

**MEETING OF FACULTY COUNCIL
OF THE FACULTY OF MEDICINE**

A meeting of Faculty Council will be held on **Monday, February 9, 2015**, from 4:00 p.m. to 6:00 p.m. in the **Red Room, Donnelly Centre**, University of Toronto.

AGENDA

- | | | |
|--|--|-------------------------------------|
| 1 | Minutes of the previous meeting of Faculty Council – September 29, 2014 | Speaker |
| 1.1 | Business Arising | |
| 2 | Report from the Speaker | Speaker |
| 2.1 | Report on External Reviews | |
| 3 | Reports from the Dean’s Office | |
| 3.1 | Report from the Dean’s Office | T. Young |
| 3.2 | Vice-Dean, Research & International Relations | A. Buchan |
| 3.3 | Vice-Deans, Education | J. Rosenfield
G. Bandiera |
| 4 | Faculty Council Forum | |
| Graduate Education in the Faculty of Medicine: Innovation and Transformation | | A. Buchan
P. Hamel
A. Kaplan |
| 5 | New Business | |
| 5.1 | Executive Committee | Speaker |
| 5.1.1 | <i>“THAT the proposed amendments to the Faculty of Medicine Bylaws be approved as submitted.”</i> | Speaker |
| 5.2 | Graduate Education Committee | C. Evans |
| 5.2.1 | <i>“THAT the proposal to establish a field of study, Applied Immunology, within the MSc Immunology Degree Program be approved as submitted.”</i> | A. Kaplan |
| | <i>“THAT the current field of study within the MSc Immunology Degree Program be renamed Fundamental Immunology.”</i> | |
| 5.3 | Education Committee | I. Witterick |
| 5.3.1 | <i>“THAT the proposed Major Modification to the Undergraduate Medical Education Preclerkship Curriculum be approved as submitted.”</i> | M. Schreiber
P. Bryden
M. Law |

6 **Standing Committee Annual Reports**

- 6.1 BScPA Board of Examiners
- 6.2 Appeals Committee

R. Goldberg
D. Templeton

7 **Adjournment**

Speaker

NEXT MEETING: May 4, 2015 (previously scheduled as April 27, 2015)



**FACULTY COUNCIL
FACULTY OF MEDICINE**

Meeting Materials – February 9, 2015

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UNIVERSITY OF TORONTO

FACULTY OF MEDICINE

Faculty Council of the Faculty of Medicine
Minutes of the September 29, 2014 meeting
4:00 p.m.
Red Room, Donnelly Centre

Members Present: L. De Nil (Speaker), P. Poldre, A. Jakubowski, A. Buchan, S. Spadafora, M. Connell, T. Coomber, J. Hall, T. Neff, L. Manchul, I. Witterick, R. Forman, J. Rosenfield, A. Rachlis, J. Barkin, B. Horne, A. Kaplan, S. Verma, C. Whiteside, B. Papsin, C. Evans, B. Steipe, A. Emili, P. Kim, S. Belo, G. Yousef, R. Kirsch, D. Salonen, V. Taylor, P. Wilansky, L. DiProspero, D. Dawson, S. Nixon, A. Eriks-Brophy, Y. Yunusova, N. Chattergoon, R. Vanner, A. Damji, A. Deshwar, S. Feng, S. Rappolt, J. Nodwell, P. Wildgoose

Call to Order

The Speaker called the meeting to order and noted that there was a quorum. Dr. De Nil informed the members that the Faculty Council Forum would be postponed to the February 9, 2015 meeting due to unforeseen circumstances.

1 Minutes of the previous meeting of Faculty Council – May 5 , 2014

The minutes of the meeting of May 5, 2014 had been previously circulated. They were approved on a motion from S. Verma and seconded by A. Buchan. There was no business arising.

2 Report from the Speaker

The Speaker noted that this would be the final meeting of Dean Whiteside's term as Dean and wished to say a few words on behalf of Council. Prior to becoming Dean, Dean Whiteside served as a Graduate Coordinator and as the Associate Dean of Graduate and Inter-Faculty Affairs. The Dean has been an advocate for teaching excellence and has won numerous teaching awards. Dean Whiteside was a champion of the interfaculty teaching program and the BSc programs. The Dean undertook a major restructuring of the Dean's Office and has exceeded all expectations in fundraising. Dr. De Nil mentioned that, in his time as Chair of Speech-Language Pathology, meetings with Dean Whiteside were always thorough - she would always ask the difficult questions but that she was also always fair and supportive of those who were working to make things better.

2.1 Report on External Reviews

As per the Faculty Council By-Laws, the Executive Committee received and reviewed External Reviews for the Centre for Faculty Development, the Centre for Forensic Science and Medicine, the Centre for Interprofessional Education and the Terrence Donnelly Centre for Cellular and

3 Reports from the Dean's Office

3.1 Report from the Dean's Office

Dean Whiteside thanked the Speaker for the kind words and noted that she wasn't finished yet and has much more to accomplish in the coming months.

Dean Whiteside thanked everyone who participated in the recent strategy retreat, [Fulfilling our Potential](#), and noted that the report from the event is now online. The Dean indicated that the feedback received from the Faculty leaders at this event will help provide strategic direction to the Faculty.

Dean Whiteside noted that there has been agreement on a [guiding document](#) between the government and Ontario universities that will provide defined metrics that the universities will have to achieve. The Dean noted that the University of Toronto has been singled out amongst the group for its innovation.

Dear Whiteside mentioned that, while it is not within the purview of Faculty Council, the Faculty budget is related to the academic mission. Given the current economic climate, the Dean is working with all Faculty leads to focus on academic priorities.

3.2 Vice-Dean, Research & International Relations

Vice Dean Alison Buchan noted that there is a new expanded list of funding opportunities on the [Faculty of Medicine Research website](#). Dr. Buchan indicated that many of these are from smaller foundations that may not have been explored in the past. Due to the reform to the CIHR open grant competition, normal renewal will not be possible. Dr. Buchan indicated that these grants are likely smaller than what has been received from CIHR in the past but that they will help bridge the gap to the new CIHR process. Dr. Buchan indicated that CIHR received three times the expected number of applications to the foundation program including many who have never received CIHR funding. In March 2015, researchers can apply to a normal 5 year grant. There will be no open competition in September 2015. In March 2016 CIHR will switch to the new program.

3.3 Vice-Deans, Education

Dr. Jay Rosenfield presented the report that is included in these minutes beginning on page 5.

Dr. Rosenfield drew particular attention to the update of the eLearning Task Force and the ongoing SWOT and Gap Analysis. He invited members to participate by completing a brief survey over the coming weeks: <https://fluidsurveys.com/surveys/dc-N/elearning-swot-analysis/>

4 New Business

4.1 Research Committee

4.1.1 The Rehabilitation Sciences Institute

The following was moved by A. Buchan and seconded by S. Spadafora:

“THAT the proposal to establish the Graduate Department of Rehabilitation Science as an EDU:B renamed The Rehabilitation Sciences Institute be approved as submitted.”

Dr. Allan Kaplan indicated that this initiative was being brought forward by the current Chair of the Graduate Department of Rehabilitation Science which encompasses the Department of Occupational Science and Occupational Therapy and the Department of Physical Therapy. Dr. Kaplan indicated that the new EDU will have its own director rather than the current rotating Chair system which has been onerous for the Chairs of these two departments.

The motion passed.

4.1.2 The Centre for Integrative Medicine

The following was moved by A. Buchan and seconded by S. Verma:

“THAT the proposal to establish The Centre for Integrative Medicine as an EDU:C be approved as submitted.”

Dean Whiteside noted that the proposed centre represents a partnership between Medicine and Pharmacy. The Dean indicated that integrative medicine is the blending of traditional medicine with western medicine and noted that many faculty members are involved in blended practice or engaged in basic science research related to traditional medicine. The main hospital partner is the Scarborough Hospital and, though official collaborators are limited at this time, there are many interested partners. Dean Whiteside noted that a director has been hired to lead the Centre.

Dr. Ian Witterick asked why the partnership in China was limited to the two universities in Hong Kong. The Dean indicated that this was just a starting point and that these two institutions have a focus on eastern medicine. There are plans to expand the partnership with other universities in China.

Dr. Witterick also inquired as to how the success of the Centre would be measured. The Dean indicated that the Centre would be part of the five year external review process, as are all Faculty of Medicine EDU-Cs.

Narayan Chattergoon asked if consideration had been given to including East Indian medicine. Dean Whiteside indicated that there was no one currently involved with that focus but that the Centre is not limited to Chinese medicine. The academic mission of the Centre does not limit its scope.

Dr. Jack Barkin inquired as to how the Centre would be funded. The Dean indicated that the two partner Faculties have provided a small amount for startup costs. There is also a three million dollar endowed Chair for the director. Fundraising will also be ongoing.

The motion passed.

5 Standing Committee Annual Reports

5.1 UME Board of Examiners

Dr. Blake Papsin praised the work of the Board and noted that they are both hardworking and innovative. Since he's taken over as Chair, the group meets more frequently than it has in the past (approximately 11 times per year) which allows the Board to react to issues earlier. This, along with better processes such as better differentiation between extra work and remediation and defining certain courses as unremediable, has made the Board more efficient. Dr. Papsin presented the Board statistics found on page 30 of these minutes. Four first year students are currently still undergoing remediation. There are a large number of students on Leaves of Absence due to better process and support. The large number of students on remediation in upper years is related to the iOSCE but most of these students remediate with no issue.

5.2 MRS Board of Examiners

Dr. Anthony Brade was unable to attend due to clinical commitments. The Speaker read the following report on his behalf:

The Medical Radiation Sciences Board of Examiners reviews cases of students in academic difficulty and determines the appropriate course of action, which may include promotion, remediation, failure, suspension and dismissal.

The MRS Board of Examiners met 4 times in 2014 with one addition meeting scheduled for next week. The BOE has reviewed the cases of 23 students so far this year. One student was reviewed twice in 2014.

15 students were placed on remediation with 3 of these being for reasons of professionalism. 4 students were placed on remediation with probation. 3 students received modified programs without a change in academic status.

6 Adjournment

The meeting was adjourned at 5:05pm



Council of Education Vice-Deans Faculty Council Report

September 29, 2014

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Office of the Education Vice-Deans, Integrative Activities

eLearning Task Force – Update

In January 2014, the Faculty of Medicine launched an **eLearning Task Force**, co-chaired by Professors Dimitri Anastakis, Vice Dean of Continuing Professional Development, and Jay Rosenfield, Vice Dean of Undergraduate Medical Professions Education.

Task Force membership **continues to grow**, spanning across all of the portfolios and education units and consisting of undergraduate, postgraduate, graduate and adult learners. The Task Force includes representatives from the Ontario Institute of Studies in Education, Biomedical Communications and the University of Toronto Innovations and Partnerships office.

The eLearning Task Force is **currently conducting** a high-level SWOT and Gap Analysis within the FOM community to identify the gaps between where we are today and where we want to be over the next decade and beyond. The specific methodological steps include:

- Completing an inventory of eLearning efforts and resources across the Faculty,
- Conducting a literature review and an environmental scan of best practices in eLearning,
- Interviewing global leaders in eLearning, and
- Conducting focused interviews with learners, internal and external stakeholders.

The **Task Force's recommendations** will enable us to further position the FOM as a leader in eLearning (i.e., teaching, learning and scholarship) across the education continuum. Their findings will lay the foundation to ensure that we have the competencies and infrastructure to provide the best education for today's and tomorrow's learners.

One of the core strengths of this project is how highly collaborative it is. We want to involve as many of our stakeholders as possible to make this an engaging and participatory process. In addition to gathering information (through completed surveys, data collection and analysis, and focused stakeholder interviews), we will also be sharing information throughout the process. We are currently developing a website to share our findings in real time, and a draft report is scheduled for completion by late October with a final report projected for December 2014.

At this time, we invite you to contribute to this project by sharing the unique eLearning strengths, weaknesses, opportunities and threats that you perceive within your individual portfolio. Your feedback is exceptionally valuable to this project, and we hope that you will **share your perspective** with us through a brief survey: <https://fluidsurveys.com/surveys/dc-N/elearning-swot-analysis/>

If you would like to learn more about the eLearning Task Force, please contact Lindsey Fechtig at lindsey.fechtig@utoronto.ca.

Education Achievement Celebration – Save the Date

The Education Vice-Deans are pleased to announce the date of the 2015 Education Achievement Celebration:

Tuesday May 12, 2015

5:00 pm – 7:00 PM

Great Hall, Hart House (7 Hart House Circle)

Education Development Fund – List of funded projects

We are pleased to announce the recipients of the 2014 Education Development Fund:

The Creation of a Web-based Learning Module for Indigenous Health Education

- Drs. Lisa Richardson and Jason Pennington, Department of Medicine

Exploring Continuity, Integration, Context and Curriculum during Longitudinal Integrated Clerkship (LIC) Training

- Drs. Karen Weyman and Maria Mylopoulos, Department of Family and Community Medicine

Fostering Continued Professional Development in the Workplace: TESCoP (Teaching and Education Scholarship Community of Practice)

- Drs. Debbie Kwan and Denyse Richardson, Pharmacy and Medicine

Adapting Theatre Practice to Enhance Role-playing and Communication Skills of Occupational Therapy Trainees

- Dr. Jill Steir, Occupational Science & Occupational Therapy

Developing a Lifelong Learning Curriculum to Prepare Psychiatry Residents for Continuing Professional Development

- Drs. Sanjeev Sockalingam and David Wiljer, Department of Psychiatry

The Health Advocate Role in Family Medicine and Psychiatry Residency Curricula

- Drs. Sophie Soklaridis and Carrie Bernard, Department of Family and Community Medicine and Psychiatry

Development of an Introductory eLearning Course on Clinical Research Methods and Quality Improvement for the Toronto-Addis Ababa Academic Collaboration

- Drs. Stefan and Neill Adhikari, Medicine (Anesthesia)

Resource Stewardship Workshop: Teaching Internal Medicine and Pediatric Residents to Communicate Effectively with Patients to Avoid Potential Harm from Unnecessary Diagnosis Tests

- Drs. Geetha Mukerji and Adina Weinerman, Department of Medicine and Pediatrics

Implementing a Point-of-Care Ultrasound Curriculum for CCFP-EM Residents

- Drs. Deborah Leung and Jordan Chenkin, Department of Family and Community Medicine, Division of Emergency Medicine

Developmental Evaluation of Applied Clinical Pharmacology as a New Field of Study in the Master of Science in Pharmacology Program

- Drs. Cindy Woodland and Michelle Arnot, Department of Pharmacology and Toxicology

Evaluation of Short-term Field-based Global Health Training Programs Through Trainee and Host Community Perspectives

- Dr. Sumeet Sodhi, Department of Family and Community Medicine

High-Fidelity eLearning to Support Competency-based Residency Training

- Drs. Meredith Guiliani and Caitlin Gillan, Radiation/Oncology

Undergraduate Medical Education Faculty Council Update

CaRMS – 2014 Match Results

- 94% of UofT MD students who applied to Canadian residency positions were matched in the first iteration of CaRMS (national average = 95%)
- 55% of UofT MD students who applied to Canadian residency positions were matched to UofT residency programs (national average = 13%)
- 39% of UofT MD students matched in the first iteration of CaRMS were matched to Family Medicine
- Two UofT MD students matched to residency programs in the United States
- Following the second iteration of CaRMS, 7 of 16 UofT MD students were successfully placed in residency programs

Admissions – Fall 2014 Entry

MD Program

	Fall Entry
Applicants	3463
Files Reviewed	1990
Interviews	600
Offers	336*
Acceptances	268**

*including 6 deferrals from fall 2013 entry

** including 9 deferrals for fall 2015 entry

MD/PhD Program

	Fall Entry
Applicants	116
Files Reviewed	88
Interviews	43
Offers	12*
Acceptances	9*

*including 2 current MD students

Update – Longitudinal Integrated Clerkship

At its February 10, 2014 meeting, Faculty of Medicine Faculty Council approved a proposal to introduce a voluntary **Longitudinal Integrated Clerkship (LiNC)** experience that MD students can apply to complete in place of the program's existing third-year Clerkship. Since that time, work on the project has been progressing nicely and is on schedule.

The ultimate goal is to have 50 students (approximately 20% of the class) in a LInC across all four academies on an ongoing basis, starting with the 2016-17 academic year, with the potential of further expansion in the future. A notification of curricular change has been submitted to CACMS.

Implementation of the LInC experience for the 2016-17 academic year will be informed by a LInC pilot program, which is scheduled to run over the 2014-15 and 2015-16 academic years, as follows:

- For the 2014-15 academic year, eight students from one of our four academy sites (Fitzgerald Academy) applied to complete and were accepted into the LInC pilot program. (One of the eight students subsequently decided to pursue a PhD and withdrew from the LInC pilot. The space will not be filled.)
- For the 2015-16 academic year, plans are underway to expand the LInC to some or all of the other academies (Peters-Boyd, Wightman-Berris and the Mississauga Academy of Medicine). Consultation and engagement with and within the academies and their hospital partners is ongoing.

In the spring 2014, faculty, staff and students were provided with an opportunity to vote for their favorite Longitudinal Integrated Clerkship acronym. With almost 50% of the 324 votes, LInC was chosen.

For the 2014-15 LInC pilot, individual schedules, with exam times, have been created for each of the participating students. Enhancements have been made to MedSIS to support the creation of individualized and adaptable timetables.

A critical feature of the LInC experience is that students work longitudinally with a small number of preceptors, which supports the development of a mentoring relationship with these supervisors. Owing to the novel nature of this teaching and mentoring, faculty development has been and continues to be an important priority. A faculty development event was held at St. Michael's Hospital on June 23, 2014. Further events, including sessions being held by clinical departments, are planned for the future.

The **LInC Communications Subcommittee** has been hard at work developing tools to ensure that the LInC model is recognized and understood by health care providers at the participating hospitals. Such tools include one-page information documents, stories in hospital-based newsletters, webinars, an information card that LInC students can provide to patients and health care providers, a LInC wordmark, and a lanyard that clearly identifies LInC students.

Students in the LInC will have as a focus of their clinical learning a panel of patients, which will consist of 50-75 patients who represent various developmental milestones of a person's life and reflect diversity in the population in terms of ethnicity, gender, ability and other attributes. Collaboratively, all clerkship directors devised a list of 34 required panel patients with a variety

of demographic and clinical characteristics to optimally support student learning. Early on in the clerkship year, primary preceptors will help LInC students acquire the required panel patients. Steps have been taken to ensure that adequate technology is in place such that LInC students are able to follow the patients on their panel, log their patient panel activities, and provide reflections on these activities. Information regarding LInC students' patient panels will be stored on secure servers at the participating hospitals. These information storage systems have been (and will be) developed in consultation with hospital-based privacy commissioners, and LInC students will receive extra training on the relevant hospital-based information systems.

