projection (estimate):**

5

**Prerequisite (if any):**

MSC 4001H

**Co-requisites/ exclusions/ enrolment restrictions (if any):**

Students must be enrolled in the Collaborative Program in Resuscitation Sciences at the doctoral level in order to register for this course.

**Regular/continuing/ extended (indicate one below)*:**

___x_ Regular
___ Continuous
___ Extended

*See SGS Calendar, Section 6 Course Codes

**Grading Scheme (indicate letter grade or credit/no credit (CR/NCR) designation):**

___ Letter grades  
___x__ CR/ NCR

**Grading Scheme (indicate letter grade or credit/no credit (CR/NCR) designation):**

___ Letter grades  
___x__ CR/ NCR

**List components of course and percentage value for each component** (no single component should have a value of more than 80% of the final grade; class participation is normally limited to no more than 10% and may not exceed 20%):

This is a credit/no-credit course. A credit designation is normally achieved through attendance at all of the classes, participation in class discussion, and class presentations of thesis work.

**Schedule of evaluation of course components**

See above

**List graduate units where significant similarity or overlap may occur** (confirm endorsement by those units of this new course; attach documentation as appropriate; indicate “None” if no overlap):

None

**Indicate resources required for delivery of course** (instructor/teaching assistant/lab equipment, computing resources, distance delivery elements, etc.) and indicate whether requirements will be met through existing resources or whether additional resources will be required:

Instructor; space; audiovisual supports. All elements of the course will be met with existing resources.

**Confirm that course proposal has been approved by a graduate unit committee** (provide committee name and meeting date):

TBA Institute of Medical Science, Curriculum Committee, Dec 2010

**Chair/Director Name and Contact Information:**

Dr. Ori Rotstein, Director of the Institute of Medical Science

**Faculty Dean Name and Contact Information:**

(Provide e-mail address, telephone number, etc.)

Andrea Sass-Kortsak, Vice Dean Graduate Affairs
Date: December, 2010
## SECTION A: Required information

<table>
<thead>
<tr>
<th>Course designator/code (three letters):</th>
<th>Course Number and Weight (four digits + H or Y):</th>
<th>Start Session:</th>
<th>Course Format (lecture/ seminar/readings, distance delivery, etc.):</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRM</td>
<td>3333H</td>
<td>Sept 2011</td>
<td>Type 1 Graduate Seminar Series (Master’s level)</td>
</tr>
</tbody>
</table>

### Course Title:

**Resuscitation Sciences Graduate Seminar Series**

<table>
<thead>
<tr>
<th>Abbreviated Course Title (maximum 30 characters and/or space or punctuation): Foundations Resusc. Research</th>
</tr>
</thead>
</table>

### Department:

Institute of Medical Science

### Instructor/course coordinator (including any other lecturers/instructors, if applicable; indicate responsibility of each instructor):

Laurie Morrison – Course coordinator. Other lecturers include: Arthur Slutsky; Paul Dorian; Julie Spence; Avery Nathens; Don Redelmeier;

This CR/NCR seminar series, will provide all students in the program an opportunity to meet, network, and hear from expert researchers in the field of resuscitation sciences. Local and international investigators will share current research projects and experiences.

### Academic Relevance – state the reason for creating the course, and its place in your program (required, elective, etc.):

This monthly seminar series for master’s participants in the Collaborative Program in Resuscitation Sciences, will expose students to current research in this emerging field; as well as an opportunity to meet with their colleagues from other departments thus enhancing opportunities for true collaboration to occur.

### Enrolment Projection (estimate):

10

### Number of Contact Hours Per Week:

N/A – this is a monthly seminar (2 hours per month)

### Prerequisite (if any):

None

### Co-requisites/ exclusions/ enrolment restrictions (if any):

Students must be enrolled in the Collaborative Program in Resuscitation Sciences in order to register for this seminar.

### Regular/continuing/extended (indicate one below)*:

___ Regular

X___ Continuous

___ Extended

*See SGS Calendar, Section 6 Course Codes
**Grading Scheme (indicate letter grade or credit/no credit (CR/NCR) designation):**

<table>
<thead>
<tr>
<th>Letter grades:</th>
<th>CR/NCR:</th>
</tr>
</thead>
<tbody>
<tr>
<td>___</td>
<td>x</td>
</tr>
</tbody>
</table>

**List components of course and percentage value for each component (no single component should have a value of more than 80% of the final grade; class participation is normally limited to no more than 10% and may not exceed 20%):**

Students are required to attend 75% of seminars.

**Schedule of evaluation of course components:**

Students are required to enroll for two consecutive sessions and attendance will be evaluated at the end of each session.

**List graduate units where significant similarity or overlap may occur (confirm endorsement by those units of this new course; attach documentation as appropriate; indicate “None” if no overlap):**

None

**Indicate resources required for delivery of course (instructor/teaching assistant/lab equipment, computing resources, distance delivery elements, etc.) and indicate whether requirements will be met through existing resources or whether additional resources will be required:**

Instructor; space; audiovisual supports. All elements of the course will be met with existing resources.

**Confirm that course proposal has been approved by a graduate unit committee (provide committee name and meeting date):**

TBA Institute of Medical Science, Curriculum Committee, Dec 2010

---

**Chair/Director Name and Contact Information:**

*(Name of Chair/Director of Graduate Unit, or designate; include title)*

Dr. Ori Rotstein, Director of the Institute of Medical Science

**Faculty Dean Name and Contact Information:**

*(Provide e-mail address, telephone number, etc.)*

Andrea Sass-Kortsak, Vice Dean Graduate Affairs  
*a.sass@utoronto.ca*  
416 946 7617
# Governance Form C: New Course

2009-2010, revised March 2010

## SECTION A: Required information

<table>
<thead>
<tr>
<th>Course designator/code (three letters):</th>
<th>Course Number and Weight (four digits + H or Y):</th>
<th>Start Session:</th>
<th>Course Format (lecture/ seminar/readings, distance delivery, etc.):</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRD</td>
<td>4444H</td>
<td>Sept 2011</td>
<td>Type 1 Graduate Seminar Series (Doctoral level)</td>
</tr>
</tbody>
</table>

**Course Title:**

*Resuscitation Sciences Graduate Seminar Series*

**Abbreviated Course Title** (maximum 30 characters and/or space or punctuation):

Foundations Resusc. Research

**Department:**

Institute of Medical Science

**Instructor/course coordinator** (including any other lecturers/instructors, if applicable; indicate responsibility of each instructor):

Laurie Morrison – Course coordinator.
Other lecturers include: Arthur Slutsky; Paul Dorian; Julie Spence; Avery Nathens; Don Redelmeier

This CR/NCR seminar series, will provide all students in the program an opportunity to meet, network, and hear from expert researchers in the field of resuscitation sciences. Local and international investigators will share current research projects and experiences.