Students in the LInC pilot will be required to complete an advocacy project in place of the academic project completed by block clerks. The goal of the project is to engage LInC students in the CanMEDS Advocacy role through scholarly work and proposed or active interventions relating to patients who they identify on their patient panel. A working group was formed to develop learning objectives, format, timelines and evaluation requirements. Dr. Philip Berger, the UME Advocacy Lead, will provide mentoring to the seven LInC students in 2014-15 regarding their projects.

A **Research Subcommittee** has been established. Drs. Karen Weyman and Maria Mylopoulos submitted an Education Development Fund application regarding the LInC, which was awarded in the amount of nearly \$20,000. Four LInC-related poster abstracts were submitted for The Muster Conference in Uluru, Australia. The topics are: students' perspective, patient panel, roadblocks and challenges, and faculty development.

Update – Preclerkship Renewal

Work is well underway on a significant renewal of the MD program's preclerkship curriculum. Consultations regarding the preclerkship renewal, including endorsement of the renewal process by the UME Executive Committee, were initiated the summer 2013 and continued over the 2013-14 academic year. A summary of the renewal process was provided in the April 2014 UME report to Faculty Council.

Full implementation of the new preclerkship curriculum model is planned for the 2016-17 academic year. Development of the new preclerkship curriculum model will be informed by two pilot projects, as follows:

- Students entering the MD program in the fall 2014 will be introduced to a three-week introductory version of the renewed preclerkship curriculum in November as part of the existing first year Structure and Function course. This **Phase 1 curricular change** is constructed around a virtual congestive heart failure case that students currently experience (via Mr. GB), which will be complemented by a COPD case during respiratory week and a hypertension case during cardiovascular week. Further integration will take place in related sessions in the first year Art and Science of Clinical Medicine (ASMC-1) and Community, Population and Public Health (CPPH) courses.

- Planning is underway for a **Phase 2 implementation** for both the first and second students during the 2015-16 academic year.

Both modules will be evaluated in collaboration with the Wilson Centre for Research in Education.

A Concept Organization Group – comprised of 13 members of the preclerkship committee – is working on **i)** identifying the overarching content framework for the curriculum and the sequencing of the concepts for the first two years, **ii)** developing learning objectives, and **iii)** identifying specific cases (including revised versions of existing PBL cases) that can be tied to the concept and curriculum.

Three other working groups – Portfolio and Assessment, Toronto Online Patient-Centered Integrated Curriculum (**TOPIC**), and Integrated Clinical Experience (**ICE**) – that align with major components of the new curriculum model have identified objectives as well as processes for achieving those objectives.

A consulting firm has been retained to provide high-level project management support. The firm has successfully supported undergraduate medical education curricular renewal projects for the UBC Faculty of Medicine and NOSM.

Next steps include presentation of a formal proposal to the Faculty Council Education Committee in October 2014 and, from there, to Faculty Council in February 2015.

Update – Academy Membership Framework

Although the Academy system was identified as a particular strength of the MD program by the accrediting bodies in their October 2012 accreditation report, there are no formal documents that describe the structure and governance of the Academies. Between April and August 2013, Sarita Verma (Deputy Dean and Associate Vice-Provost, Health Professions Education) and Jay Rosenfield (Vice-Dean, Undergraduate Medical Professions Education) led a series of consultation meetings with the Academy Directors and designated education leads of the University's nine fully-affiliated hospitals and four major community-affiliated hospitals. The focus of those meetings was the development of an Academy Membership Framework, including Academy membership type definitions (and corresponding roles and responsibilities) as well as principles and guidelines intended to inform the management and collaborative delivery of the MD program through and within the Academy system.

The designated education leads of the nine fully-affiliated hospitals and four major community-affiliated hospitals who participated in the consultation meetings confirmed that they would like to maintain the existing Academy configurations.

At an Academy Summit held on May 29, 2014, the designated education leads (or their representative) of the University's nine fully-affiliated hospitals and four major community-affiliated hospitals unanimously endorsed the Academy Membership Framework, which had been updated to reflect feedback provided during the consultation process. They also endorsed the development of an Academy Letter of Understanding template. Work on the template letter is in progress, with the goal of presenting a final draft to the TAHSN CEOs in the fall 2014.

Summer Mentorship Program – 20th Anniversary Event

The **Summer Mentorship Program (SMP)** provides high school students from under-represented populations with an opportunity to explore health sciences at the U of T over four weeks in July. It is offered to approximately 50 students each year. An event marking the 20th anniversary of the SMP was held on the evening of July 30, 2014 at the Hart House Great Hall. Over 230 people attended the 20th anniversary event, including current SMP students and alumni, parents of SMP students, founders of the program, and faculty and staff from the Faculty of Medicine and other health professions Faculties (Pharmacy, Social Work, Dentistry, Nursing, and Kinesiology). Dr. Leslie Nickell graciously hosted the event and the speakers included Dean Whiteside, Indigenous Elder Jacqui Lavalley and two SMP alumni: Erik Mandawe and Husam Abdel-Qadir. It was an auspicious occasion celebrating the program's continued success.

Governance & Leadership

- Dr. Adelle Atkinson was appointed Acting Associate Dean, Undergraduate Medicine Admissions and Student Finances, effective July 1, 2014 for a six month term while Dr. Mark Hanson is on administrative leave
- Dr. Amy Bourns was appointed as the first Faculty Lead for LGBTQ (Lesbian, Gay, Bisexual, Transgender & Queer) Health Education, effective July 2014
- Dr. Neil Sweezey was appointed Director for Comprehensive Research Experience for Medical Students (CREMS) Programs, effective September 15, 2014
- Dr. Allison Chris was appointed as Course Director for the new Community, Population and Public Health (CPPH) course, effective July 1, 2014
- Dr. Debra Katzman was appointed as Course Director for the new Health Science Research (HSR) course, effective August 1, 2014
- Dr. Heather Sampson was appointed as Course Director for the final offering of the Determinants of Community Health-2 (DOCH-2) course in the 2014-15 academic year

Physician Assistant Program

1. Move to September Start:

The BScPA program had a January start date for student entry since inception (January 2010). For 2014, a cohort began the program in January, but a second cohort also began Sept 2, 2014. Moving forward, all cohorts will start in September. This aligns the program with the Faculty of Medicine programs as well as most of the programs within the greater university. Students will also benefit by completing the program in August, well before the annual national certification examination sitting in October.

2. Admissions:

	Jan 2010 Entry	Jan 2011 Entry	Jan 2012 Entry	Jan 2013 Entry	Jan 2014 Entry	Sept 2014 Entry
Applicants	160	152	236	215	259	244
Files Reviewed	117	71	91	90	91	107
Interviews	64	49	59	66	66	66

3. Changes to Admissions requirements:

In response to the need to extend the applicant pool, allowing for the best students to have access to the program, and to potentially begin to increase the cohort size, the BScPA Program Admissions & Selection Committee has approved the following changes in the admission requirements:

- 1) 2.7 CGPA is now a required minimum for consideration (previously there was no requirement, although a preference of 3.0 GPA was posted)
- 2) Required health care experience is reduced to 910 hours from 1680 and broadened to include non-direct patient care as well as volunteer (within the last 5 years preferred)

4. Curricular review and changes:

The **Curriculum Working Group of the BScPA Program Restructuring and Integration Task Force** has suggested that while the curriculum content of the BScPA program is sound (as evidenced by success rate on the national competency exam as well as employment rate), efficiencies can be found to reduce student cognitive load and staff burdens. Previously, in the second year (clinical year) of the program, students also participated in academic courses throughout the year. Academic courses ran simultaneously with the clinical rotations. Academic courses have now been concentrated into dedicated weeks prior to and between clinical rotations. This allows students to increase their didactic learning prior to their first clinical

rotation and improve focus on daily preparation for clinical rotations as suggested by preceptors.

Medical Radiation Sciences Program Updates:

The newly redesigned Nuclear Medicine and Molecular Imaging (NMMIT) stream of the MRS Program launched in September 2014 with an initial cohort of 16. The main features of the redesigned NMMIT program allow students to build competency as they progress through the program and include:

- Hybrid delivery model in both asynchronous and synchronous learning environments (live, tutorial, simulation and lab work)
- Integrated program design with common content threads and competencies interwoven across courses and learning environments
- Earlier clinical experiences with three 4-day clinical placements being introduced into the 4th and 5th semesters of the program
- Case-based learning to encourage critical inquiry and problem solving abilities

An extensive evaluation plan has been drafted to assess the design and implementation of the new curriculum and the desired outcomes. The plan has been mapped to monitor and capture data over the next four years, with a long term focus for Continuous Quality Improvement.

For the academic year 2014/2015 the Radiation Therapy stream of the MRS Program will be hosting a student from Brazil enrolled in the **Ciência sem Fronteiras (CsF)** Program (formerly Science without Borders). This is the first time that a student from the CsF Program has been placed in the Faculty of Medicine.

2014/2015 MRS Program Enrollment:

Total Program Enrollment: 269

- Radiological Technology: 120
- Nuclear Medicine and Molecular Imaging Technology: 16
- Radiation Therapy: 133*

**Including the CsF student who will attend for 2 semesters only*

Postgraduate Medical Education Faculty Council Update

PGME Topics/Issues/Events	
<u>PGME Leadership & Annual Report</u>	<u>ICRE: PGME Showcase Focusing on CQI and Supporting Best Practices</u>
<u>CARMS 2015</u>	<u>Internal Review Committee and Accreditation</u>
<u>Chief Resident Leadership Workshop</u>	<u>Medical Trainee Days Project</u>
<u>Global Health</u>	<u>MERS-COV Screening</u>
<u>Graduation Events</u>	<u>PGMExchange</u>
<u>Guidelines for Educational Responsibilities in Clinical Fellowships</u>	<u>Teaching and Academic Capacity in Toronto (TACT)</u>
<u>Gullane Task Force on Best Practices in PGME Program Support</u>	<u>Toronto International Summit on Leadership Education (TISLEP)</u>

1. [PGME Leadership & 2013-14 Annual Report](#)

Dr. Sal Spadafora was appointed to Full Professor this year. He is scheduled to take his administrative leave from January to December 2015 and Dr. Glen Bandiera will serve as Acting Vice Dean during this period.

Dr. Linda Probyn will continue in the position of Director, Education in the PGME Office and Dr. Anne Matlow will continue as Academic Lead for Leadership and Strategic Initiatives.

Maureen Morris joined the PGME Office in April 2014 as Associate Director, Operations. In this capacity, Maureen will manage all activity related to trainee registration, transfers, licensing, and visa operations, central program administration contact, as well as liaison with the accrediting and licensing organizations.

The PGME Annual Report for 2013-14 is posted on the PGME website at <http://www.pgme.utoronto.ca/content/reports-communications>

2. CARMS 2015

The number of **CARMS** entry residency positions for 2015 will remain at the 2014 intake number: 417. The Quotas Allocation Committee met in the summer and some program positions were decreased and others increased based on several considerations including program capacity, physician employment opportunities, government priorities and societal need.

3. Chief Resident Leadership Workshop

On August 12, 2014, PGME held its **9th Annual Chief Resident Workshop**, with opening remarks from the Dean and Dr. Susan Lief as the keynote speaker. Participation in the event was the highest ever, with attendance topping 100. Other sessions presented were Wellness, HealthForceOntario, residents as teachers and a “Chief Resident Primer” presented by the resident’s association (PARO). A panel discussion of former and current chief residents also garnered a great deal of interest.

4. Global Health

The first annual **PGME Global Health Day** was held on Tuesday May 27th at the Li Ka Shing Knowledge Institute. Over 175 residents, fellows, and medical students participated in the information sessions with facilitators and mentors such as Colleen Flood, Kelly MacDonald, Doug Sinclair, and Raghu Venugopal. Certificates were also distributed to residents who completed the 2-year Global Health Education program. Guidelines for residents undertaking Global Health electives have been established, and Pre-Departure Training sessions scheduled for November 18, February 5, and May 26 at the PGME Boardroom.

5. Graduation Events

PGME partnered with Advancement and departments to host five graduation events for our residents and fellows in the departments of Radiation Oncology, Medicine, Obstetrics & Gynecology, Pediatrics, and Otolaryngology – Head and Neck Surgery. Celebrations included distribution of certificates and awards, reception, photographs, music, and remarks from department chairs.

6. Guidelines for Educational Responsibilities in Clinical Fellowships

Following a detailed development and review process, including consultation with legal counsel, the **Fellowship Education Advisory Committee (FEAC)** finalized [Guidelines for Educational Responsibilities in Clinical Fellowships](#). The guidelines are intended to assist programs in dealing with serious educational issues that may arise during clinical fellowship training but require immediate, sensitive and informed response when they occur. The guidelines have been announced by the Vice Dean PGME and posted on the PGME website.

7. Gullane Task Force on Best Practices in PGME Program Support

After the April 2013 Accreditation, the Dean appointed a **Task Force on Best Practices** in PGME Program Support under Dr. Patrick Gullane to review supports to residency program sustainability. The Task Force's report was released in July 2014 and includes recommendations for improved communication, greater transparency and creation of an accountability framework to resource residency programs. The PGME Office will work with all Program Directors and program assistants in 2014-15 to implement the report's recommendations.

8. ICRE: PGME Showcase Focusing on CQI and Supporting Best Practices

The **Royal College International Conference on Residency Education (ICRE)** will be held in Toronto October 24-28th. PGME has been invited to present at a special session focusing on Continuous Quality Improvement. The showcase will reflect UofT PGME's evidence-based, centralized processes and educational and technical supports, which have resulted in benchmark-setting across the Faculty's programs and training sites. Topics will include trainee exit surveys, case logs, leadership and resource management curriculum development, best practices in rotation evaluation, admissions and selection, web-based repository for medical education resources, and expansion of global health programming.

9. Internal Review Committee and Accreditation

The Internal Review Committee will start a new review cycle beginning in Fall 2014. Logistical planning is underway to prepare for the 100+ regularly scheduled internal reviews of residency programs. Over the spring and summer several programs prepared follow up accreditation reports to the Royal College of Physicians and Surgeons of Canada and the College of Family Physicians of Canada. In Spring 2014, an application for new program status was submitted and approval received over the summer (i.e. General Internal Medicine). In anticipation of revised educational standards, called CanMEDS 2015, the Internal Reviews will be emphasizing HR needs to support educational excellence, guiding programs in implementing the new standards, and employing best practices metrics to monitor outcomes and evaluate improvements.

10. Medical Trainee Days Project

The development work for the **Medical Trainee Days (MTD)** project is almost complete and the Faculty will begin to submit MTD reports to the Ontario Ministry of Health in 2014-15. The project was initiated in response to changes in data collection and implementation of the 275 day cap per learner. A collaborative initiative of the Faculty of Medicine and its affiliated hospitals, the Ontario Ministry of Health, and the Council of Ontario Faculties of Medicine, the new structure will maximize the number of eligible learner days for each hospital. Learner attendance will be based on existing registration and evaluation systems, and the Faculty will

support hospitals in the co-ordination and verification of learner data for annual reporting to the Ministry.

11. MERS-COV Screening

In May 2014, the Dean announced that the Faculty of Medicine would be screening for the MERS-CoV in our trainee community. Communications were prepared and PGME developed an on-line screening questionnaire which was shared with other Faculty offices. Newly arriving trainees from the specified geographic areas received an email and a link to the questionnaire as well as current trainees returning from those areas of the world. No trainees have been reported with the virus to date.

12. PGMExchange

In June 2014, **PGME launched PGMExchange**, a central repository to collect and share learning resources within the UofT PGME community including tools for teaching, assessment, curriculum planning, and workshop development. The resources available in this web-based resource --- OSCEs, journal articles, exam questions, videos --- can be sorted by CanMEDS role, intended audience, program, format, and author and more.

13. Teaching and Academic Capacity in Toronto (TACT)

The **TACT** committee was formed earlier this year, co-chaired by Dr. Glen Bandiera and Dr. Stacey Bernstein. The purpose of **TACT** is to determine the optimal placement of learners for clinical experiences. **TACT** will analyze the results of increased enrolment and complete an environmental scan of current placements. An electronic “capacity dashboard” will be developed to continually assess capacity to achieve consistency, excellence and equity in clinical experiences.

14. Toronto International Summit on Leadership Education (TISLEP)

On October 22nd, 2014, the University of Toronto with the Royal College of Physicians and Surgeons will be hosting a **pre-ICRE summit**. This inaugural summit will be co-Chaired by Dr. Adalsteinn Brown (IHPME, U of T) and Dr. Fiona Moss (Editor, Postgraduate Medical Journal, England). The Organizing Committee for the Summit is chaired by Dr. Anne Matlow. The event will bring together an international audience of thought leaders and educators to further articulate the physician leadership competencies and discuss how stakeholders can collaborate to create future physician leaders. The goal is to create guiding principles for developing a physician leadership curriculum to complement implementation of CanMEDS 2015 thereby driving improvement in patient care and of the healthcare system.

Continuing Professional Development Faculty Council Update

1. Continuing Professional Development

1.1. CPD Strategic Planning Retreat

The CPD Strategic Planning Retreat has been rescheduled to October 1, 2014. During the retreat we will address the CACME accreditation standard that was in partial compliance (Standard 1.1), which cited that CPD did not clearly define its target population. In addition, we will review and revise our current strategic priorities and initiatives.

1.2. CPD Awards 2012-13

The 2012-13 academic year's CE Award Winners are as follows:

Colin Woolf Award for Long Term Contributions to CE:

Dr. Paula Ravitz, Associate Professor, Department of Psychiatry, Faculty of Medicine, University of Toronto, for the breadth and depth of her contributions to CPD in a relatively short period of time: Leadership, scholarship, research, publications and program development.

Colin Woolf Award for Excellence in Course Coordination:

Princess Margaret Cancer Centre Accelerated Education Program

David Jaffray, Professor, **Pamela Catton**, Professor, and **Nicole Harnett**, Assistant Professor, Department of Radiation Oncology, Faculty of Medicine, University of Toronto, for developing a broad interprofessional curriculum in radiation oncology that looks at impact on practice as an outcome.

Colin Woolf Award for Excellence in Teaching:

Dr. Miriam Weinstein, Associate Professor, Department of Paediatrics, Faculty of Medicine, University of Toronto, for her glowing teaching evaluations from multiple course participants over several years.

David Fear Fellowship

Dr. Douglas Wooster, Professor, Department of Surgery, Division of Vascular Surgery, Faculty of Medicine, University of Toronto, to develop an electronic vascular Ultrasound curriculum.