**Academic Relevance – state the reason for creating the course, and its place in your program (required, elective, etc.):**

This monthly seminar series for doctoral participants in the Collaborative Program in Resuscitation Science, will expose students to current research in this emerging field; as well as an opportunity to meet with their colleagues from other departments thus enhancing opportunities for true collaboration to occur.

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<tr>
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<th>Prerequisite (if any):</th>
<th>Co-requisites/ exclusions/ enrolment restrictions (if any):</th>
<th>Regular/continuing / extended (indicate one below)*:</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>None</td>
<td>Students must be enrolled in the Collaborative Program in Resuscitation Sciences in the doctoral level order to register for this seminar.</td>
<td>___ Regular _<strong>X</strong> Continuous ___ Extended</td>
</tr>
</tbody>
</table>

*See SGS Calendar, Section 6 Course Codes*
**Grading Scheme (indicate letter grade or credit/no credit (CR/NCR) designation):**

<table>
<thead>
<tr>
<th>Letter grades</th>
<th>CR/NCR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**List components of course and percentage value for each component (no single component should have a value of more than 80% of the final grade; class participation is normally limited to no more than 10% and may not exceed 20%):**

Students are required to attend 75% of seminars.

**Schedule of evaluation of course components**

Students are required to enroll for two consecutive years and attendance will be evaluated at the end of each session.

**List graduate units where significant similarity or overlap may occur (confirm endorsement by those units of this new course; attach documentation as appropriate; indicate “None” if no overlap):**

None

**Indicate resources required for delivery of course (instructor/teaching assistant/lab equipment, computing resources, distance delivery elements, etc.) and indicate whether requirements will be met through existing resources or whether additional resources will be required:**

Instructor; space; audiovisual supports. All elements of the course will be met with existing resources.

**Confirm that course proposal has been approved by a graduate unit committee (provide committee name and meeting date):**

TBA Institute of Medical Science, Curriculum Committee, Dec 2010

**Chair/Director Name and Contact Information:**

Dr. Ori Rotstein, Director of the Institute of Medical Science

**Faculty Dean Name and Contact Information:**

(Provide e-mail address, telephone number, etc.)

Andrea Sass-Kortsak, Vice Dean Graduate Affairs

a.sass@utoronto.ca
416 946 7617

**Date:** December, 2010
Appendix V

Graduated Independent Clinician Scientists now active in resuscitation sciences research:

- Damon Scales - HPME PhD graduate supervised by Don Redelmeier
- Steve Brooks – University of British Columbia MSc graduate in clinical epidemiology
- Sandro Rizoli - PhD graduate supervised by Ori Rotstein
- Homer Tien – HPME MSc graduate supervised by Don Redelmeier
- Lorraine Tremblay – A. Slutsky, supervisor. PhD in IMS in 1998 on *Molecular mechanisms of ventilator-induced lung injury*
- Gerald Keirzak - PhD graduate in law and bioethics (France) supervised by Laurie Morrison
- Carolyn Snider – MSc Public Health graduate supervised by Avery Nathans

Graduated research scientists now active in resuscitation sciences research:

- Blair Bigham - L. Morrison, supervisor. MSc in IMS in 2009 on *Evaluating the Implementation and Effectiveness of the 2005 American Heart Association CPR and ECG Guidelines for Out of Hospital Cardiac Arrest*
- Valeria Rac - S. Lye, supervisor. PhD in IMS in 2007 on *Meloxicam and Preterm Birth*
- Katie Dainty – L. Morrison, supervisor. Exploring Collaborative Networks for Knowledge Translation and Clinical Trials. PhD in IMS in progress on knowledge translation (defense scheduled Autumn 2010)
- Andrew Ramadeen – P. Dorian supervisor. PhD in Pharmacology (expected Autumn 2010)

Current Trainees conducting research in the field of resuscitation sciences:

- Katie Allen – P. Dorian, supervisor. PhD in IMS in progress
- Barbara Hass – A. Nathens, supervisor. PhD in IMS in progress
- Leeanne Douglas – L. Morrison, supervisor. MSc in progress in Public Health Sciences (BSc in Paramedicine)
- Andrea Rigamonti – A. Nathens, supervisor. MSc Clinical Epidemiology in progress (MD)
- Steve Lin – L. Morrison, supervisor. MSc in progress in HPME (MD Clinician Scientist Program)
- Jason Buick – L. Morrison, supervisor. MSc in progress in HPME.
- David Gomez Jaramillo – A. Nathens, supervisor. PhD in IMS in progress.
- Leah Szadkowski – MSc Biostatistics in Public Health in progress.
Appendix VI

Selected list of theses related to resuscitation sciences recently completed at the University of Toronto.

Austin, James. Molecular mechanisms of Fas mediated cell death in oligodendrocytes. MSc.

Bigham, Blair. Evaluating the implementation and effectiveness of the 2005 American Heart Association CPR and ECC guidelines for out-of-hospital cardiac arrest. MSc.

Butler, Erin. Critical dependence on timing of cardiac injection for retention of endothelial progenitor cells and functional benefit post-myocardial infarction. MSc.

Cantelmi, David. Direction of Covert Attention after Cerebellar Damage. MSc.

Crnko, Naomi Tadea. Neutrophil activation and apoptosis in traumatic brain injury patients following pre-hospital resuscitation with hypertonic saline dextran. MSc.