Ivan Silver Award for Innovation in CPD:

Drs. Joel Sadavoy, Professor, **Virginia Wesson**, Assistant Professor, Department of Psychiatry, and **LJ Nelles**, PhD student/Wilson Centre Fellow, University of Toronto, for their train the trainer “CARERS” program designed to educate family members how to care for their relative Alzheimer’s disease with the ultimate goal to allow the Alzheimer’s patient to remain longer in a home environment before becoming institutionalized.

Interprofessional Team CE Award:

Dr. Michael Pollanen, Associate Professor, Department of Laboratory Medicine and Pathology, Faculty of Medicine, University of Toronto, for the interdisciplinary interprofessional program for coroners, lawyers and pathologists as well as technologists on suicide.

There were no recipients this past year for the Dave Davis Research or Fred Fallis Online Awards.

1.3 CPD Academic

The new office under leadership of **Dr. Suzan Schneeweiss** was recently established to address the academic needs of our over 500 course directors. Key support services provided include:

- a. Education consulting
- b. CPD leadership development
- c. Resources for best practices in courses design and development
- d. CPD Education Scholarship grants
- e. CPD Awards

1.4. Internally managed courses

The office of CPD works to align our educational programming with the health care needs in our community and across Ontario. We have partnered with several stakeholders to address key issues affecting patient care, quality improvement and patient safety. **Key examples include:**

- a. **Dr. Anna Banerji**, a Paediatric Infectious Disease specialist and Director of Global Health at CPD has established the first interprofessional Indigenous Health Conference which will begin a dialogue about disparities and burden of disease among indigenous people and address issues such as equity, cultural competence, stereotypes and misperceptions.

- b. CPD has successfully partnered with the College of Physicians and Surgeons of Ontario to address needs of Ontario physicians by developing **courses in Medical Record Keeping and Safe Opioid Prescribing**. CPD has also applied innovative teaching strategies with eLearning technology and flipped classroom methodology to enhance learning outcomes.
- c. **Quality improvement** has been identified by the Ontario Ministry of Health and Long-Term Care as a strategic priority to transform healthcare delivery across the province by developing capacity in quality improvement, change management and leadership. Two quality improvement programs, entitled IDEAS (Improving and Driving Excellence Across Sectors) and led by Dr. Adalsteinn Brown, were developed to address these needs; a 9-day advanced and a 2-day introductory program. Over 3 years, 360 participants will complete the 9-day advanced program providing faculty capacity to lead quality improvement projects and programs in their home communities. University of Toronto CPD led in the development of a needs assessment for the 2-day introductory program and collaborated with the 5 other medical schools in the Province of Ontario to support the design and delivery this program across the province. University of Toronto CPD is currently implementing the 2-day introductory program and over the next 2 years will train 360 participants. Collectively, these programs will ultimately reach more than 2500 clinicians and managers building our capacity and sustainability for quality improvement in the province.

2. Standardized Patient Program

2.1. Strategic Plan

We completed our **five-year strategic plan** and have begun implementing the year one priorities. The four goals are: improve operational effectiveness and efficiency, develop an academic mandate, be recognized as a leader in experiential education, and achieve fiscal stability. In 2014, the Standardized Patient Program marks their 30th year at the University of Toronto. At a gala event in November we will celebrate this achievement, and officially launch the implementation of our strategic plan.

2.2. Notable new and developing projects

We designed and implemented a licensing OSCE for the College of Denturists of Ontario. Due to this success, we will be coordinating two similar exams for them next year. We are collaborating with Holland Bloorview Kids Rehabilitation Hospital to build simulation scenarios on effective communications skills with clients and families. We are also working with the Peel

Police in training officers to interact effectively with individuals with mental health issues, and are proposing a similar program for Toronto Police Service. We're preparing for the second phase of federal and provincial funding to arrive for the Internationally Educated Health Professionals Project. Our goal for the next three years will be to add to the five open source e-learning modules that we have already created.

2.3. International simulation community

Diana Tabak was invited to co-present a **simulation and communities of practice workshop** with Walter Eppich in Poland for the SESAM Conference. She also co-presented a workshop on SP methodology with Turkish and Swiss faculty. **Nancy McNaughton** was invited to conduct a week-long faculty development course on live simulation fundamentals for the Faculty of Medicine at Kuwait University, and simulation training modules and workshops in multiple locations in Australia.

3. i+e (Innovations + Education) Office

The **i+e office** was established in February 2013. Its purpose is to offer business services support that better enable faculty to develop best-in-class educational products and services. The **i+e Office** is finalizing its strategic plan and business case which will see the office achieve self-sustainability within the next 5 years. The office continues to grow its book of business with the addition of 4 new project related to business development, communications, marketing and reputation management.

Since the last report, some recent activities and accomplishments include:

3.1. Advanced Clinician Practitioner in Arthritis Care Program (ACPAC)

i+e is supporting a national program expansion of The Advanced Clinician Practitioner in Arthritis Care Program (ACPAC). Negotiations with educators in Alberta is underway and we anticipate a nationally expanded ACPAC program for 2015/16. ACPAC is a post licensure program designed to enhance the skills and scope of practice of allied health professionals in the management and treatment of arthritis and is funded by the Ontario Ministry of Health and Long Term Care. The Program's academic home is in CPD and financial management, administrative and business development support is provided through i+e.

3.2. CoursePeer Inc. and Eve

In partnership with CPD, i+e has negotiated a license for the **Events Evolved (EvE)** events management system. EvE is a **full service automated platform** for the management of educational events and learner registration. EvE is being licensed to CoursePeer Inc., a Toronto-

based learning management system (LMS) company (www.CoursePeer.ca).

3.3. Copyright Management

As part of a suite of business support services i+e offers, the office has developed a “turn-key” solution for Copyright Management. Through consultation with the Dean's office, the Office of Risk Management, the Office of Vice President of Research and Innovation and legal services, i+e has developed a template "**Content License Agreement**" that can be used to manage Copyright-based assets developed by faculty and staff at the FOM. The Content License Agreement represents a significant step towards the development of alternative revenue streams derived from education-based assets for departments and faculty.

Office of Graduate and Life Sciences Education Faculty Council Update

1. New Appointed Vice-Dean, Graduate and Life Sciences Education

Professor Allan Kapan has been appointed Vice-Dean, Graduate and Life Sciences Education for a five-year term effective July 1, 2014.

2. Undergraduate

Communication Strategies

- a)** Third Annual Graduate and Undergraduate Research Information Fair will be held on November 13, 2014, Medical Sciences Building. Exhibitors from our undergraduate, graduate departments, as well as hospitals, student associations, School of Graduate Studies will be attending.
- b)** Second Annual Human Biology Undergraduate Research Day (TBA)
- c)** Monthly google analytic reports for the Graduate and Life Sciences Education website.
- d)** Created a video on How to Find an Undergraduate Research Opportunity.

Data Collection

- a)** Third annual undergraduate student survey was sent to all life sciences fourth year graduating students. Preliminary 2014 data is similar to last year's survey and will be analyzed by the Life Sciences Planning Curriculum Committee.
- b)** Department/College questionnaire regarding undergraduate life sciences research was compiled by Faculty of Arts and Science. Preliminary data will be analyzed by the Life Sciences Planning Curriculum Committee.

Undergraduate Faculty Teaching Awards

The Undergraduate Faculty Teaching Awards [competition deadline will be January 30, 2015](#).

Four awards will be adjudicated in three categories.

- Excellence in Undergraduate Teaching in Life Sciences
- Excellence in Undergraduate Laboratory Teaching in Life Sciences
- Excellence in Linking Undergraduate Teaching to Research in Life Sciences

Plans for Graduate Recruitment

GLSE will be attending UTSC and UTM Graduate and Professional School Fair.

Life Sciences Undergraduate Research Opportunities Fund

A funding strategy was developed for undergraduate research opportunities. The [donation link](#) is located on the Faculty of Arts and Science and Graduate and Life Sciences Education website. Donations will help support the expansion of critical research opportunities for undergraduate life sciences students in their second, third and fourth years.

Joint Working Group on Undergraduate Tutorials

[The Joint Working Group](#) was a collaborative initiative undertaken by the University and CUPE Local 3902, Unit 1 and made recommendations designed to enhance the training provided to teaching assistants assigned to tutorials. The Provost accepted the recommendations contained in the Report and the University has committed to offer paid training the first time a teaching assistant's appointment includes facilitating tutorials in any of the four categories of tutorials defined in the Report. The categories are discussion-based sessions, skill development sessions, Q&A and exam/test/assignment review sessions, and laboratories/practical's. The Centre for Teaching Support & Innovation (CTSI) has developed a number of resources to support this initiative, and to enhance tutorial teaching for instructors and teaching assistants.

3. Graduate Education

Graduate Awards

- 25 Faculty of Medicine-wide OSOTF, Expendable and Other Endowed Awards were adjudicated in June and July 2014 with over \$538,000 available for distribution for the 2014-15 academic year.

- 201 OSOTF, Expendable and Other Endowed Awards with over \$14.8 million was distributed to 14 graduate departments, 21 clinical departments, and 7 affiliated hospitals (total 42) for distribution for the 2014-15 academic year.
- A total of \$4,388,735 University of Toronto Fellowships was distributed in June to 14 graduate departments for 2014-15 graduate students funding.
- 68 QEII-GSST (49 doctoral-stream awards and 19 clinician/surgical-scientist trainee awards) at \$15,000 each are to be distributed for the 2014-15 academic year (total \$1,020,000).
- \$440,000 Doctoral Completion Award (DCA) has been allocated to 12 graduate departments for 2014-15 academic year. The DCA is to support full-time PhD students who are beyond the funded cohort and within time-limit for the degree.
- \$276,748 will be distributed to 6 graduate departments with professional masters programs in early-Fall 2014.
- Over 50 graduate studentships, including CIHR CGS D, Vanier and other external doctoral research awards paid through ROSI to doctoral-stream students with Principal Investigators affiliated with the Faculty of Medicine.

Graduate Faculty Teaching Awards

The Graduate Faculty Teaching Award **Competition deadline will be early-December 2014**. Six awards will be adjudicated in three categories:

- Early Career Excellence in Graduate Teaching & Mentorship
- Continuing Graduate Teaching & Mentorship
- Sustained Excellence in Graduate Teaching & Mentorship

Each awardee will receive a framed certificate and \$1,000 cash prize.

Postdoctoral Fellowships

The Faculty of Medicine Postdoctoral Fellowships Review Committee adjudicated the 2014-15 Banting Postdoctoral Fellowships in early-August 2014 and forwarded 8 nominations to the University for submission to the CIHR and NSERC agencies for nation-wide review. Each Fellowship is worth \$70,000 per year for two years.

Graduate Student Information System (GradSIS)

GradSIS, a web based Student/Supervisor Agreement Form with a mechanism for doctoral-stream students, the supervisors and 13 graduate departments to submit and formally agree upon a student's graduate funding. In our continued effort to make GradSIS easier to use, GLSE invested over \$15,000 in functional changes, in place for 2014-15.

Office of Integrated Medical Education Faculty Council Update

The **OIME** continues to function at full speed and the clinical preceptor payments are proceeding within the allocated \$6 million /annum MOHLTC budget. We do not anticipate any issues with the IME programs at this time. All major projects including the Learner Affairs projects that support orientation, badges and pagers are proceeding well. The **TACT project (Teaching and Academic Capacity in Toronto Review)** is making early progress in scanning the environment and developing a tool for the ongoing assessment of teaching capacity across all our sites.

Acknowledging the significant increasing number of community-based teachers to the learning of medical students and residents at the University of Toronto, the Faculty of Medicine (through the Office of Integrated Medical Education) created three awards to recognize excellence in community-based teaching. Launched during the fall of 2012, the awards carry a cash value of \$1,000 each and are presented at the Faculty of Medicine's Annual Education Achievement Celebration. The awards are open to MDs who are clinical teachers of medical students or residents within the University of Toronto's Faculty of Medicine, and who teach and practice primarily in the community environment, including the U of T's Community Affiliates or community-based office/clinic. In 2014, we received an outstanding forty-nine nominations. Subsequently, forty-five nominees submitted complete nomination packages. A wide range of clinical specialties and community-based hospitals were represented through these stellar nominees. The committee intended to provide three awards in 2014, but a total of four awards and four special commendations were given across the three awards categories.

Please join us in congratulating the 2014 recipients of these awards listed in our OIME newsletter:

<http://www.oime.utoronto.ca/Assets/Root+Digital+Assets/Newsletters/current.pdf?method=1>

This year the **OIME will co-host a summit on Interprofessional Education in collaboration** with the TAHSN Education Committee, the Council of Health Sciences Education Subcommittee, the Center for Interprofessional Education and the Canadian Interprofessional Health Leadership Collaborative. To be held on December 2 2014, this event will bring together high level academic across the affiliated sites, health sciences and in the province to deliberate interprofessional education and its links to practice.

OIME has recently undergone **administrative changes**. Wendy Kubasik, who served as Manager for the OIME for 3 years departed the role early in August 2014 to take on a new adventure and exciting career opportunity at McMaster University. The search for the new Manager is underway. Dr Sarita Verma, Deputy Dean will have oversight of the OIME in the interim.

**BOARD OF EXAMINERS UNDERGRADUATE MEDICAL PROGRAM
FACULTY COUNCIL REPORT
ACADEMIC YEAR 2013-2014**

**SUMMARY OF ACADEMIC STANDING
DOCTOR OF MEDICINE PROGRAM**

Academic Year	# of Students	# of Cases Before the BOE	# Completing Formal Remediation*	# Successfully Remediated	# Required to Repeat**	# Promoted	OTHER
ONE	259	14	9	2	3	256	1 LOA
TWO	261	6	4	1	1	259	2 LOA 1 WD
THREE	262	49	30	18	1	257	9 LOA
FOUR	249	40	21***	19		246	3 LOA 1 WD

*Remediation for academic and/or professionalism

** Repeat Year or Specific Course(s)

*** Remediation for the iOSCE is completed during 4th Year

Council of Education Vice-Deans Faculty Council Report

February 9, 2015

Submitted on behalf of:

Dr. Dimitri Anastakis, Vice-Dean, Continuing Professional Development

Dr. Glen Bandiera, Acting Vice-Dean, Postgraduate Medical Education

Dr. Allan Kaplan, Vice-Dean, Graduate and Life Sciences Education

Dr. Jay Rosenfield, Vice-Dean, Undergraduate Medical Professions Education

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Education Vice-Deans, Integrative Activities

1. eLearning Task Force – Update

In 2014, the Faculty of Medicine at the University of Toronto embarked on a reflective and forward-looking exercise to explore the current state of eLearning activities and to chart a path forward to establish the Faculty as a current and future leader in medical education eLearning curricula and technology and to anticipate future technological needs.

The eLearning Task Force, co-chaired by Professors Dimitri Anastakis, Vice-Dean of Continuing Professional Development, and Jay Rosenfield, Vice-Dean of Undergraduate Medical Professions Education, was created to examine and evaluate existing eLearning resources, initiatives and opportunities in the Faculty of Medicine and to make strategic recommendations. The Task Force gathered information through surveys, data collection and analysis, and focused stakeholder interviews, and undertook an internal assessment of eLearning scholarship, resources (including financial, technological, space and human resources), curricula design and implementation, awards and grants, and future requirements.

A series of strategic recommendations have been developed as a result of this comprehensive assessment, which established a roadmap to advance the Faculty of Medicine at the University of Toronto as a global leader in eLearning across the education continuum. These recommendations cluster around four key themes: **Strategic Planning, Faculty Development and Scholarship, Funding and Infrastructure and Resources**. The Task Force's recommendations will enable us to position the Faculty of Medicine to achieve a future state as a leader in eLearning (i.e., teaching, learning and scholarship) across the education continuum. Their findings will lay the foundation to ensure that we have the competencies and infrastructure to provide the best education for today's and tomorrow's learners.

The Task Force's final report is in its final stages and preliminary working group findings will be made available via the eLearning Task Force website: <http://www.innovatingedu.ca/elearning/>. If you would like to learn more about the eLearning Task Force, please contact Lindsey Fechtig at lindsey.fechtig@utoronto.ca.

2. Teaching and Academic Capacity in Toronto (TACT)

The TACT committee was formed earlier this year, co-chaired by Dr. Glen Bandiera and Dr. Stacey Bernstein. The purpose of TACT is to determine the optimal placement of learners for clinical experiences. TACT will analyze the results of increased enrolment and complete an environmental scan of current placements. An electronic "capacity dashboard" will be developed to continually assess capacity to achieve consistency.

3. Review of POWER, MedSIS and K4Y

AMBIT, a consulting company based in Vancouver, was hired to undertake a review of both MedSIS and POWER, Learner Management Systems developed by K4Y which have been in place at the Faculty of

Medicine since 2002. The review is expected to begin in January and be completed by April 2015.

The purpose and scope of this review is to:

- Review the core functions of registration and evaluation as well as important ancillary functions (including, scheduling, preceptor payment, case logs, call stipends, etc.
- Review the process and resources in place to identify new enhancements, develop business requirements, manage development, undertake testing, and ensure quality
- Conduct cost analysis in light of current technology and expected quality, reliability, and security.
- Identify future requirements based on program and curriculum change, and also identification of opportunities for system integration or co-development with other Faculties of Medicine.
- Assess the suitability of POWER and MedSIS and their related technologies to address future requirements for the Faculty of Medicine.
- Identify current gaps and future needs in IT systems for identified needs in registration, evaluation and other requirements.

4. Education Development Fund

The **Education Development Fund**, funded by the Education Vice-Deans, is intended to support new and innovative projects that align with our Faculty's core values of innovation, integration and impact in education. It is a seed fund designed to encourage faculty who are newly engaged in educational scholarship to further their career development. Applicants may pursue an **Educational Innovation and Development project** or an **Education Research project**.

Please note: applicants must be a **faculty member** engaged in educational activities in basic, clinical or rehabilitation sciences in the **Faculty of Medicine**. They must also be in the early stage of their educational scholarship activities, and **cannot have served as PI on more than two** funded education development projects.

The deadline to apply to the EDF is **Friday, February 13 at 12pm noon**. This deadline is firm and late applications will not be considered.