DiCiano-Oliveira, Caterina. Signaling pathways linking osmotic stress to adaptive responses: roles for RHO family GTPases. PhD.

Ebrahim, Shanil. Outcomes of children receiving in-hospital resuscitation. MSc.

Fazel, Shafie. Cardiac repair and not regeneration after myocardial infarction: the role and therapeutic utility of the c-kit/sof pathway. PhD.

Jaecklin, Thomas. Soluble factors contribute to ventilator-induced lung injury. MSc.

Khadaroo, Rachel G. The cellular and molecular mechanisms regulating oxidative stress-induced priming of the macrophage: the role of the Src family of tyrosine kinases. PhD.

Miriuka, Santiago. Effects of immunosuppressants on endothelial progenitor cells. MSc.


Parr, Ann. Transplantation of adult neural stem/progenitor cells and bone marrow derived mesenchymal stromal cells in the injured adult rat spinal cord. PhD.

Santone, David Joseph. Assessing the role of mast cells in cardiac contractile dysfunction following hemorrhagic shock and resuscitation. MSc

Siddiq, Ishita. Upregulation of VEGF-A using engineered zinc finger protein gene therapy increases cell survival after lateral fluid percussion injury in rats. MSc

Smith, Cameron Reid. Ibutilide as a first-line antiarrhythmic drug in a porcine model of out-of-hospital cardiac arrest. MSc

Steele, Sherri. The Role of Fas-Mediated Apoptosis in the Pathophysiology of Acute Traumatic Spinal Cord Injury. PhD.

Tawadros, Patrick. The Role of Ceramide in Oxidant-mediated Priming of Macrophages for LPS Signaling. PhD

Tepperman, Elissa. The vascular effects of immunosuppression: Tacrolimus preserves vasomotor function and maintains vascular homeostasis. MSc

Yu, Anna. The Role of Prothrombotic Factors in the Ocular Manifestations of Abusive and Non-Abusive Head Trauma. MSc.
APPENDIX VII

Summary of Departmental Consultation Meetings

Department of Mechanical and Industrial Engineering, July 12, 2010.
Dept. representatives: Dr. Jean Zu and Dr. Michael Carter
Program representatives: Dr. Laurie Morrison and Sandy Iverson

Faculty of Nursing, July 13, 2010.
Dept. representatives: Dr. Sioban Nelson
Program representatives: Dr. Laurie Morrison and Sandy Iverson

Department of Public Health July 13, 2010.
Dept. representatives: Dr. Paul Corey
Program representatives: Dr. Laurie Morrison and Sandy Iverson

Dept. representatives: Dr. Richard Hegele
Program representatives: Dr. Ori Rotstein and Sandy Iverson

Department of Biomedical Engineering, July 26, 2010.
Dept. representatives: Dr. Paul Santerre and Dr. Tom Chau
Program representatives: Dr. Ori Rotstein and Sandy Iverson

Dept. representatives: Dr. Louise Lemieux-Charles
Program representatives: Dr. Laurie Morrison and Sandy Iverson

Department of Pharmacology & Toxicology, July 30, 2010.
Dept. representatives: Dr. Denis Grant and Dr. Peter McPherson
Program representatives: Dr. Ori Rotstein and Sandy Iverson

Department of Immunology, August 6, 2010.
Dept. representatives: Dr. Michael Ratcliffe
Program representatives: Dr. Ori Rotstein and Sandy Iverson

Department of Physiology, August 12, 2010.
Dept. representatives: Dr. Patricia Brubaker
Program representatives: Dr. Ori Rotstein and Sandy Iverson

Department of Pharmacy, August 16, 2010.
Dept. representatives: Dr. Henry Mann, Dr. Heather Boon and Dr. Muhammad Mamdani
Program representatives: Dr. Laurie Morrison and Sandy Iverson
Appendix VIII

Student consultations:

Current Trainees conducting research in the field of resuscitation sciences:

- Katie Allen – P. Dorian, supervisor. PhD in IMS in progress
- Barbara Hass – A. Nathens, supervisor. PhD in IMS in progress
- Leeanne Douglas – L. Morrison, supervisor. MSc in progress in Public Health Sciences (BSc in Paramedicine)
- Andrea Rigamonti – A. Nathens, supervisor. MSc Clinical Epidemiology in progress (MD)
- Steve Lin – L. Morrison, supervisor. MSc in progress in HPME (MD Clincian Scientist Program)
- Jason Buick – L. Morrison, supervisor. MSc in progress in HPME.
- David Gomez Jaramillo – A. Nathens, supervisor. PhD in IMS in progress.
- Tyrone Perriera – S. Strauss, supervisor. PhD in HPME in progress
- Leah Szadkowski – MSc Biostatistics in Public Health in progress
- Ivan Diamond, PhD in HPME in progress (Wales & Feldman, supervisors)

Additional students that have been identified as potentially interested but have not yet been interviewed include:

- Danielle Dunwoody, PhD, Nursing
- Carlo Santaguida, PhD, IMS (Andrew Baker, supervisor)
- Andrea Hill, PhD (A. Nathans, supervisor)
- Sanjay Sharma, MSc (A. Nathans, supervisor)
- Craig Dale, PhD, Nursing
- Orla Smith, PhD, Nursing
- Sheila O’Keefe McCarthy, PhD, Nursing
MOTION
Graduate Education Council
Tuesday, November 16, 2010

ITEM 7

Proposal to cease admission to and close the following collaborative program:
International Relations, master’s level
Munk School of Global Affairs, Faculty of Arts and Science

MOTION
THAT Graduate Education Council approve the proposal of the Faculty of Arts and Science to cease admissions to the Collaborative Master’s Program in International Relations program, effective immediately, and to close the program when there are no more students registered in it.

See attached documents:
• Governance Form A

Prior Approvals and Discussion

The proposal to close the collaborative master’s program in International Relations (informally known as “MAIR”) was approved by the Faculty of Arts and Science Three Campus Graduate Curriculum Committee (3CGC) on Tuesday, October 26, 2010. There was no substantive discussion at the meeting.

There are thirteen students currently registered in the program; it is estimated that all students will have completed the program at the end of the year.

Further Governance

GEC approval is final. It will be sent for information to the Academic Policy and Programs Committee of Academic Board in SGS’s annual report. It will also be sent to OCGS for information.
Governance Form A: General

Faculty Affiliation:
Arts and Science

Name of Graduate Unit:
Munk School of Global Affairs

Graduate Program/s involved in proposal, if any:
Anthropology – MA
Economics – MA
Geography – MA
Health Policy, Management & Evaluation – MSc
History – MA
Political Science – MA
Religion – MA
Sociology – MA
Women and Gender Studies - MA

Brief Summary of Proposed Change:
To cease admission to the MAIR program, and close the program when there are no more students registered in it.

Rationale:
Closure of the program is being sought owing to an evolution in International Relations programs at the University of Toronto, after about two years of consultation and planning.

The closure of the program will not affect students already admitted to the program. Those students will have full access to the program and course requirements to allow them to complete their degrees.

Prior Approvals/Actions and Comments:
Approved by the MAIR Academic Advisory Committee and the Munk Council in fall 2009. Collaborating departments and participating units were also consulted and notified in fall 2009.

Proposed Effective Date:
Admission will cease immediately upon approval and the Collaborative Program will close when there are no more students registered in it.

Financial and/or Planning Implications:
None

Chair/Director Name and Contact Information:
Steven Bernstein
Director, Collaborative Master’s Program in International Relations
1 Devonshire Place, Munk School of Global Affairs
M5S 3K7

Faculty Dean Name and Contact Information:
Robert Baker, Vice-Dean Research & Graduate Programs

Date: September 17, 2010
MOTION
Graduate Education Council
Tuesday, November 16, 2010

ITEM 8

Proposal to change the admission and program requirements for the following program:
Comparative Literature, MA, PhD
Centre for Comparative Literature, Faculty of Arts and Science

MOTION
THAT Graduate Education Council approve the proposal of the Faculty of Arts and Science to change the admission and program requirements to introduce a direct-entry option to the PhD in the Comparative Literature program. To be admitted, students coming out of an undergraduate program must demonstrate exceptional ability to undertake advanced research in two languages and literatures other than English. Students entering the program this way must complete at least 8.5 FCE overall, of which 4.5 FCE must be COL courses. This change is effective September 2011.

MOTION
THAT Graduate Education Council approve the proposal of the Faculty of Arts and Science to change the program requirements of the MA in Comparative Literature by removing the two-year option in the program, effective immediately.

MOTION
THAT Graduate Education Council approve the proposal of the Faculty of Arts and Science to change the program requirements of the PhD in the Comparative Literature program by reducing the overall requirements from 5.0 to 4.5 FCE, effective immediately.

See attached documents:
- SGS Governance Form A
- Calendar Entry

Prior Approvals and Discussion

The proposal was approved by the Faculty of Arts and Science Three Campus Graduate Curriculum Committee (3CGC) on Tuesday, October 26, 2010. Although there was discussion regarding direct entry into Ph.D. programs, there was no discussion related to this proposal.

Further Governance

GEC approval is final. It will be sent for information to the Academic Policy and Programs Committee of Academic Board in SGS’s annual report.
Governance Form A: General

Faculty Affiliation:
Arts and Science

Name of Graduate Unit:
Centre for Comparative Literature

Graduate Program/s involved in proposal, if any:
M.A. and Ph.D

Brief Summary of Proposed Change:
M.A. Program Requirement Change: removal of the two-year option in the M.A. program.

New direct-entry option to Ph.D.: For “direct-entry” admission to the PhD program, students coming directly out of an undergraduate program must demonstrate the ability to undertake advanced research in two languages and literatures other than English. For this option, program requirements are at least 8.5 FCE overall, of which 4.5 FCE must be COL courses.

Normal Ph.D. Program Requirement Change: Reduction of Ph.D. course load from 5 FCEs to 4.5.

Rationale:
M.A. Program Requirement Change: Although we have had a 2-year M.A. on the books, in actual practice none of our M.A. students do a 2-year program. This change aligns the structure of our program with current practice over the last 5 years.

New Ph.D. Direct-Entry Option: Direct-entry to the PhD program will enable us to manage our recruitment in a way that is more in line with many of our peer institutions in the US. This will enable us to broaden our applicant pool and attract the best students at the PhD level.

Ph.D. Requirement Change: A reduction in the number of required courses will enable our students to complete all their course work over three sessions and will facilitate their progress through the program by providing more time to prepare for their field exams and to focus on the dissertation.

Prior Approvals/Actions and Comments:
Ph.D. and M.A. program requirement changes were approved at a full faculty meeting held on September 21, 2010. Two graduate students (one at the M.A. level and one PhD) were also in attendance.

Ph.D. Direct-Entry Option was approved at a full faculty meeting on April 1, 2010.

Proposed Effective Date:
M.A. Program Requirement Change: Immediately

Ph.D. Direct-Entry Option: September 2011

Ph.D. Program Requirement Change: Immediately

Financial and/or Planning Implications:
M.A. Program Requirement Change: No financial implications
Ph.D. Direct-Entry Option: No financial implications since direct-entry PhD students will receive 5 years of funding, the same package that is currently offered to students who move from our M.A. program into the PhD.

Ph.D. Program Requirement Change: No financial implications

Chair/Director Name and Contact Information:
Professor Neil ten Kortenaar, Director
Professor Jill Ross, Graduate Coordinator

Faculty Dean Name and Contact Information:
Robert Baker, Vice-Dean Research & Graduate Programs

Date: September 22, 2010
Comparative Literature

Faculty Affiliation
Arts and Science

Degree Programs
Comparative Literature – MA, PhD

Overview
The Centre for Comparative Literature offers Master of Arts and Doctor of Philosophy degree programs to students qualified to pursue literary studies involving several languages. Students pursue research across languages and national literatures, and theoretical issues that cross traditional disciplines.

Applicants interested in graduate study at the Centre should consult the Centre’s Web site www.complit.utoronto.ca/. It provides updated information about requirements, graduate programs, course offerings, and academic profiles of graduate faculty.

Admissions are selective; therefore, applicants with the minimum qualifications cannot be guaranteed admission.