To find out more about this fund, including eligibility requirements and application criteria, please visit the EDF webpage: <http://medicine.utoronto.ca/about-faculty-medicine/education-vice-deans-education-development-fund>

5. 13th Annual Education Achievement Celebration

The Faculty of Medicine's **13th Annual Education Achievement Celebration** will be held on **Tuesday, May 12, 2015** from **5:00–7:00pm** in the **Great Hall of Hart House**. This Faculty-wide forum is held each year to celebrate, showcase and reward excellence in teaching and education, and all are welcome to

attend. To find out more about this event and last year's award recipients, please visit the 2014 EAC webpage: <http://medicine.utoronto.ca/faculty-staff/12th-annual-education-achievement-celebration>

Undergraduate Medical Education Faculty Council Update

1. Governance and Leadership

Dr. Tao Wang has been appointed to the position of **Program Lead for the Shantou University Medical Student Experience (SUMSE)**, effective December 1, 2014 for a three-year term. SUMSE is a specialized program designed to provide undergraduate medical students from Shantou University Medical College (SUMC) exposure to the practice of medicine in Canada. Six students with clinical experience are chosen annually by SUMC to participate in an eight week program in Canada during May and June. In his position as program lead, Dr. Wang is responsible for designing, planning, implementing and evaluating the elective experience of Shantou University medical students at the U of T.

Dr. Jana Lazor (formerly Bajcar) has been appointed to the newly created position of **Director, UME Faculty Development**, effective January 5, 2015. For the first three months of her appointment, Dr. Lazor will be transitioning from her current position as Director of Faculty Development at the Mississauga Academy of Medicine, and will be sharing her time between MAM and UME. As director of a newly created UME Office of Faculty Development, Dr. Lazor is responsible for providing leadership in and support for faculty development across the entire UME program, including all four academies.

2. Enrolment

The November 1, 2014 enrollment counts for the MD program by year are:

Year 1 – 260

Year 2 – 258

Year 3 – 259

Year 4 – 258

3. Accreditation

Under the leadership of Dr. Martin Schreiber, Director, UME Curriculum and Senior Academic Coordinator, Accreditation, work is well underway on a follow-up accreditation status report for submission to the accrediting bodies in April 2015. Full accreditation of the MD program for the maximum allowable eight-year term was confirmed by the Committee on the Accreditation of Canadian Medical Schools (CACMS) and Liaison Committee on Medical Education (LCME) in October 2013. The purpose of our April 2015 status report is to address eight (out of 128) accreditation standards that were identified by the accrediting bodies as still requiring monitoring.

4. Curriculum

Notification of Curricular Change: LInC and Preclerkship Renewal

Notification of curricular change regarding two significant curricular initiatives (namely, the introduction of a voluntary Longitudinal Integrated Clerkship and major modifications to the first two years of the MD program, known as Preclerkship) has been submitted to the Committee on the Accreditation of Canadian Medical Schools (CACMS). We anticipate receiving a response from CACMS in the near future.

Clerkship Capacity at MAM

Over the last several months Trillium Health Partners has been working to prepare for the August 2015 start of core clerkship for year three MD students at the Mississauga Academy of Medicine (MAM).

Trillium Health Partners has undergone a thorough review to accurately assess capacity projections. This review included face-to-face dialogue with Programs Chiefs, Education Leads and Program Directors, and a robust assessment of program-specific operational capacity, space allocation and physician and clinical stakeholder engagement. We are pleased to report that based on this internal assessment, Trillium Health Partners will achieve an overall 87% capacity to take core clerks in Mississauga across the ten mandatory clinical programs for the 2015-16 year, representing 4% overall growth from 2014-15, and 13% since first year of clerkship at MAM in 2013-14. This figure also takes into account unknown variance, and therefore is the best estimate for this year. As more information becomes available in the coming months, this projected capacity may increase, allowing for more rotations at Trillium Health Partners. For planning purposes, however, the projections below should be considered firm for this year. We will ensure all students are assigned their location well in advance of August to facilitate appropriate arrangements for those rotations which Trillium Health Partners will not be able to accommodate.

The table below provides a detailed overview of the projected capacity at Trillium Health Partners by program for 2015/16:

Program	2013-14 Capacity	2014-15 Capacity	2015-16 Capacity
Anesthesiology	100%	100%	100%
Otolaryngology	100%	100%	100%
Ophthalmology	56%	56%	56%
Emergency Medicine	67%	76%	89%
General Surgery	44%	67%	100%*
Surgical Subspecialties	100%	100%	100%
Medicine	89%	100%	100%
Obstetrics & Gynecology	56%	61%	61%
Paediatrics	44%	44%	56%
Psychiatry	100%	100%	100%
Family Medicine	100%	100%	100%
Total Overall	74%	83%	87%

*At Credit Valley Hospital, the 2 week general surgery rotation will continue to comprise 1 week general surgery and 1 week thoracic surgery, for the time being.

This continuing growth is a testament to the ongoing collaboration between and commitment from Trillium Health Partners and our university departments and faculty.

5. Project Updates

Medical Psychiatry Alliance

The overarching goal of the Medical Psychiatry Alliance project – which is a joint venture involving the University of Toronto, CAMH, SickKids, and Trillium Health Partners – is to improve the quality of life of both patients and their families by creating new models of clinical care for patients with concurrent medical and psychiatric illnesses. To support that goal through the training of future health professionals, UME has committed to creating two new positions to facilitate transformative curriculum change in the MD program, such as the development of enhanced longitudinal training approaches and clerkships in health care settings that integrate medical and psychiatric aspects of illness. The two new positions are:

- UME Faculty Lead for the Medical Psychiatry Alliance – Reporting to the Director of UME Curriculum and working closely with the UME/Wilson Centre Curriculum Research Scientist, the incumbent will be responsible for the design, development, implementation, and evaluation of the UME curriculum supporting the Medical Psychiatry Alliance initiative in the MD program.
- Curriculum Research Scientist – Reporting jointly to the Vice-Dean, Undergraduate Medical Professions Education and the Director of the Wilson Centre, the incumbent will be responsible for developing and leading a scholarly program of research related to curricular development in undergraduate medical education that supports integrated medical/psychiatric training, including active participation in the design/refinement of the curriculum and its evaluation as a 'living laboratory' for research.

Detailed job descriptions for both positions have been created and posted widely. The plan is to fill both positions by the end of February 2015.

Hiring committees for both positions have been confirmed. The committee for the Faculty Lead position will be Chaired by Jay Rosenfield (Vice-Dean, Undergraduate Medical Professions Education) while the committee for the Curriculum Research Scientist position will be Co-Chaired by Jay Rosenfield and Nikki Woods (Interim Director, the Wilson Centre). Both committees include senior-level representation from UME, the Wilson Centre and the MPA as well as student representatives.

Space Planning

- The new MD Student Lounge in the Student Commons (former Stone Lobby) officially opened on Monday, October 20th.
- Work is well underway on our new UME Enrolment Services “Welcome Centre”, which will be located on the main floor of the Medical Sciences Building and has been designed to provide increased public access to admissions information and support. It will be home to the Offices of Admissions, Student Financial Services, and the Registrar.

Physician Assistant Program

Overlapping Cohorts

The fall of 2014 proved to be an exceptionally busy time for the BScPA Program, with three registered cohorts due to the move to a September start (previously January start): Class of 2014, in the final semester of their program; Class of 2015, in the final semester of their first year; and Class of 2016, just starting their program. We achieved a unique milestone on October 20, 2014, with all three cohorts (totaling 87 students) in evaluations at the same time. Class of 2014 in OSCE and the other two classes in supervised examinations, with proctors in 15 sites spread across Ontario. A second unique milestone occurred the week of December 8, 2014, with two cohorts in-house for Residential Block weeks.

Clinical Placement Process

The BScPA Program is moving to a more transparent clinical placement process through the use of EVOS (E*Value Optimization Scheduling). This is an algorithm that reviews each student's preferences simultaneously, with the objective of creating schedules that most closely match student preferences.

Additionally, the program is working with clinical sites with a goal to improve student experience and learning. This will be achieved by greater consistency in use of clinical sites and by the creation of learning hubs.

Curricular Evaluation and Reporting

Students within the BScPA Program complete course evaluations at the end of each course. Previously, the Medical Director and the Course Director reviewed the reports, and discussions for potential change took place within the Evaluation & Assessment and Curriculum Committee meetings. This process has been formalized, and at the end of each course, Course Directors will write a report and provide a verbal report on salient points to the Curriculum Committee. The written reports will aid long-term tracking of the evolution of courses.

Postgraduate Medical Education Faculty Council Update

1. PGME Governance and Leadership

Dr. Sal Spadafora began his 1-year administrative leave on January 1, 2015. Dr. Glen Bandiera is serving as Acting Vice Dean during this period. Dr. Linda Probyn is the Acting Associate Dean, Admissions and Evaluation and Dr. Anne Matlow is continuing as Academic Lead for Leadership and Strategic Initiatives.

Dr. Susan Glover Takahashi is on a secondment with the RCPSC to assist in the implementation of CanMEDS 2015. In her absence Melissa Kennedy Hynes and Laura Leigh Murgaski are Acting Co-Directors of the Research and Education Unit. Maureen Morris joined the PGME Office in April 2014 as Associate Director, Operations and is managing all activity related to trainee registration, transfers, licensing, visa operations, central program administration contact, as well as liaison with the accrediting and licensing organizations.

The PGME Annual Report for 2013-14 is posted on the PGME website at <http://www.pgme.utoronto.ca/content/reports-communications>

2. Enrolment – CARMS 2015

The number of CARMS entry residency positions for 2015 will remain at the 2014 intake number: 417. In September 2014, PGMEAC approved the recommendation of the Quotas Allocation Committee to make adjustments to intake including increasing the intake to Psychiatry by 5 positions and discontinuing the joint McMaster – U of T joint dermatology position as McMaster develops its own capacity to continue the program.

3. Accreditation

The Internal Review Committee started a new review cycle beginning in Fall 2014. Dr. Linda Probyn is Chair of the IRC and is well underway with logistical planning to prepare for the 100+ regularly scheduled internal reviews of residency programs. To date, Child and Adolescent Psychiatry and Geriatric Psychiatry received status as Accredited Programs with regular survey follow-up. The Pain Medicine Program application has been submitted and will be reviewed at the March 2015 RCPSC Accreditation meeting. Internal reviews were completed between October and November for Orthopedics, Emergency Medicine, General Surgery, Occupational Medicine and Respiriology and reviews of Urology, Forensic Psychiatry and Vascular Surgery are scheduled for the early part of 2015. In anticipation of revised educational standards, called CanMEDS 2015, the Internal Reviews will be emphasizing HR needs to support educational excellence, guiding programs in implementing the new standards, and employing best practices metrics to monitor outcomes and evaluate improvements.

4. Research, Conferences and Workshops

ICRE: PGME Showcase Focusing on CQI and Supporting Best Practices

The Royal College International Conference on Residency Education (ICRE) was held in Toronto on October 24-28, 2014. PGME presented at a special session focusing on Continuous Quality Improvement. The showcase reflected U of T PGME's evidence-based, centralized processes and educational and technical supports, which have resulted in benchmark setting across the Faculty's programs and training sites. Topics included trainee exit surveys, case logs, leadership and resource management curriculum development, best practices in rotation evaluation, admissions and selection, web-based repository for medical education resources, and expansion of global health programming. Links to the posters prepared for the session can be found here.

<http://www.pgme.utoronto.ca/content/icre-pgme-showcase>

Toronto International Summit on Leadership Education (TISLEP)

On October 22, 2014, the University of Toronto with the Royal College of Physicians and Surgeons hosted a pre-ICRE summit. This inaugural summit was co-Chaired by Dr. Adalsteinn Brown (IHPME, U of T) and Dr. Fiona Moss (Editor, Postgraduate Medical Journal, England). Dr. Anne Matlow chaired the Organizing Committee for the Summit. The event brought together an international audience of thought leaders and educators to further articulate the physician leadership competencies and discuss how stakeholders can collaborate to create future physician leaders. The goal was to create guiding principles for developing a physician leadership curriculum to complement implementation of CanMEDS 2015 thereby driving improvement in patient care and of the healthcare system.

5. Curriculum

PGMExchange

In June 2014, PGME launched PGMExchange, a central repository to collect and share learning resources within the U of T PGME community including tools for teaching, assessment, curriculum planning, and workshop development. The resources available in this web-based resource --- OSCEs, journal articles, exam questions, videos --- can be sorted by CanMEDS role, intended audience, program, format, and author and more.

CanMEDS 2015

A workshop is taking place January on 23, 2015 focusing on the impact of CanMEDS 2015 for Program Directors, with a focus on Competency Based Education, milestones and the impacts on accreditation requirements. In addition, a number of Faculty Development workshops have been scheduled from January to June 2015 on issues related to the new RCPSC and CFPC competency framework.

6. Global Health

The first annual PGME Global Health Day was held last May 2014 – a forum for research, service and activism across disciplines. It has been decided that this will become an annual event. Global Health Certificate program graduates held first alumni dinner in December. Guidelines for residents undertaking Global Health electives have been established, and Pre-Departure Training sessions are

scheduled for November 18, February 5, and May 26. Guidelines for residents taking external electives have been implemented.

7. Alumni and Advancement

PGME partnered with Advancement and departments to host five graduation events for our residents and fellows in the departments of Radiation Oncology, Medicine, Obstetrics & Gynecology, Pediatrics, and Otolaryngology – Head and Neck Surgery. Celebrations included distribution of certificates and awards, reception, photographs, music, and remarks from Department Chairs. Additional graduation events are planned for 2015.

8. Guidelines and Best Practices

Guidelines for Educational Responsibilities in Clinical Fellowships

Following a detailed development and review process, including consultation with legal counsel, the Fellowship Education Advisory Committee (FEAC) finalized [*Guidelines for Educational Responsibilities in Clinical Fellowships*](#). The guidelines are intended to assist programs in dealing with serious educational issues that may arise during clinical fellowship training and require immediate, sensitive and informed response when they occur. The guidelines have been announced by the Vice Dean PGME and posted on the PGME website.

9. KPMG Review of PGME Funding

A presentation was made to the Deans of Medicine regarding the MOHLTC review of PGME funding, undertaken by KPMG. Potential new models of funding were presented with the MOHLTC indicating that they would like to implement a recommended model beginning with the 2016-17 fiscal year. Discussions are also underway with the MOHLTC regarding updated Transfer Payment Agreements for PGME funding, including salaries and benefits for residents. The projections suggest a fixed envelope for the next 2 to 3 years.

10. Projects and Initiatives

Program Administrator Information Session Series

In response to the Gullane Task Force on Best Practices in PGME Program Support, PGME has developed a series of information sessions on a variety of subjects and activities of interest to both Residency Program Administrators, Hospital Medical Education Administrators and other administrative staff involved in postgraduate medical education. PGME staff provides the 2-hour lunchtime sessions with registration by invitation. Recent topics include: Overview of PGME Registration; CaRMS, orientation to Adobe Professional and AVPs and PEAPs. More information can be found at this link.

<http://www.pgme.utoronto.ca/content/program-administrator-information-session-series>

Medical Trainee Days Project

The Faculty has begun to submit MTD reports to the Ontario Ministry of Health for 2014-15. The project was initiated in response to changes in data collection and implementation of the 275 day cap per

learner. The new reporting structure is intended to maximize the number of eligible learner days for each hospital. Learner attendance will be based on existing registration and evaluation systems, and the Faculty will support hospitals in the co-ordination and verification of learner data for annual reporting to the Ministry. PGME and UGME are collaborating on this project.

Development of Vulnerable Sector Screen

In response to the HUEC working group on Vulnerable Sector Screen, a working group has been formed to implement a VSS for all PGME trainees. A POWER/MedSIS Working Group is seeking to establish a registration requirement indicator that would enable training sites to ensure that learners have completed the required screen, with coding for full clearance, pending, further review required, or unacceptable.

Resource Stewardship Committee

Dr. A. Matlow and Dr. B. Wong provided an overview of the Choosing Wisely/Resource Stewardship project, which began in August 2013. A sub-committee of PGMEAC has been formed with Terms of Reference. The goal is to promote better use of health care resources. Choosing Wisely Canada identified 5 “*don’ts*” in practice, and physician societies have come forward with more such recommendations on better resource use.

Short-term goals for the committee are to raise awareness and establish core competencies. A handout of Resource Stewardship was distributed, listing 7 competencies, and many resources listed on the second page. Dr. B. Wong and Dr. A. Matlow invited members to review the competencies and email comments to either on whether the competencies described are achievable and realistic for physicians in training. Questions posed to Program Directors are: what would be most useful to your program, can we integrate these competencies in an academic half-day, a research day, and retreat. Each department has been asked to identify a “champion” and a train-the-trainer approach would be utilized, including some “*did you know*” facts to highlight the resource issues.

Continuing Professional Development Portfolio

Faculty Council Update

1. Continuing Professional Development

a. CPD Academic

Dr. Suzan Schneeweiss, Director, CPD Academic

The academic section of the Office of Continuing Professional Development (CPD) has had a very active year. Our group has been involved in organizing the provincial 2 day Introductory IDEAS quality improvement program in Toronto. Thus far we have trained more than 120 interprofessional health care practitioners from across the metropolitan Toronto area in three separate 2 day programs (May/June, September/October and October/November). Evaluations of this program have been excellent and 2 further programs scheduled for the winter/spring of 2015 are currently at full capacity. We also led in the development and dissemination of a provincial needs assessment to shape the content and delivery of the program around the province. Our group is now involved in developing a comprehensive evaluation of this program.

We have also been engaged in two internally managed courses in conjunction with the CPSO. Our Medical Record Keeping program is offered on a monthly basis and continues to attract a wide audience from across Ontario. The Safe Opioid program was transformed to a blended style of learning with the introduction of a webinar series followed by a 1 day face-to-face program. This program ran several times over the year and has gained increased popularity attracting clinicians from across the province of Ontario.

For the second year, we were invited to present a 1.5-day intensive pre-conference Essential Skills in CPD Course (ESCPD) at the annual Association of Medical Education in Europe (AMEE) in Milan Italy in August 2015. This program was attended by 22 participants from around the world. We are the only university CPD organization invited to present a pre-conference course at this meeting, which is attended by more than 2,000 medical educators from around the world. We will be presenting a similar program for AMEE in Glasgow this summer.

We held a University of Toronto CPD retreat in Toronto on October 1, 2014 with our CPD leaders and directors as well as CPD staff. This gave us an opportunity to review our strategic plan and focus on innovations in CPD including simulation, eLearning and the standardized patient program. Lastly, Dr. Schneeweiss has also been involved in planning committee for national CPD meetings and forums including the upcoming AFMC-CPD retreat with the CCME conference in April 2015 and the Royal College Competency by Design CPD Summit in May 2015.

b. CPD Global and Indigenous Health

Dr. Anna Banerji, Director, Global and Indigenous Health CPD

CPD Global and Indigenous Health was very active in 2014. In November 2014, the inaugural *Indigenous Health Conference: Challenging Health Inequities* took place. This 2 day conference was the first national conference to improve cultural competency and safety for health care providers who work with Indigenous peoples. It fostered dialogue between Indigenous and non-Indigenous participants. The call for abstracts resulted in 150 submissions from all over Canada. There was also a job fair. The conference dealt with many important but critical issues for Indigenous peoples including residential schools, missing and murdered Indigenous women, and other issues that impacted the determinants of health. It profiled numerous high level Indigenous speakers including Justice Murray Sinclair of the Truth and Reconciliation Commission. The conference was sold out with 450 participants. This conference will be biennial.

In addition, there was preparation for the North American Refugee Health Conference 2015, a 3 day conference that will take place at the Metro Toronto Convention Centre from June 4-6, 2015. This conference is now the largest clinical conference in refugee health globally, and profiles world experts in refugee health, with an anticipated 600 to 1000 international participants.

c. CPD Operations

Trevor Cuddy, Director, CPD Portfolio

Alignment of CPD operations to support Department-based CPD activities continues to be a priority. A new partnership model of CPD shared services delivery is under development and will be piloted with the Department of Surgery.

Growing enrolment in CPD events, both domestically and internationally, will be a principle focus in the next year. We will continue to expand the branding activities initiated in 2014, and further improve the sophistication of our marketing and business intelligence support to Course Directors.

Leadership in the areas of learner big data, simulation-based CPD and eLearning will also be priorities in 2015. We will be implementing a strategy for developing capacity and expertise among Course Directors and administrative staff within each of these areas.

The reorganization that was initiated in Winter 2014 is now complete, seeing an overall reduction in the number of support staff and associated payroll costs. Looking forward to 2015, we will be seeking to gain additional efficiencies through a portfolio-wide review of administrative support and identification of opportunities for shared services.

In the period of May 1, 2014 to December 31, 2014 the CPD events team supported Course Directors in delivering a total of 82 CPD events that reached 7941 learners. The number of event registrations increased by close to 10% over the same period in 2013. The events team is seeing an increase in engagement of our marketing services and online registration and event management system.

2. Innovations and Education (i+e)

Dr. Peter Azmi, Business Development Officer

The i+e office was established in February 2013. The office's mandate is to help faculty and departments develop new and sustaining revenues from education-based programs and assets. The i+e Office has recently finalized its strategic plan and business case, which will see the office achieve self-sustainability within the next 5 years. The office continues to grow its book of business with the addition of new projects related to business development, communications, marketing and reputation management.

Since the last report, some recent activities and accomplishments include:

(1) i+e is supporting a national program expansion of The Advanced Clinician Practitioner in Arthritis Care Program (ACPAC). i+e has secured a national trademark for the ACPAC program, an important initial step towards future licensing opportunities. i+e also developed a fellowship program which has helped ACPAC raise approximately \$80,000 in new support.

(2) In partnership with the Department of Pharmacology and Toxicology, i+e has produced an online eLearning portal for the department. The eLearning Portal is used to support the needs of current learners, as well as market the Online Pharmacology Course to prospective learners.

See: <http://elearning.pharmtox.ca/>

(3) In partnership with CPD, i+e has negotiated a license for the Events Evolved (EvE) events management system. EvE is a full service automated platform for the management of educational events and learner registration. EvE is being licensed to CoursePeer Inc., a Toronto-based learning management system (LMS) company (www.CoursePeer.ca) To further support the partnership between CPD and CoursePeer, i+e is leading a grant submission to the Ontario Centres of Excellence (OCE) for an innovation grant for a joint project valued at over \$40,000.

(4) i+e is working with key stakeholders in CPD, the MOHLTC as well as with clinical educators to develop a Chronic Diseases portfolio of CPD programs based on the ACPAC educational model. The "Advanced Clinician Practitioner" education model will include advanced certification as well as interprofessional education and practice.

See: chronicdiseases.ca

(5) In partnership with the Centre for Collaborative Drug Research (CCDR), i+e has built an online presence and memberships portal. The site is used for communications with the CCDR community and to promote activities and programs available at the CCDR.

See: <http://www.collaborativedrugresearch.ca/>

(6) i+e is planning a new workshop and seminar series for faculty and educators at the FOM called "Innovating Education". The Innovating Education series will introduce our educators to new eLearning technologies and partnership opportunities that can help programs find new sources of revenue and support. The first workshop in the series will be sponsored by Apple and highlights the iBook Author tool that can be used to create eLearning objects (eg. eTextbooks, manuals, etc). These eLearning objects can then be sold through the iTunes store, thereby providing new sources of support to programs and departments.

3. Standardized Patient Program (SPP)

Dr. Brian Simmons, Director, SPP

In 2014 we completed our 30th year of supporting simulation-based learning at the University of Toronto. We are looking forward to a celebration of our past, present and future at an event on Thursday, February 5. The Standardized Patient Program has three major areas of focus: **(1)** teaching, learning and assessment, **(2)** national licensure examinations, **(3)** research in simulation methodology and pedagogy.

Teaching, Learning and Assessment

The Faculty of Medicine continues to be the primary client in our teaching, learning and assessment cluster, representing 78% of activity. The remainder of activity supports other health-related Faculties at U of T (13%) and community-based initiatives (9%).

The SPP is engaged in the full continuum of medical education. Of our work in the Faculty of Medicine, 70% of activities were based in undergraduate education, 12% in post graduate education, 6% in Continuing Professional Development. We also support other departments within the Faculty of Medicine, e.g. the Physician Assistant Program.

Licensure

Licensure examinations comprise another significant area of responsibility for our program, and our staff have developed considerable expertise in coordinating large multi-track clinical examinations for several licensing bodies. Clients include the Medical Council of Canada, the Canadian Alliance of Physiotherapy Regulators, the College of Denturists of Ontario, and the Pharmacy Examining Board of Canada.

Research

We continue to develop expertise in communication and conflict interactions giving invited workshops at professional conferences supported by the published works. In 2015 we look forward to our ongoing collaboration with the Wilson Centre in their research ateliers.

Graduate and Life Sciences Education Faculty Council Update

Undergraduate Life Sciences Education

1. Communication Strategies

- a) Third Annual Graduate and Undergraduate Research Information Fair was held on November 13, 2014 at the Medical Sciences Building (MSB). Exhibitors from our undergraduate, graduate departments, as well as hospitals, student associations, School of Graduate Studies were present with over 1000 students attending the event.
- b) The Second Annual Human Biology Undergraduate Research Day will be held on March 19, 2015. The goal of this event is to provide students with the opportunity to display their research as posters to their peers and to promote awareness of the different areas of research students are pursuing.
- c) Important events and notices are posted on the bulletin board by Tim Horton's in MSB.

2. Undergraduate Faculty Teaching Awards

The Undergraduate Faculty Teaching Awards competition deadline is January 30, 2015. Each awardee will receive a framed certificate and \$1,000 cash prize. Four awards will be adjudicated in three categories:

- Excellence in Undergraduate Teaching in Life Sciences
- Excellence in Undergraduate Laboratory Teaching in Life Sciences
- Excellence in Linking Undergraduate Teaching to Research in Life Sciences

3. Undergraduate Research Opportunity Program (UROP)

GLSE will oversee 136 UROP award allocations for 10 departments within the Faculty of Medicine. Support is set at \$2,400 per student. The students must be guaranteed at least an additional \$2,400 in compensation from other sources managed by the sponsoring department/centre/institute/program, and are expected to engage in full-time research for at least 12 weeks.

4. GLSE Undergraduate Leadership Awards

Three annual undergraduate student leadership awards in life sciences have been established to recognize promising students for their leadership and scholarship. Each awardee will receive a framed certificate and \$500 cash prize. Deadline to submit an application is March 6, 2015 and recipients will be announced on April 13, 2015.

5. GLSE Undergraduate Summer Research Studentship

Seven annual summer research project studentships will support our third or fourth year specialist and/or major students in our Basic Science departments and in Laboratory Medicine and Pathobiology. The award carries a value of \$4,800 each. Deadline to submit an application is March 6, 2015.

6. Plans for Graduate Recruitment

First Annual Interactive Graduate School Webinar will be held on March 13 and 20, 2015. GLSE invites all prospective students wishing to explore graduate studies in our interdisciplinary MSc and PhD programs. Registration is open to the first 142 students who wish to attend in person; alternatively, prospective students can attend via web-streaming. Participating graduate departments include Immunology, Laboratory Medicine and Pathobiology, Molecular Genetics, Biochemistry, Pharmacology and Toxicology, Speech-Language Pathology and the Institute for Medical Science.

Graduate Education

1. Strategic Priorities: 2015-16

a) Development of new funding model for graduate education, including for international graduate students

b) Training graduate students for the new Job Market

i. Development of co-curricular transferable professional skills

In August 2013, the Task Force on Innovation and Transformation in Graduate Education recommended that the Faculty of Medicine “develop sustainable programs for its graduate students (including) co-curricular, transferable professional skills during their graduate program.” A small working group, chaired by Professor Joseph Ferenbok, has been tasked to identify these key skills, which can be developed using an e-learning or alternative and innovative delivery platform, establish FOM-sponsored activities for students to practice these skills prior to graduation and track graduates employment trends to determine FOM footprint within Ontario, Canada and abroad.

ii. New Professional Degree Programs

- Completed: New Translational Health Science Research Degree Program; Applied Immunology (MSc only)
- Currently accepting students for September 2015

iii. New workshop on Biosafety

Building on the success of the Integrity in Research Workshop, GLSE is designing a biosafety workshop for incoming students slated for Fall 2015. The structure is similar to the Research Integrity workshop offered in the Fall term. This initiative is in collaboration with Marc Drouin, Director of the Office of Environmental Health & Safety, and his team, along with consultation from research institutes at the hospitals that offer similar training in order to minimize overlap.

c) Development and implementation of a centralized coordinated recruitment strategy

GLSE has established a taskforce to explore the feasibility of a coordinated strategy within FOM to keep students from accepting offers of admission at other universities.

d) Fundraising initiatives to support graduate education through Enhanced Student Awards

2. Graduate Faculty Teaching Awards

a) The Graduate Faculty Teaching Award Competition

The deadline was on December 5, 2014. Six awards will be adjudicated in three categories:

- Early Career Excellence in Graduate Teaching & Mentorship
- Continuing Graduate Teaching & Mentorship
- Sustained Excellence in Graduate Teaching & Mentorship

Each awardee will receive a framed certificate and a \$1,000 cash prize.

b) Centralized Entrance Scholarships

In the spirit of transparency and fairness, for the first time, the Graduate Chairs unanimously agreed that the Office of the Vice Dean, Graduate and Life Sciences Education (GLSE) will offer Merit based Entrance Scholarships (MES) valued at \$2,000 to a limited number of the most highly rated MSc and PhD successful applicants. This scholarship is restricted to individuals who have been offered admissions to at least one of the nine graduate departments participating in the Harmonized Stipend Agreement and must be approved by the Office of Graduate and Life Sciences Education. Also serving as a centralized recruitment strategy, each student receiving this scholarship will to retain the full amount over and above his/her total stipend. As a result, no other “admissions” or “recruitment” incentive funds may be offered by individual graduate departments. Inaugural recipients will be granted the Merit Entrance Scholarships for September 2015 admissions.

c) Queen Elizabeth II Graduate Scholarships in Science and Technology (QEII-GSST)

To better align QEII-GSST deadlines with the School of Graduate Studies, the following changes has been made starting 2015-16 award year:

- student application deadline has been moved up two months earlier (i.e., March 31, 2015)
- students no longer apply with hardcopy applications and must now submit an OGS application using the U of T School of Graduate Studies centralized online OGS application
- departmental QEII-GSST nominations are due to GLSE two months earlier (e.g., end of May 2015)

d) Transfer of the Institute of Health Policy, Management and Evaluation (IHPME) funds to Dalla Lana School of Public Health (DLSPH)

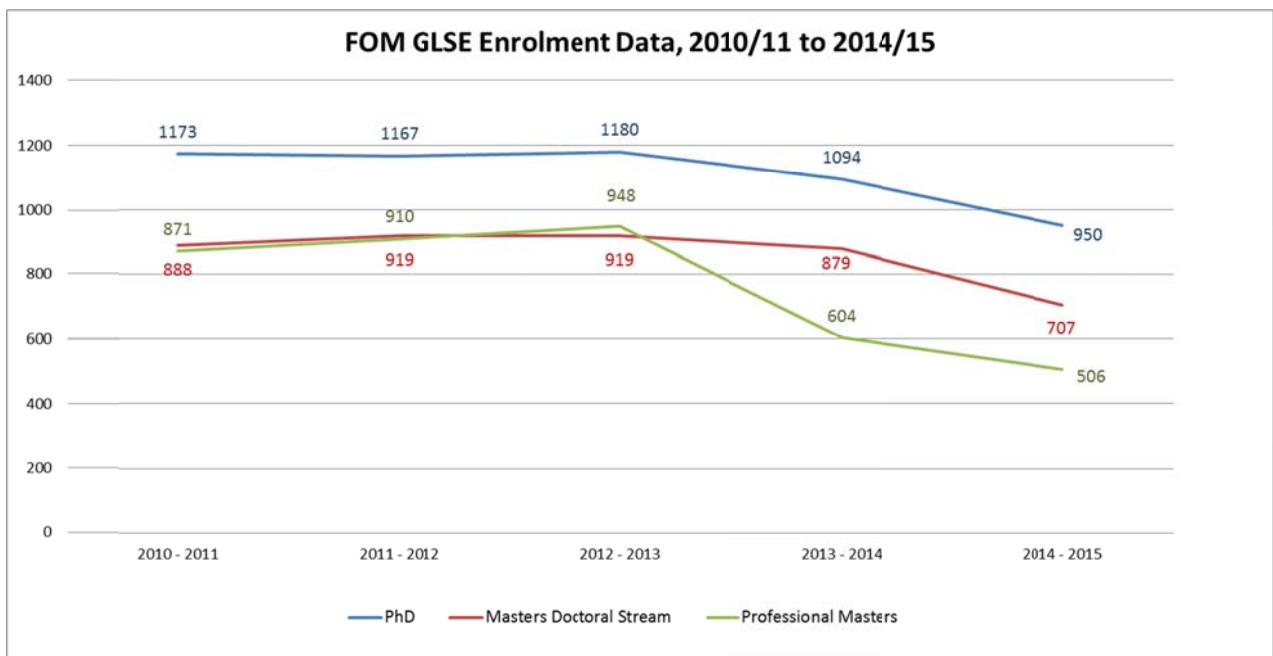
Effective July 1, 2014, IHPME transferred from the Faculty of Medicine to its new home faculty, DLSPH. GLSE and IHPME agreed that 2014-15 is a transition year for financial arrangements, such as the transfer of funds.

3. Enrolment Fall 2015

As of November 1, 2014, 2,163 students were enrolled in a graduate degree program in the Faculty of Medicine. Please note that these numbers do not include Winter 2015 enrolment.

Comparatively, 2014 – 15 enrolment seems to be in line with enrolment trends for the last 5 years. The sudden drop in enrolment starting 2013 – 2014 is due to the departure of the Dalla Lana School of Public Health (MPH, MSc, MHSc and PhD programs) as of July 1, 2013 and the Institute of Health Policy, Management and Evaluation (MSc, MHSc, MHI and PhD programs) as of July 1, 2014. Below is the 5 year enrolment data for graduate programs at the Faculty of Medicine.

Table 1.



4. Other

The Rehabilitation Science Institute (RSI) was officially established on January 1, 2015. The search for the inaugural Director is underway; Professor Helene Polatajko will be serving as Interim Director.



**UNIVERSITY OF TORONTO
FACULTY OF MEDICINE**

FOR APPROVAL

TO: Faculty Council

SPONSOR: Executive Committee, Faculty Council

CONTACT INFO: todd.coomber@utoronto.ca

DATE: February 9, 2015

AGENDA ITEM: 5.1.1

ITEM OF BUSINESS: Amendment to the Faculty Council By-Laws

JURISDICTIONAL INFORMATION:

As per the Faculty Council Constitution, The By-Laws of Council may be amended with the approval of a two-thirds majority of Council members present and voting.

GOVERNANCE PATH:

1. Education Committee [For recommendation to Council] – December 4, 2014
2. CPD Committee [For recommendation to Council] – December 10, 2014
3. Graduate Education Committee [For recommendation to Council] – January 13, 2015
4. Research Committee [For recommendation to Council] – January 15, 2015
5. Faculty Council [For approval] – February 9, 2015

HIGHLIGHTS:

A number of the amendments are a result of decisions made by Council since the April 29, 2013 amendments to the By-Laws. These include the transfer of the Institute of Health Policy, Management and Evaluation to the Dalla Lana School of Public Health and the resulting elimination of the Community Health sector within the Faculty and the renaming of the Continuing Education and Professional Development portfolio to Continuing Professional Development.

Item 3.3.12 has been expanded to prevent quorum issues on the Boards of Examiners potentially arising from student members being excluded from deliberations as per sections 3.5.3.1, 3.6.3.1, 3.7.3.1, and 3.8.3.1. The amendment in 3.3.12 will also negate the loss of quorum due to other potential conflicts of interest.

PROPOSED MOTION:

“THAT the proposed amendments to the Faculty of Medicine Faculty Council By-Laws be approved as submitted.”



UNIVERSITY OF TORONTO

FACULTY OF MEDICINE

BY-LAWS OF FACULTY COUNCIL

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1. RULES OF PROCEDURE FOR THE ELECTION OF MEMBERS TO FACULTY COUNCIL

1.1. Time of Elections

Elections for Constituencies 3, 4, 5, 6, ~~7~~, (teaching staff representatives), Constituency ~~9-8~~ (alumni representatives) and Constituency ~~4-10~~ (administrative staff representatives) will be completed and reported to the Faculty Affairs Officer before the end of April of each year. Elections for Constituency ~~8-7~~ (student representatives) will be completed and reported to the Faculty Affairs Officer by the end of September of each year.

1.2. Election/Appointment Procedures

Members who are acclaimed or elected for Constituency ~~7-6~~ to Council after the second meeting of each year will be considered to begin their three-year term as of July 1 of the succeeding year. Members may be acclaimed or elected to successive terms.

1.2.1. Teaching Staff Representatives

1.2.1.1. Departmental Representatives - Constituencies 3, 4, ~~and 5, and 6.~~

Each Department will have two (2) representative elected to serve a three year term. The Departmental Chair will be responsible for the conduct of such an election. All Teaching Staff (except the Departmental Chair) whose primary appointment is in the appropriate Department of the Faculty of Medicine will be eligible for nomination and will be eligible to participate in the departmental election.

1.2.1.2. Representatives of Faculty at Large - Constituency ~~7-6~~

Nominations for a three year term will be solicited from all Teaching Staff in the Faculty of Medicine for those positions whose incumbents are completing their terms. Valid nominations must bear the signatures of three (3) members of the Teaching Staff, a statement from the nominee indicating that he/she is prepared to serve, and a brief statement of relevant experience. The Faculty Affairs Officer will be responsible for the conduct of an election should the number of nominees exceed the number of positions available.