Applicants, including those from the University of Toronto, must arrange for recommendations from two referees; must submit a statement of purpose not exceeding 500 words; and must submit a sample of written work, preferably a short essay on a literary topic. Admission to all programs for higher degrees will be based upon the applicant’s undergraduate and graduate records and upon the evidence of the references and statement. The deadline for receiving applications to both the MA and PhD programs is January 15.

All incoming students will meet with the Graduate Coordinator to discuss their program and to decide on their course of study before beginning classes.

Collaborative Programs
The following collaborative programs are available to students in participating degree programs as listed below:

1. Book History and Print Culture
   • Comparative Literature, MA, PhD
2. Jewish Studies
   • Comparative Literature, MA
3. Women and Gender Studies
   • Comparative Literature, MA, PhD
4. Diaspora and Transnational Studies
   • Comparative Literature, MA, PhD
5. South Asian Studies
   • Comparative Literature, MA, PhD

Contact and Address
Web: www.complit.utoronto.ca/
E-mail: banguyen@chass.utoronto.ca
Telephone: (416) 813-4041
Fax: (416) 813-4040

Centre for Comparative Literature
University of Toronto
Degree Programs

Comparative Literature

Master of Arts

Minimum Admission Requirements

- General regulations of the School of Graduate Studies provided that applicants also satisfy the Centre for Comparative Literature's requirements stated below. In all cases, programs of study must be approved by the Centre.
- Four-year University of Toronto bachelor's degree, or its equivalent from a recognized university, that includes courses in literature and languages with an average grade of at least B+ in the applicant's overall program.
- Demonstrated experience in the study of two literatures at the undergraduate level and an ability to work at the graduate level in at least one language other than English.
- All applicants must register as full-time students.

Program Requirements

- Students admitted to the M.A. must complete at least 4.0 full-course equivalents (FCE) including at least 2.0 FCE in COL courses, among which must be COL 1000H.
- Students may pursue independent research for credit equivalent to 0.5 FCE at the MA level, under the direction of an advisor approved by the Centre.
- A plan of study defined by each MA student through consultation with the graduate coordinator in light of the student's particular areas of interest and background. This plan of study is subject to the approval of the Centre for Comparative Literature. In addition to the numerous courses in literary theory, methodology, and interdisciplinary topics offered by the Centre, courses may also be selected from departments of language and literature, as well as from other units in the humanities.
- Average of at least B+ in course work.
- MA students who intend to pursue doctoral studies are strongly advised to make appropriate plans for the acquisition of graduate level competence in a second language and literature other than English. An adequate reading knowledge of this second language must be demonstrated before the MA is received.

Normal Program Length – 3 sessions (one year full-time)

Doctor of Philosophy

Minimum Admission Requirements

- General regulations of the School of Graduate Studies provided that applicants also satisfy the Centre for Comparative Literature's requirements stated below. In all cases, programs of study must be approved by the Centre.
- University of Toronto master's degree, or its equivalent from a recognized university, with an average grade of at least A-. Normally, the master's degree will be in Comparative Literature; however, students with a master's degree in a humanities discipline involving literary studies, especially specific language and literature programs, will also be considered. Demonstrated ability to do advanced research in two languages and literatures other than English.
  - Students coming directly out of an undergraduate program with demonstrated ability to undertake advanced research in two languages and literatures other than English may be considered for direct admission into the PhD program.
- Submit preliminary statement of purpose.

Program Requirements

- Students may be admitted to either a one-year or a two-year degree depending upon their academic background. Those who have sufficient training in at least two literatures in the original languages may be admitted to a one-year program.
- Students admitted to the two-year program must complete at least 6.0 FCE including at least 3.5 FCE in COL courses, one of which must be COL 1000H.
• A student with a **four-year bachelor's degree** who is admitted directly to the Ph.D. program must take at least **8.5 full-course equivalents (FCE)** of which **4-5 FCEs must be COL courses**.

• A student with an **MA in Comparative Literature**, or its equivalent, must take at least **4.5 full-course equivalents (FCE)**, of which **2.5 FCEs must be COL courses**. A student who has an **MA in a humanities discipline** involving literary studies, especially specific language and literature programs, may be required to take more courses, up to 8.0 FCE. The actual number of courses required for the PhD will be established at the time of admission through consultation with the Director/Coordinator of Graduate Studies.

• Students define the scope and approach of their plan of study in consultation with the Graduate Coordinator and other faculty. During the first two years of the program, students complete course work, language requirements, and prepare for the field examination. Course work must be completed within the first two years of the PhD program. Students constitute a field examination/ supervisory committee and submit a dissertation proposal no later than the end of the second year of PhD study. The field examination is taken no later than the end of the first session of the third year.

• The Centre for Comparative Literature is not obligated to provide supervision in areas which fall outside the competency, interests, or availability of its graduate faculty.

• Students must demonstrate an ability to work at the graduate level in two languages and literatures other than English. An adequate reading knowledge of a third language other than English must be demonstrated before taking the field examination. For this last requirement, it is possible to substitute competency in a non-literary discipline. The Centre reserves the right to determine whether a student has met this requirement. Typically, it will be two graduate half-courses. Certification of graduate level competence and reading knowledge in languages is given to all students who qualify.

• Students may pursue independent research for credit equivalent to 0.5 FCE at the PhD level, under the direction of an advisor approved by the Centre.

• All PhD students are required to enrol in COL 4000Y, a credit/non-credit course, in addition to the agreed upon number of FCEs in their individual program. Normally students enrol in COL 4000Y after completing their course work. The course has no specific content, but it recognizes the work done in preparation for the field examination.

• When the field examination has been completed successfully, the candidate will prepare and defend a dissertation which must be an original and significant contribution to the existing body of knowledge.

• Students' progress will be assessed at least once a year by the Centre's Graduate Academic Committee and/or their respective supervisory committees.

• The student must be geographically available, visit the campus regularly, and must register as a full-time student. In addition, a full-time student is not permitted to be absent from the University for an extended period or to participate in a program offered by another university without the explicit written permission of the Centre for Comparative Literature. Ideally, the PhD program in Comparative Literature should be completed in four years, or in 5 years for students who were direct-entry admits.

**Normal Program Length** – 4-5 years (full-time PhD)

**Course List**

Students should consult the Comparative Literature handbook as well as the handbooks of other departments for courses that may be taken for credit. Information about course availability is also contained in the handbooks.

**Core Program**

- COL 1000H Faculty Seminar
- COL 5019H Cervantes and Renaissance Humanism
- COL 5021H The Body in Medieval Literature
- COL 5033H Visual Portraiture in Contemporary Autobiographical Narrative
- COL 5037H Magic Prague: Questions of Literary Cityscapes
- COL 5043H Cultural Icons: From Aleksandr Pushkin to Che Guevara
- COL 5044H A Journey from Petersburg to Los Angeles
- COL 5053H Modern Textual Imagination
- COL 5062H Prague School Semiotics of Drama, Theatre and Cinema in Contemporary Context
- COL 5066H Literature, Machine and Empire
- COL 5068H Traditions and Innovations of Epic Theatre from an Intercultural and Feminist Perspective
- COL 5070H Neo-primitivism in Contemporary Discourses
- COL 5071H Psychoanalysis, “Race,” and Culture
- COL 5072H Affinities: Readings of Realism and Radicalism
- COL 5073H Chinese Literature in the Modern World
COL 5083Y Redefining Security through Art
COL 5086H Literature, Culture and Contact in Medieval Iberia
COL 5088H Brecht and Greek Tragedy
COL 5090H Global Visual Culture
COL 5092H Lacan 1
COL 5093H Lacan 2
JFC 1255H Aspects of Structuralism
MOTION
Graduate Education Council
Tuesday, November 16, 2010

ITEM 9.1

Proposal to change the program requirements for the following combined program:
Law and Global Affairs, JD/MGA
Faculty of Law / Munk School of Global Affairs, Faculty of Arts and Science

MOTION
THAT Graduate Education Council approve the proposal of the Faculty of Law and the
Faculty of Arts and Science to change the program requirements of the combined JD/MGA
in Law and Global Affairs by replacing the requirement of a Supervised Upper Year
Research course with the requirement of an International, Comparative or Transnational
Law course, effective September 2011.

See attached documents:
- SGS Governance Form A
- Calendar Entry

Prior Approvals and Discussion

The proposal was approved by the Faculty of Arts and Science Three Campus Graduate Curriculum Committee
(3CGC) on Tuesday, October 26, 2010. There was no substantive discussion at the meeting.

Further Governance

GEC approval is final. It will be sent for information to the Academic Policy and Programs Committee of
Academic Board in SGS’s annual report.

65 St. George Street, Room 202, Toronto, ON, M5S 2Z9, Canada
Tel: +1 416 946-3427 • Fax: +1 416 978-1649 • sgs.governanceofficer@utoronto.ca • www.sgs.utoronto.ca
Governance Form A: General
2009-2010, revised March 2010

Faculty Affiliation:
Arts and Science and Faculty of Law

Name of Graduate Unit:
Munk School of Global Affairs, Faculty of Arts and Science
Faculty of Law

Graduate Program/s involved in proposal, if any:
Combined J.D./MGA

Brief Summary of Proposed Change:
Change to J.D. Requirement: Reference to "a Supervised Upper Year Research Program (SUYRP)" in the proposal or calendar entry should be replaced with "an International, Comparative or Transnational Law course" due to changes in the J.D. portion of their degree.

Rationale:
Change is being made to reflect changes made by the Faculty of Law to the requirements of the J.D. Degree. No anticipated effect on the program/students.

Prior Approvals/Actions and Comments:
Approved by the Acting Assistant Dean in the Faculty of Law in consultation with the Director of the MGA program. Proposal rose after consultation with two current JD/MGA students.

Proposed Effective Date:
September 2011

Financial and/or Planning Implications:
None.

Chair/Director Name and Contact Information:
Steven Bernstein
Director, Master of Global Affairs
Munk School of Global Affairs
e-mail: steven.bernstein@utoronto.ca
t. 416-946-8927

Judith McCormack
Assistant Dean (Acting), Faculty of Law
e-mail: judith.mccormack@utoronto.ca
t. 416-978-5793

Faculty Dean Name and Contact Information:
Rob Baker
Vice-Dean Graduate, Faculty of Arts and Science

Date: 21 October 2010
Overview
The Master of Global Affairs (MGA) is a two-year professional program, consisting of four sessions of course work, and a compulsory summer internship. The purpose of this program is to provide an outstanding professional, multidisciplinary education to train the next generation of global leaders of international institutions, global civil society, and business. The MGA will equip students with a sophisticated understanding of the larger political, economic and social contexts of global affairs and with the skills necessary to work strategically and effectively within the evolving global system.

The MGA will integrate the study of global institutions, global civil society, and the global economy and markets into the same program, and require that students learn about each area – and about the inter-connections among them.

In offering a curriculum that provides both breadth and depth, the MGA draws on the scholarly strength of faculty from a range of disciplines and subject areas. Students lacking backgrounds in basic economics will be required to take courses in micro- and macroeconomics for policy analysis.

Contact and Address
Web: http://www.globalaffairs.utoronto.ca/
E-mail: mga@utoronto.ca
Telephone: (416) 946-8917
Fax: (416) 946-8915

School of Global Affairs
Munk Centre for International Studies
1 Devonshire Place
Toronto, Ontario
M5S 3K7
Canada

Degree Programs
Combined Juris Doctor/Master of Global Affairs

The Combined Juris Doctor/Master of Global Affairs is designed for students interested in studying the intersections of law and global affairs. The combined program permits the completion of both degrees in four years rather than the five years it would take to acquire them independently.

Applicants must apply to each program separately; they should indicate on their applications that they wish to be considered for the Combined J.D/MGA program. Students are registered in the Faculty of Law in year one of the program, the School of Global Affairs for year two of the program, and in both for years three and four.

Minimum Admission Requirements

Each student in the Program shall meet the respective admission requirements of both the Faculty of Law J.D. program and Master of Global Affairs program. Students may be admitted to the Combined Program either at the time of their first application or they can apply to the MGA program during their first year of their J.D. studies. Whether admitted at the outset or after the first year of the J.D. program, however, all students will register in the School of Global Affairs only after their first year in the J.D. program.