1.2.2. Student Representatives - Constituency ~~8-7~~

Student representatives from the Undergraduate Medicine, Radiation Sciences Program, Postgraduate Medicine, Graduate and Physician Assistant Professional Degree Programs shall be elected by and from among the student bodies for a one-year term. The Presidents of the Medical Society, PAIRO, the Undergraduate Medical Radiation Sciences Student Society, the Physician Assistant Professional Degree Program will forward the names of those students elected to the Faculty Affairs Officer each year.

Graduate student representatives will be elected by and from among the graduate students for a one-year term. The Presidents of the departmental Graduate Student Unions will forward names of those students elected to the Faculty Affairs Officer. Each sector should be represented.

1.2.3. Alumni Representatives - Constituency ~~98~~

The President of the Medical Alumni Association will forward the names of the two alumni elected by their association to represent them on Council for a three-year term to the Faculty Affairs Officer.

1.2.4. Administrative Staff - Constituency ~~4410~~

Nominations from members of the administrative staff of the Faculty of Medicine will be solicited for three-year term positions on Council. Valid nominations must bear the signatures of three (3) members of the administrative staff, a statement that the nominee is prepared to serve, and a brief statement of relevant experience. The Faculty Affairs Officer will be responsible for the conduct of an election should the number of nominees exceed the number of positions available.

1.2.5. Vacancies

In the case of retirement, resignation or death of any elected member of Council, the person responsible for the conduct of the election in the member's constituency will name an *ad hoc* representative for the remainder of the electoral year. The seat will be declared open for election at the next electoral period.

2. RULES OF PROCEDURE OF THE COUNCIL OF THE FACULTY OF MEDICINE

2.1 Suspension of the Rules of Order

The following Rules of Order, contained in sections 2-22 inclusive below, shall not be suspended at any meeting if any member present expresses objection to such suspension.

2.2 Meetings

- a) Council shall meet a minimum of three times per academic year (July 1– June 30) at 4:00 p.m. on Mondays.
- b) Special meetings shall be convened by the Speaker in either of the following circumstances:
 - i. upon the request of no fewer than ten members, or
 - ii. upon the request of the President or the Dean.
- c) At all regular or special meetings, 20% of the members from constituencies ~~2-44-10~~ and ~~4615-20-19~~ shall form a quorum.
- d) *Ex-officio* members of Council from Constituencies ~~4211-4514~~, shall not count toward a quorum.
- e) All meetings shall be open. Council may, by a simple majority vote, decide to consider any particular issue *in camera*. At the discretion of, or by pre-arrangement with the Speaker, or on a motion from the floor, a non-member may be invited to address Council.

2.3 Presiding Officer

The Speaker shall preside at all meetings of Council. In the absence of the Speaker, the Deputy Speaker shall preside. In the absence of both the Speaker and the Deputy Speaker, any member of the Executive Committee may convene the meeting and a Speaker shall be chosen from the Executive Committee members present by a majority of the voting members present for the meeting.

2.4 Duties of Speaker

At all meetings of the Council of the Faculty of Medicine, the Speaker shall, in addition to her/his duties as a member of Council, maintain order and decorum and exercise such authority as may be necessary to conduct the meeting in conformity with the By-Laws of Council.

2.5 Speaker to rule on points of order

The Speaker shall rule on all points of order. The ruling may be appealed by any member, who may briefly indicate the reason for the appeal, but otherwise the appeal is not subject to amendment or debate. Council shall decide the appeal by majority vote. If the Speaker considers that a successful appeal of the ruling would constitute a suspension of the rules of order, he/she shall may rule that section 1 hereof applies to the appeal. Thus if any member supports the ruling, the appeal shall be deemed to be defeated. A ruling by the Speaker that section 1 applies shall be conclusive and not subject to further appeal.

2.6 Agenda

The agenda for each regular meeting shall be prepared by the Executive Committee and shall set forth items of business to be discussed at the meeting.

2.7 Order of business on agenda

The order of business at a meeting shall be the order set out in the agenda unless varied or added to according to 2.8 and 2.9 below.

2.8 Vary the order of business

A motion to vary the order in which the items on the agenda are to be taken up will be in order at any time except when another motion is being debated or voted upon. The mover shall briefly indicate reasons why the order should be varied, but otherwise the motion is not debatable.

2.9 Add to the agenda

No matter not on the agenda may be introduced at a regular meeting unless the introduction thereof is agreed to by two-thirds of the members present and voting. The mover shall briefly indicate reasons why the matter should be introduced, but otherwise the motion shall not be debatable.

2.10 Notice of Motion

A notice of motion is a request by a member to have an item included in the agenda of the meeting. Except in the case of special meetings, a notice of motion shall be delivered to the Faculty Affairs Officer in time for consideration by the Executive Committee at its meeting which is normally held three (3) weeks prior to a forthcoming meeting of Council. Additional motions may be introduced in Council meetings only in relation to items included in the agenda.

2.10 Member to be recognized

Any member desiring to speak during the meeting of Council shall signify her/his intention to the Speaker. No member shall speak until recognized by the Speaker, and when so recognized, shall stand and address the Speaker.

2.11 Interruptions

The Speaker may at any time call to order any member, including the member who is speaking, but otherwise, no member shall interrupt any other member. A member called to order by the Speaker shall sit down.

2.12 Speaking more than once to a motion

A member is entitled to speak only once to a motion but at the discretion of the Speaker may be permitted to speak again on the same motion.

2.13 Length of speeches

No member or other person invited to address the Council shall speak for more than five minutes at any one time. At the discretion of the Speaker, this rule may be waived if in her/his opinion the matter is complex enough that further time should be allotted.

2.14 Statement of question

Any member may require the question under discussion to be stated at any time during the debate, but not so as to interrupt a member.

2.15 No speaking after the question is put

No member shall speak to a question after it has been put to a vote by the Speaker.

2.16 Motions to be seconded

All motions, except those for adjournment of the meeting or of a debate, shall be seconded before being debated or put by the Speaker. The Speaker may at her/his discretion require that a motion be put in writing before being debated or put by the Speaker.

2.17 Question period

After the mover and seconder have spoken to a motion presented to the Council for debate, the Speaker may, at her/his discretion, allow members to ask questions to obtain information regarding the motion. Such questions shall be directed to the Speaker who may request an answer from any member or person present. The Speaker shall determine and declare when the period of questioning is ended and upon such declaration shall call for further formal debate on the motion.

2.19 Voting procedure

When a question is put to a vote by the Speaker, members shall indicate their vote in such manner as the Speaker may direct. The Speaker shall declare the result of the vote and such declaration shall be conclusive. If, prior to the time when the Speaker has undertaken to determine the vote, any three members require that the count of votes be recorded, then the number of votes for and against the question shall be counted and this count recorded in the minutes of the meeting. If any member wishes to record her/his abstention from voting on any question, the member must do so immediately following declaration by the Speaker.

2.20 E-Mail Notification

Communications to members of the Faculty and to members of Faculty Council shall be considered to constitute official notice whether in printed or electronic format.

2.21 Dispute of a Motion Passed or Rejected

The mechanisms set out below are intended to provide a formal channel to allow motions passed or rejected by Council to be challenged by full time teaching staff. Obviously, in the tradition of open debate of the University, teaching staff, students, and administrative staff all remain free to pursue the usual processes for making matters of concern to them known within the University and academic communities.

If 50 or more members of the full-time teaching staff¹ of the Faculty of Medicine, who may or may not be members of the Faculty Council of Medicine, wish to dispute a motion passed or rejected by Council, these members should state their concerns in writing in one petition which has been signed by the 50 or more dissatisfied members of the teaching staff. This petition must identify a representative individual who shall be designated the contact person for communication. The petition shall be addressed and delivered (within 21 calendar days of the results of the motion) to the Speaker and to the Dean who shall attempt to resolve the issue(s) in whatever manner they consider appropriate given University and Faculty policies. The Speaker and the Dean shall also reply in writing to the contact representative and make a report to Faculty Council. The signed petition shall be distributed to Council.

If two-thirds or more of the original petitioners are not satisfied after the Speaker and Dean have tried to resolve the issue raised in their petition, then a Special Meeting of Faculty Council shall be called as soon as is reasonably possible to discuss the issues raised by the petitioners. Petitioners may be present and may contribute to the debate. The aim of the Special Meeting shall be to recommend that the contentious motion is either to be subjected to another Council vote as it was originally framed or the original motion is to be referred back to a duly constituted committee of Council for possible amendment having regard for the petitioners' concerns.

If two-thirds or more of the original petitioners are not satisfied with the result of that Special meeting, then the petitioners may forward their original petition to the Vice President and Provost and to the Chair of the Academic Board of Governing Council along with a separate letter outlining their reasons for their continuing dissatisfaction. The Speaker and Dean shall write a letter outlining their attempts to resolve the issue(s).

The Vice President and Provost and the Chair of the Academic Board may either address the issue(s) themselves or appoint designates to address them. In the event that the Vice-President and Provost and/or the Chair of the Academic Board were present at the Special Meeting, then the President will appoint an individual to act in their places as necessary.

The decision of the Vice-President and Provost and the Chair of the Academic Board (or their designates) shall be final.

2.22 Dean to Convey Approvals to Governing Council

Following approval by Council, the Dean or designate will convey motions, as required, to the Office of the Provost for approval at Governing Council.

3. COMMITTEES OF COUNCIL

3.1. Standing Committees

The Standing Committees of Council are:

- Appeals Committee
- Board of Examiners – Bachelor of Science Physician Assistant Program
- Board of Examiners – Medical Radiation Sciences Program
- Board of Examiners – Postgraduate Programs
- Board of Examiners – Undergraduate Medical Program
- Continuing ~~Education and~~ Professional Development Committee
- Education Committee
- Executive Committee
- Graduate Education Committee

¹ Petitioners must hold a University or Faculty full-time appointment on the date they sign the petition

Research Committee
Striking Committee

3.2. Special Committees

From time to time Council may find it useful to establish Special Committees to consider particular issues. Special Committees are normally formed on the recommendation of the Executive Committee, when one or more of the following conditions exist:

- a) An issue cannot be accommodated easily within a Standing Committee's schedule – either intense scrutiny is required in a relatively short time or thorough examination of complex issues is necessary over a relatively long period of time;
- b) An issue does not fall readily under an existing Standing Committee; or
- c) There is need for the participation of experts not represented on the relevant committee.

A recommendation from the Executive Committee to establish a Special Committee shall include terms of reference, an outline of membership, the anticipated reporting date, and the proposed date of disestablishment.

3.3. General Procedures of Committees of Council

- 3.3.1. Rules and regulations that guide Council shall also apply to committees of Council, unless specified otherwise.
- 3.3.2. Elections shall be held annually for all Standing Committees in accordance with the functions of the Striking Committee. The Speaker will inform the new Council of the results of the election at the earliest opportunity. Changes in the membership of Standing Committees shall occur at the beginning of the academic year, i.e., July 1st, except changes in the membership of the Boards of Examiners –Medical Radiation Sciences, Undergraduate Medical Education, and Physician Assistant Professional Degree Program which shall take effect on the following October 1st.
- 3.3.3. The term of membership of all Standing Committees shall normally be three years renewable once (renewable twice for members of the Appeals Committee). If a member becomes the committee Chair or Vice Chair, this position may be held for a maximum of two additional 3-year terms (three additional terms for the Appeals Committee).
- 3.3.4. The Chairs of all Standing Committees who are not otherwise members of Council shall become *ex officio*, voting members of Council.
- 3.3.5. With the exception of the Appeals Committee, the Dean is, *ex officio*, a member of all Standing Committees.
- 3.3.6. All members of all committees and sub-committees, including *ex officio* members ~~(with the exception of the Striking Committee)~~, have voting privileges unless otherwise noted in the terms of reference of the committee.
- 3.3.7. All Standing Committees shall report to Council on their deliberations, recommendations and decisions.
- 3.3.8. Records of all Standing Committees shall be maintained by the ~~Secretary of Council~~ Faculty Affairs Officer.
- 3.3.9. Each Standing Committee shall meet at the call of its Chair. When the position of a Chair of a Standing Committee becomes vacant during the session, the Speaker will consult with the members of the Committee concerned and make an appointment of a new chair

from among the members of the Committee, who will hold that office for the remainder of the session.

When a vacancy occurs during the session among the members of a Standing Committee, the Chair of the Committee concerned, in consultation with the Speaker, shall appoint a replacement for the remainder of the session.

3.3.10. The Speaker, at the request of the Chair of a Standing Committee, may declare any elected position on the committee vacant if the member is absent for two consecutive meetings of the committee or of a subcommittee of which he/she is a member. In the event that a Standing Committee Chair is deemed absent or delinquent in his/her responsibilities the Speaker has the authority to remove them from their position.

3.3.11. Co-option of members is possible for all Standing Committees except the Appeals Committee and the Boards of Examiners. All co-opted members must be ratified by Council at its first opportunity. Co-opted members shall have voting privileges. Co-opted students must obtain sponsorship of the appropriate student organization or body before submission of the names to Council for ratification.

3.3.12. Unless otherwise stated, the Chair and 50% of other members shall constitute a quorum.

NOTE: Meetings with a duly constituted quorum that temporarily fall below that number because of other requirements of these by-laws (e.g., recusal for conflict of interest or request that student members be excused) will be deemed to retain quorum provided at least four members remain."

3.3.13. The Appeals Committee and the Boards of Examiners always meet *in camera*. The meetings of the other Standing Committees are open unless otherwise stated.

3.3.14. Sub-committees may be created by Standing Committees on *an ad hoc* basis whenever a clear need arises. The membership of such sub-committees shall be established by the parent committee.

3.3.15. At the discretion of the Chair, a committee meeting may be held by such means of telephone, or other communication facilities that permit all persons participating in the meeting to communicate with each other simultaneously and instantaneously. A person(s) participating in such a meeting by such means is (are) deemed to be present at the meeting. For meetings, or portions thereof, held in closed session or *in camera*, it is expected that members will ensure that the necessary standards of confidentiality are maintained and that their participation is conducted in a setting that ensures such confidentiality.

3.3.16. At the discretion of the Chair, a committee may be asked to consider a matter outside of a committee meeting and to determine the matter by means of an electronic vote. Such matters would, in the judgement of the Chair, be time-sensitive and delay until the next regularly scheduled meeting would have an adverse effect. Such matters would also, in the judgement of the Chair, normally require little, if any, discussion prior to voting. Matters considered in this manner shall be reported at the next regular meeting of the committee and recorded in the report of that meeting.

3.4. Appeals Committee

3.4.1. Membership

Council shall approve the membership of the Appeals Committee composed of the following:

Chair: elected by Council

2 Vice-Chairs: elected by Council

11 Teaching Staff of whom at least 1 shall be designated by the Michener Institute for Applied Health Sciences after consultation with the Speaker

4 student members nominated by students and approved by Council, of whom 1 shall be from the Undergraduate medical program, 1 from Postgraduate programs, 1 from the Undergraduate Medical Radiation Sciences program, and 1 from the Physician Assistant Professional Degree Program.

Ex-officio:

Faculty Affairs Officer (non-voting)

3.4.2. Functions

- a) To hear appeals of Undergraduate students, Postgraduate students, students in the Undergraduate Medical Radiation Sciences Programs and students in the Physician Assistant Professional Degree Program of the Faculty of Medicine against decisions of Council and its Standing committees and Boards, and to make rulings on such appeals that are binding and final, subject to an appeal to the Governing Council¹.
- b) To recommend to Council changes to policies and procedures with respect to petitions and appeals by students.
- c) To generate and disseminate recommendations arising from appeals.
- d) To report to the Council at least annually on its decisions.

3.4.3. Procedures

3.4.3.1. Quorum

The Chair or a Vice-Chair and 7 members shall constitute a quorum, of which at least 1 shall be a student.

3.4.3.2. Term

The Chair and Vice-Chairs shall be elected for a term of 3 years, which may be renewed twice. Faculty members shall be to three year terms, but their terms may be renewed twice. Student members shall be appointed annually.

Note

When the Chair is present and presiding at a hearing, a Vice-Chair present will be considered a regular member of the committee. A Vice-Chair shall exercise all the Chair's powers and duties if the Chair is absent or has disqualified herself/himself.

3.4.3.3. Conflict of Interest

A Committee member must declare a potential conflict of interest with any case presented to the Appeals Committee. The concern will be disclosed by the member to the Chair, who will decide on the appropriate course of action.

¹ The *Policy on Academic Appeals within Divisions* is available at <http://www.governingcouncil.utoronto.ca/Assets/Governing+Council+Digital+Assets/Policies/PDF/ppdec122005.pdf>.

3.4.3.4. Confidentiality

All deliberations of the Committee shall meet *in camera*. The documents provided to the Committee at meetings shall be retained by the Faculty Affairs Officer. All deliberations of the Committee and all information received by the Committee shall be confidential except for such disclosure as is necessary for the Committee's Report

N.B. The "Guidelines for Procedure" of the Appeals Committee are available on the Faculty of Medicine website

3.4.3.5. In hearing appeals the Committee may:

- Uphold an appeal in whole or in part;
- Reject an appeal; or
- Refer the case back to the body concerned.

3.5. Board of Examiners – Physician Assistant Professional Degree Program

3.5.1. Membership

Council shall approve the membership of the Board of Examiners – Physician Assistant Professional Degree Program composed of the following:

Chair: elected by Faculty Council

Vice-Chair: elected by and from among the members of the Board

8 Teaching Staff: elected by Council, at least one member must be from the Department of Family and Community Medicine, and no more than two members shall be associated with the Physician Assistant Professional Degree Program (BScPA) program

Representative from the Michener Institute named by their President

Representative from the Northern Ontario School of Medicine named by their Dean

1 student member of the BScPA Program

Ex officio:

Vice Dean, Undergraduate Medical Professions Education

Chair, Department of Family and Community Medicine (DFCM)

Medical Director for the BScPA Program (non-voting)

Program Director for the BScPA Program (non-voting)

Faculty Affairs Officer (non-voting)

3.5.2. Function

In relation to the **Physician Assistant Professional Degree Program**, and on behalf of Faculty Council:

- a) At the request of the Medical Director for the BScPA Program or designate to review the cases of students in academic difficulty and to determine or give advice (as requested) concerning the course(s) of action.
- b) After receiving and considering recommendations from the Medical Director for the BScPA Program or designate for the progression of students through the Program, to determine in relation to each student, the appropriate course of action, which may include promotion, remediation, failure, suspension and dismissal.
- c) To review the marks/grades of all students in all courses of each year of the Program as recommended by the Medical Director for the BScPA Program or designate and, review, adjust and approve as appropriate.