Program Requirements

Year 1 – Full-time Faculty of Law
Year 2 – Full-time in School of Global Affairs
Summer between years 2 and 3 – Full-time in School of Global Affairs
Year 3 – Full-time Faculty of Law and Part-time in the School of Global Affairs
Year 4 – Full-time Faculty of Law and Part-time in the School of Global Affairs

- Within this combined four-year program, students must:
  - register and complete the first year of the J.D. program with at least a B standing.
  - complete the MGA 1000-level core courses (with the exception of Public International Law GLA1006H which can be substituted by LAW252H) with at least a B+ standing.
  - complete a summer internship following completion of the MGA 1000-level courses, worth .5 FCE (GLA2007H).
  - complete a further 3.5 full-course equivalents (FCE) at the 2000-level from the School of Global Affairs or graduate-level courses approved by the Director of the MGA (including the capstone seminar GLA20008Y), and 41-45 credits from the Faculty of Law, including Public International Law LAW252H (in addition to the J.D. requirements to complete a Moot, a Perspective course, and an International, Comparative or Transnational Law course). At least 9 of the 41-45 credits must be in the area of international law, which could include the following courses:
    a. International Environmental Law (LAW225H)
    b. Law, Institutions, and Development (LAW278H)
    c. International Trade Regulation (LAW285H)
    d. International Human Rights Law (LAW294H)

- To participate in the J.D. or MGA student exchange program, combined program students must have approval both from the Faculty of Law and MGA. The J.D. student exchange program allows law students to spend one term away as exchange students at an approved law school. While on exchange, J.D. students must take the equivalent of 14 U of T Law credits, as set by the Office of Assistant Dean.
Students at the Faculty of Law. Combined program students who participate in the J.D. student exchange program arrange their schedule accordingly so that they meet their program requirements during the terms in residence at the University of Toronto. The MGA student exchange program, currently under development, will allow MGA students to spend one term away as exchange students at an approved school or department of international or global affairs. While on exchange, MGA students must take the equivalent of 4 half courses (2 FTEs). No required courses can be met while on exchange. If the exchange proves incompatible with the combined program requirements, the combined program student is denied participation. Credits achieved while on a MGA exchange will count towards the MGA credit requirements only; and similarly, credits achieved while on a J.D. exchange will count towards the J.D. credit requirements only. J.D./MGA students may participate in one exchange program only during the combined J.D./MGA degree (either MGA OR J.D. exchange. At the completion of the four-year combined program, the successful student is awarded both the Juris Doctor and the Master of Global Affairs degrees which, if taken separately, would require five years of study.
MOTION
Graduate Education Council
Tuesday, November 16, 2010

ITEM 9.2

Proposal to change the program requirements for the following program:
Statistics, MSc
Department of Statistics, Faculty of Arts and Science

MOTION
THAT Graduate Education Council approve the proposal of the Faculty of Arts and Science to change the program requirements of the MSc in the Statistics program by removing the option of 3.5 FCE overall, composed of STA 3000Y plus five 0.5 FCE. All students will now be required to complete 4.0 FCE overall, one of which may be an approved supervised reading project (this was an option previously). This change is effective September 2011.

See attached documents:
- SGS Governance Form A
- Calendar Entry

Prior Approvals and Discussion

The proposal was approved by the Faculty of Arts and Science Three Campus Graduate Curriculum Committee (3CGC) on Tuesday, October 26, 2010. There was no substantive discussion at the meeting.

Further Governance

GEC approval is final. It will be sent for information to the Academic Policy and Programs Committee of Academic Board in SGS’s annual report.
Faculty Affiliation:
Arts and Science

Name of Graduate Unit:
Department of Statistics

Graduate Program/s involved in proposal, if any:
Master program in Statistics

Brief Summary of Proposed Change:
Currently students in the one year full-time MSc program can complete the program requirements in one of two ways:

* 4.0 full course equivalents (FCE), one of which may be an approved supervised reading project OR
* 3.5 FCE comprising STA 3000Y plus five 0.5 FCE.

We propose the second option be deleted so that all students must now complete 4.0 full course equivalents (FCE), one of which may be an approved supervised reading project.

Rationale:
STA3000Y is a requirement in the PhD program. Some of our MSc students continue on to the PhD program however we also have direct entry PhD students. The existing option creates an unfair advantage to the former category.

Prior Approvals/Actions and Comments:
The Graduate Committee consisting of Professors Radu Craiu, Sebastian Jaimungal, Sheldon Lin, Radford Neal, Fang Yao and Zhou Zhou made the recommendation in October 2009 and the faculty approved the changes in a departmental meeting in October 2009.

Proposed Effective Date:
September 2011

Financial and/or Planning Implications:
There are no financial or planning implications.

Chair/Director Name and Contact Information:
Radu Craiu, Associate Professor, Associate Chair for Graduate Affairs

Faculty Dean Name and Contact Information:
Robert Baker, Vice-Dean Research and Graduate Programs

Date: June 14, 2010
Statistics

Faculty Affiliation
Arts and Science

Degree Programs Offered
Statistics – MSc, PhD

Overview
Statistics is the study of random phenomena and as such encompasses a broad range of scientific, industrial, and social processes. The past several decades have witnessed a vast impact of statistical methods on virtually every branch of knowledge and empirical investigation.

The Department of Statistics offers opportunities for study and research in the areas of (a) Statistical Theory and Applications and (b) Probability, leading to the Master of Science and the Doctor of Philosophy degrees. Starting with the Academic Year 2011-1012 and pending approval from the Ontario Council on Graduate Studies, the Department of Statistics will also start to offer a Doctor of Philosophy degree in the field of Actuarial Science and Mathematical Finance. Please visit the Department of Statistics website at www.utstat.utoronto.ca for further details about the program and admission requirements.

The Department has substantial computing facilities available and operates a statistical consulting service for the University’s research community. Programs of study may involve association with other departments such as Mathematics, Mechanical and Industrial Engineering, Computer Science, or Public Health Sciences. The Department maintains an active seminar series and strongly encourages participation by graduate students.