- d) To oversee the general consistency of grading procedures.
- e) To review and approve grades and non-grade course reports.
- f) To report to Council its deliberations, recommendations and decisions.

N.B. The assessment of a student's performance includes not only the evaluation of performance in the courses of the Program but also the evaluation of the student's behavioural, ethical and professional performance in the Program.

3.5.3. Procedures

A student whose performance is being considered by the Board may make a written submission to the Board through the Faculty Affairs Officer.

3.5.3.1. Quorum

Chair (or Vice-Chair) and 50% of the members of the Board of whom one must be a student except as noted below.

Student members

Student members shall be voting members of the Board, but will be excluded from such deliberations upon request of any student whose case is being considered or if their own case is being considered.

Non-Member Attendees

The Vice Dean, Undergraduate Medical Professions Education and/or the DFCM Chair, with the agreement of the BOE Chair, will invite those academic and administrative staff who are not members of the Board to attend each meeting only as necessary for the full presentation of information concerning each case. Such visitors may be asked to leave after the presentation of their material.

3.5.3.2. Conflict of Interest

A Board of Examiners member must declare a potential conflict of interest with any case presented to the Board of Examiners. The concern will be disclosed by the member to the Chair, who will decide on the appropriate course of action.

3.5.3.3. Appeal of Decisions

Decisions of the Board are final and binding on the Faculty but students may appeal the decision of the Board to the Faculty of Medicine Appeals Committee.

~~N.B. The assessment of a student's performance includes not only the evaluation of performance in the courses of the Program but also the evaluation of the student's behavioural, ethical and professional performance in the Program.~~

3.5.3.4. Confidentiality

The Board shall meet *in camera*. The documents provided to the Board at meetings shall be retained by the Faculty Affairs Officer. All deliberations of the Board and all information received by the Board shall be confidential except for such disclosure as is necessary for the Board's Report.

3.6. Board of Examiners – Medical Radiation Sciences Program

3.6.1. Membership

Council shall approve the membership of the Board of Examiners – Medical Radiation Sciences Program Committee composed of the following:

Chair: elected by Faculty Council

Vice-Chair: elected by and from among the members

8 faculty members elected by Council, three of whom shall be nominated by the Michener Institute for Applied Health Sciences after consultation with the Speaker, and, of the remaining five, no more than two shall be associated with the Medical Radiation Sciences Program and no more than two shall be associated with the Radiation Physics Residency Program

1 student member of the Undergraduate Medical Radiation Sciences Program

Ex officio:

Vice Dean, Undergraduate Medical Professions Education

Chair, Department of Radiation Oncology (or designate)

Vice-President, Michener Institute (or designate)

Faculty Affairs Officer (non-voting)

3.6.2. Function

In relation to the **Medical Radiation Sciences Program and the Radiation Physics Residency Program**, and on behalf of Council:

- a) At the request of the Academic Director (or designate) to review the cases of students in academic difficulty and to determine or give advice (as requested) concerning the course(s) of action.
- b) After receiving and considering recommendations from the Academic Director (or designate) for the progression of students through the Program, to determine in relation to each student, the appropriate course of action, which may include promotion, remediation, failure, suspension and dismissal.
- c) To review the marks/grades of all students in all courses of each year of the Program as recommended by the Academic Director (or designate) and, review, adjust and approve as appropriate.
- d) To oversee the general consistency of grading procedures.
- e) To review and approve grades and non-grade course reports.
- f) To report to Council its deliberations, recommendations and decisions.

N.B. The assessment of a student's performance includes not only the evaluation of performance in the courses of the Program but also the evaluation of the student's behavioural, ethical and professional performance in the Program.

3.6.3. Procedures

A student whose performance is being considered by the Board may make a written submission to the Board through the Faculty Affairs Officer.

3.6.3.1. Quorum

Chair (or Vice-Chair) and 50% of the members of the Board of whom one must be a student except as noted below.

Student members

Student members shall be voting members of the Board, but will be excluded from such deliberations upon request of any student whose case is being considered or if their own case is being considered.

Non-Member Attendees

The Vice Dean (or designate), with the agreement of the BOE Chair, will invite those academic and administrative staff who are not members of the Board to attend each meeting only as necessary for the full presentation of information concerning each case. Such visitors may be asked to leave after the presentation of their material.

3.6.3.2. Conflict of Interest

A Board of Examiners member must declare a potential conflict of interest with any case presented to the Board of Examiners. The concern will be disclosed by the member to the Chair, who will decide on the appropriate course of action.

3.6.3.3. Appeal of Decisions

Decisions of the Board are final and binding on the Faculty and the Michener Institute but students may appeal the decision of the Board to the Faculty of Medicine Appeals Committee.

~~N.B. The assessment of a student's performance includes not only the evaluation of performance in the courses of the Program but also the evaluation of the student's behavioural, ethical and professional performance in the Program.~~

3.6.3.4. Confidentiality

The Board shall meet *in camera*. The documents provided to the Board at meetings shall be retained by the Faculty Affairs Officer. All deliberations of the Board and all information received by the Board shall be confidential except for such disclosure as is necessary for the Board's Report.

3.7. Board of Examiners – Postgraduate Programs

3.7.1. Membership

Council shall approve the membership of the Board of Examiners – Postgraduate Programs Committee composed of the following:

Chair, elected by Faculty Council (3 years, renewable once)
Vice-Chair: elected by and from among the members (3 years, renewable once)
9 Teaching Staff none of whom should concurrently be a Director of a residency training program. Teaching Staff are elected by Council and commit to a full 3-year term, with the option to renew once for an additional three years. Of the nine members, at least one should be from each of Family Medicine, Internal Medicine and Surgery.
3 postgraduate trainees who commit to a one year term, with the option to renew for a second term

Ex officio:
Vice Dean, Postgraduate Medical Education

Faculty Affairs Officer (non-voting)

3.7.2. **Function**

In relation to the **Postgraduate Programs**, and on behalf of Council:

- a) At the request of the Vice Dean (or her/his designate), to review the cases of trainees in academic difficulty and to determine the appropriate course(s) of action, which may include remediation, remediation with probation, probation, suspension and dismissal.
- b) The assessment of a trainee's performance may include the evaluation of the trainee's academic, behavioural, ethical and professional performance in the Program, or the evaluation/recommendation from an independent process.
- c) After receiving and considering recommendations from the Vice Dean (or her/his designate), make recommendations on the progression of trainees through the Program
- g) To oversee the general consistency of grading procedures.
- h) To review and approve grades and non-grade course reports.
- i) To report to Council its deliberations, recommendations and decisions.

3.7.3. **Procedures**

The procedures of this Board and of the evaluation of postgraduate trainees are detailed in the document "Guidelines for the Evaluation of Postgraduate Trainees of the Faculty of Medicine at the University of Toronto" (February 2007).

A trainee whose performance is being considered by the Board may make a written submission to the Board through the ~~Vice Dean, Postgraduate Medical Education~~ [Faculty Affairs Officer](#).

3.7.3.1. **Quorum**

Chair (or Vice-Chair), and 4 of the members of the Board of whom one must be a trainee (except as noted below). The Vice Dean is included in the count towards quorum and is allowed to vote.

Trainee members:

Trainee members shall be voting members of the Board but will be excluded from such deliberations at the request of any trainee whose case is being considered or if their own case is being considered.

Non-Member Attendees:

The Vice Dean (or designate), with the agreement of the BOE Chair, will invite those academic, administrative staff and appropriate health professional staff who are not members of the Board to attend each meeting only as necessary for the full presentation of information concerning each case. Such visitors may be asked to leave after the presentation of their material.

3.7.3.2. **Conflict of Interest**

A Board of Examiners member **must** declare a potential conflict of interest with any case presented to the Board of Examiners. The concern will be disclosed by the member to the Chair, who will decide on the appropriate course of action.

3.7.3.3. Appeal of Decisions

Decisions of the Board are final and binding on the Faculty, the Residency Training Program Committees and the Program Directors. Decisions of the Board may be appealed by postgraduate trainees to the Faculty of Medicine Appeals Committee.

3.7.3.4. Confidentiality

The Board shall meet *in camera*. The documents provided to the Board at meetings shall be retained by the Faculty Affairs Officer. All deliberations of the Board and all information received by the Board shall be confidential except for such disclosure as is necessary for the Board's Report.

3.8. Board of Examiners – Undergraduate Medical Program

3.8.1. Membership

Council shall approve the membership of the Board of Examiners – Undergraduate Medical Program Committee composed of the following:

Chair: elected by Faculty Council

Vice-Chair: elected by and from the members.

9 Teaching Staff elected by Council

2 undergraduate medical students (normally the President and past-President of the Medical Society)

Ex officio:

Vice Dean, Undergraduate Medical Professions Education

Faculty Affairs Officer (non-voting)

3.8.2. Function

In relation to the **Undergraduate Medical Program**, and on behalf of Council:

- a) At the request of the Vice Dean (or her/his designate), to review the cases of students in academic difficulty and to determine or give advice (as requested) concerning the course(s) of action.
- b) After receiving and considering recommendations from the Vice Dean (or her/his designate) for the progression of students through the Program, to determine in relation to each student, the appropriate course of action, which may include promotion, remediation, failure, suspension and dismissal; and
- c) To review the marks/grades of all students in all courses of each year of the Program as recommended by the Vice Dean (or designate), adjust and approve as appropriate.
- d) To oversee the general consistency of grading procedures.
- e) To review and approve grades and non-grade course reports.
- f) To report to Council its deliberations, recommendations and decisions.

N.B. The assessment of a student's performance includes not only the evaluation of performance in the courses of the Program but also the evaluation of the student's behavioural, ethical and professional performance in the Program.

3.8.3. Procedures

A student whose performance is being considered by the Board may make a written submission to the Board through the Faculty Affairs Officer.

3.8.3.1. Quorum:

Chair (Vice-Chair) and 50% of the members of the Board of whom one must be a student except as noted below.

Student members

Student members shall be voting members of the Board, but will be excluded from such deliberations upon request of any student whose case is being considered or if their own case is being considered.

Non-Member Attendees

The Vice Dean (or designate), with the agreement of the BOE Chair, will invite those academic and administrative staff who are not members of the Board to attend each meeting only as necessary for the full presentation of information concerning each case. Such visitors may be asked to leave after the presentation of their material.

3.8.3.2. Conflict of Interest

A Board of Examiners member must declare a potential conflict of interest with any case presented to the Board of Examiners. The concern will be disclosed by the member to the Chair, who will decide on the appropriate course of action.

3.8.3.3. Appeal of Decisions

Decisions of the Board are final and binding on the Faculty but students may appeal the decision of the Board to the Faculty of Medicine Appeals Committee.

~~N.B. The assessment of a student's performance includes not only the evaluation of performance in the courses of the Program but also the evaluation of the student's behavioural, ethical and professional performance in the Program.~~

3.8.3.4. Confidentiality

The Board shall meet *in camera*. The documents provided to the Board at meetings shall be retained by the Faculty Affairs Officer. All deliberations of the Board and all information received by the Board shall be confidential except for such disclosure as is necessary for the Board's Report.

3.9. Continuing Education and Professional Development Committee

3.9.1. Membership

Council shall approve the membership of the Continuing ~~Education and~~ Professional Development Committee composed of the following:

Chair: elected by Council

7 Teaching Staff elected by Council representing the constituencies of continuing ~~education and~~ professional development, including but not limited to such as:

- Research in CEPD/Knowledge Translation
- CEPD Program Development
- Faculty Development
- ~~Community Health Professional Education~~
- Public Education
- International CE
- Rehabilitation Science
- Clinical Sciences

1 post-professional trainee
 An alumnus/alumna of the Faculty
 Director, Office of CEPD

Ex officio:
 Vice Dean, CEPD or designate
 Faculty Affairs Officer (non-voting)

3.9.2. Function

In relation to the Continuing ~~Professional Development Education~~ Programs of the Faculty, the role of the Committee is to safeguard the standards and quality of the courses and programs offered, certificates and diplomas awarded, and teaching awards. The Committee also reviews and recommends to Council policies pertaining to research in ~~continuing education professional development~~.

3.9.2.1. **Courses and Programs Offered**

- To receive and accept on behalf of Faculty Council annual reports from the Dean or her/his designate clarifying the extent to which the goals and objectives are being met in all aspects of the delivery of ~~continuing professional development education~~ courses and programs, including the faculty development program, patient and public education programs and international ~~professional development continuing education~~ programs.
- To review and recommend to Faculty Council major changes proposed by the Dean or his/her designate, in the goals and objectives of all aspects of the delivery of a programs and courses prior to their implementation.
- The Committee will receive and approve on behalf of Faculty Council proposals for minor changes in the goals and objectives of all aspects of the delivery of all programs and courses prior to their implementation

3.9.2.2. **Research Policy**

The Committee will review and make recommendations to Faculty Council issues of policy concerning research in ~~professional development continuing education~~ and knowledge translation.

3.9.2.3. **Certificates and Diplomas**

- To review and approve on behalf of Faculty Council minor changes proposed by the Dean or his/her designate in the requirements for the certificates and diplomas offered in continuing ~~professional development education~~.

- b) To review and recommend to Faculty Council major changes proposed by the Dean or his/her designate in the requirements for the certificates and diplomas offered in continuing professional development education.
- c) To approve the awarding of certificates and diplomas to continuing professional development education students on behalf of Faculty Council.

3.9.2.4. Teaching Awards

- a) To receive and accept on behalf of Faculty Council annual reports from the Dean or her/his designate detailing the extent to which the goals and objectives are being met in the implementation of teaching award policies.
- b) To review and approve on behalf of Faculty Council the terms and conditions of new awards and changes in existing awards upon the recommendation of the Dean or her/his designate, except for significant changes that would be brought to Faculty Council for approval.
- c) The Committee, on behalf of Faculty Council, will approve the awardees.

3.9.2.5. External Reviews

The Committee will consider and report back on issues arising from the External Reviews of Departments and Extra-Departmental Units referred to it by the Executive Committee or the Speaker.

- 3.9.3. The Committee will advise Faculty Council on any matters related to the professional development Continuing Education activities of the Faculty.

3.10. Education Committee

3.10.1. Membership

Council shall approve the membership of the Education Committee composed of the following:

Chair: elected by Faculty Council

~~9-8 Teaching Staff: 3-4 from Clinical Science, 2-3 from Basic Science, 1 from Community Health, 1 from Rehabilitation Sciences, 1 from the Undergraduate Medical Radiation Sciences program, and 1 from the Physician Assistant Professional Degree Program,~~
elected by Council

3 Undergraduate Medical students (1 each from of years 1, 2 & 3, with one alternate)

1 Postgraduate Medical trainee (alternate permitted)

1 Radiation Science student

1 Physician Assistant Professional Degree student

Ex officio:

Vice Dean, Undergraduate Medical Professions Education

Vice Dean, Postgraduate Medical Education

Associate Dean, Admissions & Evaluation, Postgraduate Medical Education (non-voting)

Associate Dean, Equity and Professionalism (non-voting)

Associate Dean, Undergraduate Medicine Admissions and Student Finance (non-voting)

Associate Dean, Health Professions Student Affairs (non-voting)

Director, Medical Radiation Sciences Program (non-voting)

Medical Director, Physician Assistant Professional Degree Program (non-voting)

Faculty Affairs Officer (non-voting)

3.10.2. Function

In relation to the Undergraduate and Postgraduate Medical Programs, the Undergraduate Medical Radiation Sciences Program and the Physician Assistant Professional Degree Program, the role of the Education Committee is to safeguard the standards and quality of the programs with regard to Admissions, Awards, Financial Aid, and Curriculum and Evaluation.

The reports noted in the Admissions, Awards, Financial Aid and Curriculum and Evaluation sections below will form part of the annual reports to Faculty Council and the Governing Council.

3.10.2.1. Admissions

- a) To receive and accept on behalf of Council annual reports from each program outlining the extent to which the goals and objectives are being met in the implementation of the admission policies and targets.
- b) To review and recommend to Council major changes in the admissions policies recommended by the Dean or his/her designate.
- c) The Committee will be informed of minor changes in the admissions policies prior to their implementation.
- d) To make recommendations to Council on undergraduate and graduate admissions policy.
- e) To approve, on behalf of Council, minor changes to admission requirements. All such changes shall be reported for information to Council.
- f) To report to Council its deliberations, recommendations, and decisions

3.10.2.2. Awards

- a) To receive and accept on behalf of Council annual reports from each program detailing the extent to which the goals and objectives are being met in the implementation of the awards policies.
- b) To review and recommend to Council the terms and conditions of new awards and award policies recommended by the Dean or his/her designate and award policies prior to their implementation.
- c) To approve on behalf of Council minor changes to the terms and conditions of awards and award policies. All such changes shall be reported for information to Council.

3.10.2.3. Financial Aid

- a) To receive and accept on behalf of Council annual reports from each program detailing the extent to which the goals and objectives are being met in the implementation of the financial aid policies.
- b) To review and recommend to Council major changes in the financial aid policies recommended by the Dean or his/her designate.
- c) To be informed of minor changes to the terms and conditions of financial aid policies prior to their implementation.

3.10.2.4. Curriculum and Evaluation

It is recognized that all the programs under the jurisdiction of this Committee, where applicable, are subject to the direction of external professional accreditation bodies.

- a) To receive and accept on behalf of Council annual reports from each program outlining the extent to which the goals and objectives are being

met in the delivery of the courses of study, the program content, the grading and evaluation system and the requirements for graduation.

- b) To make recommendations to Council on all matters of curriculum policy.
- c) To review and recommend to Council for approval, subject to the approval of the appropriate body of Governing Council, proposals for new academic programs, proposals for the closure of any academic programs, and proposals for major modifications to existing academic programs¹.
- d) To review and approve, on behalf of Council, proposals for minor modifications to academic programs. All such approvals shall be reported for information to Council.
- e) To report to Council its deliberations, recommendations and decisions.

3.10.2.5. External Reviews

The Committee will consider and report back on educational issues arising from the External Reviews of Departments and Extra-Departmental Units referred to it by the Executive Committee or the Speaker.

To review and recommend to Council the establishment, continuation and termination of Departments and Extra-departmental Units.

- 3.10.2.6.** The Committee will advise Council on any matters related to the Undergraduate and Postgraduate Medical Programs, the Undergraduate Medical Radiation Sciences Program, and the Physician Assistant Professional Degree Program of the Faculty.

3.10.3. Procedures

The Committee shall meet in open session. Meetings where confidential matters of an individual are discussed shall be held *in camera*.