Students are accepted under the general regulations. Proof of English facility must also be shown for all applicants whose first language is not English and who studied at an institution where the language of instruction was other than English.

Interested applicants should refer to the detailed information available on the Department’s web site.

Contact and Address
Web: www.utstat.utoronto.ca
E-mail: grad-info@utstat.utoronto.ca
Telephone: (416) 978-5136
Fax: (416) 978-5133

Department of Statistics
University of Toronto
Sidney Smith Hall
Room 6022, 100 St. George Street
Toronto, Ontario M5S 3G3
Canada

Degree Programs

Master of Science

Minimum Admission Requirements
- Appropriate four-year bachelor’s degree with a final year average of at least mid-B from the University of Toronto or its equivalent from another recognized university.
- Recommended background of courses as outlined on the Department’s Web site.

Program Requirements
All programs must be approved by the Associate Chair for Graduate Studies.
One Year Full-Time Program
Students within this option normally complete:
- 4.0 full course equivalents (FCE), one of which may be an approved supervised reading project.

Part-Time Program
Students must satisfy the program requirements outlined for the full-time MSc.

Minimum Period of Registration - 3 sessions
Time Limit - 5 years
Normal Program Length - [q] sessions (full-time); [r] sessions (part-time)

Doctor of Philosophy

Minimum Admission Requirements
- Appropriate University of Toronto master's degree or its equivalent, with an average of at least B+ or demonstrated comparable research competence.
- The Department of Statistics considers exceptional applicants directly from undergraduate studies. These applicants must meet additional course requirements.

Program Requirements

PhD Program
- 3.0 full-course equivalents (FCE) including STA 2101H, STA 2111H, STA 2201H, STA 2211H, and STA 3000Y.
- Students are required to pass a comprehensive examination in theoretical statistics, probability, and applied statistics prior to embarking on a thesis.
- Submission of a suitable thesis.
- One-year residence period.
- Further details are found in the Graduate Information available on the department's Web site.

Direct Entry Program
Students admitted to the direct entry program must normally:
- Complete STA 2101H, STA 2111H, STA 2201H, STA 2211H, STA 3000Y plus 2.0 FCE.
- Students are required to pass a comprehensive examination in theoretical statistics, probability, and applied statistics prior to embarking on a thesis.
- Submission of a suitable thesis.
- Satisfy a two-year residency requirement.
- Further details are found in the Graduate Information available on the department's Web site.

Minimum Period of Registration - 3 sessions
Time Limit - 6 years (full-time PhD); 7 years (direct entry PhD)
Normal Program Length - [a] years (full-time PhD); [b] years (direct entry PhD)

Course List
The Department offers a selection of courses each year from the following list with the possibility of additions. The core courses will be offered each year. Consult the Graduate Information brochure for courses offered in the current academic year.

STA 1001H  Applied Regression Analysis
STA 1002H  Methods of Data Analysis
STA 1003H  Sample Survey Theory and its Application
STA 1004H  Introduction to Experimental Design
STA 1005H  Applied Multivariate Analysis
STA 1007H  Statistics for Life and Social Scientists
STA 1008H  Applications of Statistics
STA 2004H  Design of Experiments
STA 2006H Applied Stochastic Processes
STA 2047H Stochastic Calculus
STA 2050H Mathematical Methods for Statistics
STA 2100H Mathematical Methods for Statistics
STA 2101H Methods of Applied Statistics I
STA 2102H Computational Techniques in Statistics
STA 2103H An Introduction to Bayesian Inference
STA 2104H Statistical Methods for Machine Learning and Data Mining
STA 2105H Nonparametric Methods of Statistics
STA 2111H Probability Theory I
STA 2112H Mathematical Statistics I
STA 2162H Statistical Inference I
STA 2201H Methods of Applied Statistics II
STA 2202H Time Series Analysis
STA 2209H Lifetime Data Modelling and Analysis
STA 2211H Probability Theory II
STA 2212H Mathematical Statistics II
STA 2262H Statistical Inference II
STA 2270H Introduction to Wavelet Methods in Statistics
STA 2342H Multivariate Analysis I
STA 2442H Multivariate Analysis II
STA 2453H Statistical Consulting
STA 2500H Loss Models
STA 2501H Mathematical Risk Theory
STA 2502H Stochastic Models in Investments
STA 2503H Applied Probability for Mathematical Finance
STA 2505H Credibility Theory and Simulation Methods
STA 2542H Linear Models
STA 3000Y Advanced Theory of Statistics
STA 3003H Advanced Sample Survey Theory and Practice
STA 3047H Stochastic Processes
STA 3077H Research Topics in Probability Theory
STA 3101H Neural Networks and Related Statistical Methods
STA 3102H Stat Theory-Quality Control
STA 3103H Bayesian/Likelihood Asymptotics
STA 3431H Monte Carlo Methods
STA 4000H Supervised Reading Project I
STA 4210H Smoothing, Semi- and Non-parametric Regression
STA 4246H Research Topics in Mathematical Finance
STA 4247H Research Topics in Stochastic Processes
STA 4272H Research Topics in Statistics
STA 4273H Research Topics in Bayesian Inference
STA 4274H Research Topics in Statistical Computation
STA 4275H Research Topics in Likelihood Inference
STA 4276H Research Topics in Monte Carlo Methods
STA 4312H Bayesian Linear Models
STA 4315H Computational Methods in Statistical Genetics
STA 4352H Research Topics in Multivariate Statistics
STA 4360H Theory of Pivotal and Direct Inference
STA 4364H Conditional Inference: Sample Space Analysis
STA 4406H Statistical Inference for Stochastic Processes
STA 4412H Topics in Theoretical Statistics

Graduate Faculty
Graduate faculty data will be downloaded from the HRIS for placement here. For procedures on updating faculty data and to download appointment forms (checklists), visit www.sgs.utoronto.ca/adminsupport/gradfac.htm
ITEM 11

External Awards Success Rate Report

Documentation to be distributed at the meeting:

• External Awards Success Rate Report