3.11. Executive Committee

3.11.1. Membership

Council shall approve the membership of the Executive Committee composed of the following:

8 Members of Council, elected by Council:

~~4-3~~ Teaching Staff, one from each sector (basic science, clinical science, ~~community health~~ and rehabilitation)

3 Students (1 UME student, 1PGME trainee and 1 graduate student)

1 member from the administrative staff

The Speaker of Council (Chair)

Ex officio:

The Dean or designate

The Deputy Speaker of Council

The Chairs of the following Standing Committees: Continuing ~~Education and~~ Professional Development Committee, Education Committee, Graduate Education Committee and Research Committee

The Chief Administrative Officer (non-voting)

¹ Definitions of major modifications of existing programs, minor modifications, and new academic programs are provided in the University of Toronto Quality Assurance Process and are subject to change. Guidance from the Office of the Vice-Provost, Academic Programs, should be sought prior to the development of any such proposal.

The Faculty Affairs Officer (non-voting)

3.11.2. Functions

- a) To set the agenda for each Council meeting.
- b) To ensure that adequate documentation is provided for consideration of each agenda item and to refer back to the originating administrator/governance body for further preparation any item deemed not ready for submission to Council.
- c) To direct specific issues to Council or committees, or to recommend to Council the creation of special committees.
- d) To consider notices of motion given to Council.
- e) To determine the application of the distinction between "major" and "minor" issues, where this is required to implement the terms of reference of Faculty Council and its Standing Committees.
- f) To approve, in principle, urgent items arising outside of Faculty Council's regular meeting schedule. No item approved in such manner is formally binding until approved by Faculty Council.
- g) To review and advise Council on all proposed Constitution and By-Law changes, whether these be brought to Council or initiated by Council.
- h) To review and advise Council on the effectiveness of the Constitution and By-Laws.
- i) At periodic intervals of not more than five years, to establish a review of the Constitution and By-Laws and recommend to Council any changes deemed appropriate.
- j) To review on behalf of Council, reports of and responses to External Reviews of Departments and Units, inquiring into issues as necessary and reporting to Council its findings.
- k) To monitor the functioning of Council and its Committees.
- l) To report to Council its deliberations, recommendations and decisions.

3.11.3. Procedures

The Committee shall meet in closed session.

3.12. Graduate Education Committee

3.12.1. Membership

Council shall approve the membership of the Graduate Education Committee composed of the following:

Chair: elected by Council

~~4~~3 elected Teaching Staff from the Graduate Curriculum Committee (one from each sector)

2 elected Teaching Staff holding School of Graduate Studies appointments,

Elected Student: 1 PhD student from the Graduate Curriculum Committee

Ex officio:

Vice Dean, Graduate and Life Sciences Education

Faculty Affairs Officer (non-voting)

3.12.2. Function

3.12.2.1. Curriculum

- a) To receive and accept on behalf of Council annual reports from the Graduate Curriculum Committee
- b) To make recommendations to Council on all matters of curriculum policy.
- c) To review and recommend to Council for approval, subject to the approval of the appropriate body of Governing Council, proposals for new academic programs, proposals for the closure of any academic programs, and proposals for major modifications to existing academic programs¹.
- d) To review and approve, on behalf of Council, proposals for minor modifications to academic programs. All such approvals shall be reported for information to Council.

3.12.2.2. New Initiatives

The Committee will review and recommend to Council, new initiatives, such as joint inter-faculty programs, proposed by the Dean or his/her designate.

3.12.2.3. The Committee will consider and report back on any graduate educational issues arising from the External Reviews of Departments and Extra-Departmental Units referred to it by the Executive Committee or the Speaker.

3.12.2.4. The Committee will advise Council on any matters related to the graduate programs in the Faculty.

3.12.2.5. The Committee will submit an annual report to Council concerning its deliberations, including the reports noted in (a) above.

3.12.3. Procedures

3.12.3.1. Quorum

The Chair and 50% of other members shall constitute quorum.

3.13. Research Committee

3.13.1. Membership

Council shall approve the membership of the Research Committee composed of the following:

Chair: elected by Council

8 Teaching Staff elected by Council (with at least one member from each sector of the Faculty)

2 research trainees, of whom at least one must be registered in the School of Graduate Studies

Ex officio:

Vice-Dean, Research and International Relations

Faculty Affairs Officer (non-voting)

3.13.2. Function

¹ Definitions of major modifications of existing programs, minor modifications, and new academic programs are provided in the University of Toronto Quality Assurance Process and are subject to change. Guidance from the Office of the Vice-Provost, Academic Programs, should be sought prior to the development of any such proposal.

- 3.13.2.1. To identify and recommend to Council general research priorities/initiatives for the Faculty.
- 3.13.2.2. To review and recommend to Council the establishment, continuation and termination of Departments and Extra-departmental Units.
- 3.13.2.3. To review and recommend to Council Faculty policies and procedures regulating the conduct of research, including those regarding the conduct of research in compliance with regulatory and statutory authorities.
- 3.13.2.4. To advise Council on any other matters relating to research in the Faculty.
- 3.13.2.5. To consider and report back on issues arising from External Reviews of Departments and Extra-Departmental Units referred to it by the Executive Committee or the Speaker.

3.13.3. Procedures

The Committee will submit an annual report to Faculty Council concerning its deliberations and recommendations of the preceding year. The Committee shall meet in open session.

3.14. Striking Committee

3.14.1. Membership

Council shall approve the membership of the Striking Committee composed of the following:

Chair: the Speaker of Faculty Council
 All members of the Executive Committee excluding student members
 All Standing Committee Chairs not on the Executive Committee

Ex officio:
 Dean
 Faculty Affairs Officer (non-voting)

Non-member, advisors to the striking process:
 4 Departmental Chairs, one from each sector and specifically the Sector Chairs appointed to the Dean's Executive Committee

3.14.2. Function

- 3.14.2.1. The Striking Committee shall be convened annually, or from time to time as may be deemed necessary.
- 3.14.2.2. Recognising that the terms of appointment are normally for three years, the Faculty Affairs Officer, on behalf of Faculty Council, will seek suggestions and nominations to fill anticipated vacancies in the roles of Speaker and Deputy Speaker and in the membership of the Standing Committees. Before making nominations, members will obtain the concurrence of nominees to stand for election. The Faculty Affairs Officer, on behalf of the Striking Committee, will request all nominees to forward to her/him brief biographies concerning their experience to hold the position for which they have been nominated.

- 3.14.2.3.** The Striking Committee will meet to prepare a slate of candidates following receipt of nominations and suggestions from members of the Faculty. The Committee will ensure that there is at least one nominee for every anticipated vacancy. The Committee may add further nominees to vacancies for which nominations have already been received from the process in 3.14.2.2 above, but may not remove any nominees from the list. The Faculty Affairs Officer, on behalf of the Striking Committee, will obtain the concurrence of nominated candidates to stand for election as proposed, and will request all nominees to forward to her/him brief biographies concerning their experience to hold the position for which they have been nominated.
- 3.14.2.4.** The slate of candidates prepared by the Striking Committee containing both those nominated through process 3.14.2.2 above and those added by the Committee in process 3.14.2.3 above, together with the brief biographies of nominees, will be presented to a meeting of Faculty Council. At this meeting of Council no further nominations will be accepted. Council will vote by secret ballot on motions to establish those nominees who will hold positions in the forthcoming session.

4. DATES OF AMENDMENT

Amended and approved by Faculty Council on June 23, 2008.

Amended and approved by Faculty Council on June 22, 2009.

Amended and approved by Faculty Council on September 13, 2010.

Amended and approved by Faculty Council on February 27, 2012.

Amended and approved by Faculty Council on October 22, 2012.

Amended and approved by Faculty Council on April 29, 2013.



UNIVERSITY OF TORONTO
FACULTY OF MEDICINE

FOR APPROVAL

TO: Faculty Council

SPONSOR: Allan Kaplan, Vice-Dean, Graduate and Life Sciences Education

CONTACT INFO: Rachel Zulla, Graduate Affairs Administrator; 416-946-0412;
rachel.zulla@utoronto.ca

DATE: February 9, 2015

AGENDA ITEM: 5.2.1

ITEM OF BUSINESS: New Field of Study within Immunology (including 3 new courses)

JURISDICTIONAL INFORMATION:

The University of Toronto Quality Assurance Process dictates that the creation of a new program of specialization within an existing program constitutes a major modification in that program and requires the approval of divisional governance. The By-laws of the Faculty of Medicine Faculty Council dictate that major modifications to graduate programs are to be reviewed and recommended to Council for approval by the Graduate Education Committee.

GOVERNANCE PATH:

1. Graduate Education Committee [For recommendation] – January 13, 2015
2. Faculty Council [For approval] – February 9, 2015
3. Quality Council [For information]

CONSULTATIVE PATH:

Broad consultation occurred. In particular, an in-depth strategic planning exercise took place within the Department of Immunology. As part of the its strategic plan, this new field was approved on September 18, 2013 by the department’s Strategic Planning Steering Committee as well as the department’s Graduate Committee on October 4, 2013. The proposed new field Applied Immunology was introduced to all faculty in the Department of Immunology at the semi-annual faculty meeting on November 4th, 2013 and received full support. It was further presented at subsequent faculty meetings (March 10th, 2014, November 3rd, 2014) to bring everyone up to speed on all aspects of the new field and on the governance process. In addition, we have consulted with the Department of Pharmacology. Pharmacology has recently received approval for a non-thesis coursework based field of study, and we incorporated some common elements into our own proposal where suitable.

Furthermore, consultation with the Immunology Graduate Student Association has taken place. Dr. Catherine Whiteside (Dean, Faculty of Medicine), Dr. Avrum Gotlieb (interim Vice-Dean, Graduate and Life Science Education, Faculty of Medicine), Drs. Brian Corman, Jane Alderdice and Liz Smyth (School of Graduate Studies), and Drs. Sioban Nelson and Jane Harrison (Vice-Provost, Academic Programs) have also been consulted.

We consulted the Immunology undergraduate program to gauge interest in the Applied Immunology field of study. Approximately 100 students responded to a survey. Strong support for the new field was demonstrated.

The proposal for the new field was then taken to the Graduate Curriculum Committee, Graduate and Life Sciences Education and approved on September 8, 2014.

New courses were also proposed as part of this field: IMM1450Y, IMM1550Y and IMM2550Y. All three were approved at the departmental level by the Immunology Graduate Committee on October 15th, 2014, followed by the Graduate Curriculum Committee, Graduate and Life Sciences Education Committee on November 19, 2014.

HIGHLIGHTS:

New Field in Immunology: Applied Immunology

This proposal is to create a new field of study, “Applied Immunology,” within the MSc in Immunology and to rename the existing field of Immunology within both degree programs to “Fundamental Immunology” (MSc and PhD levels).

The new Applied Immunology field will operate as follows: (1) The new proposed Applied Immunology field will be offered only at the master’s level whereas the existing, renamed Fundamental Immunology field will continue to be offered at both the master's and doctoral levels. (2) The new proposed Applied Immunology field will be course-based, that is no thesis, and will include course work in applied Immunology techniques as well as a Major Research Project in a host laboratory. The existing Fundamental Immunology field will continue to be thesis-based at both the master's and doctoral levels. (3) Because it is expected that some applicants may already have completed significant advanced level course work in Immunology, the new proposed Applied Immunology field will have an advanced-standing option for students who meet the outlined requirements. The advanced-standing option will apply only to the Applied Immunology field and not to the existing Fundamental Immunology field. (4) Students in the new proposed Applied Immunology field of study will not be eligible for the funding package whereas students in the existing and renamed Fundamental Immunology field at both the master's and doctoral levels will continue to be part of the funding package.

As part of this new field, a major component will be the Major Research Project (MRP) that is hosted by a laboratory of a Department of Immunology faculty member. The MRP is comprised of IMM1450Y, IMM1550Y and IMM2550Y. Each of these courses play a particular role in the development and execution of the MPR.

- IMM1450Y is to provide the student with an introduction to the techniques and assays that are performed in the host laboratory
- IMM1550Y is the second of three courses that make up the MRP in which students will devote their first summer session towards developing their research proposal, which will be executed during IMM2550Y.
- For IMM2550Y, the student will execute the research that is proposed in IMM1550Y and will obtain professional development training (GPDI) and an internship experience (GPDII).

PROPOSED MOTIONS:

“THAT the proposal to establish a field of study, Applied Immunology, within the MSc Immunology Degree Program be approved as submitted.”

“THAT the current field of study within the MSc Immunology Degree Program be renamed Fundamental Immunology.”

University of Toronto

Major Modification Proposal – Type B: New Field or Concentration within an Existing Graduate Program

Parent Program: (program name and degree)	Immunology (MSc and PhD)
Existing field:	Immunology
Proposed New Field:	Applied Immunology, (master’s level only) Change the name of the existing field, Immunology, to Fundamental Immunology in the MSc and PhD
Unit (if applicable) where the program will reside: i.e., site of academic authority. Where a program is housed elsewhere (in physical terms), this should also be indicated also.	Department of Immunology
Faculty / Academic Division:	Faculty of Medicine
Faculty / Academic Division Contact:	Dr. Avrum Gotlieb
Graduate Unit Contact:	Dr. Jen Gommerman
Anticipated start date of new field:	September 2015
Version Date:	June 2014

1 Executive Summary

Overview: This proposal is to create a new field of study, “Applied Immunology,” within the MSc in Immunology and to rename the existing field of Immunology within both degree programs to “Fundamental Immunology” (MSc and PhD levels).

The new Applied Immunology field will operate as follows: (1) The new proposed Applied Immunology field will be offered only at the master’s level whereas the existing, renamed Fundamental Immunology field will continue to be offered at both the master's and doctoral levels. (2) The new proposed Applied Immunology field will be course-based, that is no thesis, and will include course work in applied Immunology techniques as well as a Major Research

Project in a host laboratory. The existing Fundamental Immunology field will continue to be thesis-based at both the master's and doctoral levels. (3) Because it is expected that some applicants may already have completed significant advanced level course work in Immunology, the new proposed Applied Immunology field will have an advanced-standing option for students who meet the outlined requirements. The advanced-standing option will apply only to the Applied Immunology field and not to the existing Fundamental Immunology field. (4) Students in the new proposed Applied Immunology field of study will not be eligible for the funding package whereas students in the existing and renamed Fundamental Immunology field at both the master's and doctoral levels will continue to be part of the funding package.

Differences in learning outcomes between the Fundamental and Applied Immunology fields:

Immunology is the study of the immune system in health and disease. The existing Fundamental Immunology field within the master's and doctoral program focuses on original research that reveals cellular and molecular mechanisms of the immune response in health and disease. The new Applied Immunology field will focus on immunological techniques that measure immune responses. At the doctoral level the learning outcomes, minimum admission and program requirements of the existing field of study of Fundamental Immunology (renamed field) will not change. At the master's level the learning outcomes of the existing field of study of Fundamental Immunology will remain the same and the new Applied Immunology field of study will have differentiated learning outcomes, reflecting the new field's applied focus. Specifically, at the master's level, students in the existing Fundamental Immunology field receive advanced training in an area of specialization, with a particular emphasis on the acquisition of experience in the strategies and experimental methods of modern, original scientific research. In contrast, the Applied Immunology field will focus on both a theoretical and practical understanding of the techniques in Immunology. This will provide the student with an appropriate foundation so that they may be able to critically assess data generated with these techniques and so that they may design novel immunological assays for a variety of experimental questions. The new field will feature a course-based (7.5 FCEs) curriculum. This curriculum will include 3.5 FCEs of introductory course work followed by 4.0 FCEs of core course work including a Major Research Project. After completing this field, students will have learned how to perform techniques in flow cytometry, immunohistology and molecular biology. In addition, they will have learned how to report on these techniques in an industry-style technical report, detailing goals and milestones.

Impetus for the development of the proposed field: Immunology is a growing inter-disciplinary field that touches almost all areas of biomedical research. The immune system has emerged as an important driver in multiple disease states. Given the high translational relevance of Immunology, there is an increasing demand for highly trained individuals who possess skills in Immunological assays and/or diagnostics to work in academia, industry and government/public health laboratories. To cultivate scholarship in this area, we propose a new field in "Applied Immunology".

Students who enter the MSc program in the renamed Fundamental Immunology field of study conduct original scientific research accompanied by in-depth exploration of recent advances in

Immunology. This field is excellent preparation for doctoral level work and indeed many students who enter the Fundamental Immunology field at the master's level typically segue into a PhD following successful completion of a transfer exam after 18 months in the program.

In contrast, a student completing an MSc program in the Applied Immunology field will emerge with intensive scholarship in cutting edge techniques and bioassay development and may not transfer.

Our faculty are world-renowned for their expertise in multiple areas of Immunology, including a core cluster of faculty members who have additional expertise in areas that are key to this new field of study, in particular in the technology sector such as assay development, flow cytometry, histology and pre-clinical animal modeling. Furthermore, we have designed graduate level courses on these topics. Therefore, the Department of Immunology is well-positioned to develop the proposed new field.

The Faculty of Medicine has recently established a similar applied course-based field within another program, the MSc in Pharmacology. The program elements in the field Applied Clinical Pharmacology include: (1) offered as an MSc only; (2) Course-based, that is no thesis; (3) Advanced Standing option available; (4) students in this field are not part of the funding package. Thus, there is a precedent of a field offered within the Faculty of Medicine with similar program elements.

2 Rationale

Description of the Field: Immunology is the study of the cells and molecular pathways that make up the immune system. Immunity is a state of being resistant to re-infection by pathogens such as viruses or bacteria. The existing renamed Fundamental Immunology field focuses on original research that reveals cellular and molecular mechanisms of the immune response in health and disease. The new proposed Applied Immunology field will focus on immunological techniques that measure immune responses.

Existing Fields: Currently, the existing MSc and PhD programs in Immunology have a single field: Immunology, which is to be renamed Fundamental Immunology. The learning outcomes of this field of study are the successful completion of modern, original research that is typically hypothesis-driven, culminating in the preparation and defense of a thesis. Such research often involves animal models or research on human subjects that requires ethics approval and model establishment. The majority of students will go through a lab rotation period at the beginning of their studies before selecting an appropriate lab. Typically master's students begin by enrolling in the Fundamental Immunology field of study and then approximately 75% of these students subsequently transfer into the PhD. The broad learning outcomes associated with the Fundamental Immunology field are appropriate for students who wish to pursue a career in discovery-based research, but the rotation period and project development phase (obtaining ethics approval, generating tools) can result in a lengthy development period before the project takes shape.

Relationship of the proposed field: Unlike the existing, renamed Fundamental Immunology field of study, the proposed Applied Immunology field will focus on how to measure/assay immunological outcomes. The learning outcomes of the new field will be distinct due to the practical technique-oriented course work and the different mechanism of evaluation. For example, instead of a thesis, students will be required to prepare an industry-style proposal complete with milestones and timelines (IMM 1550Y), and will prepare a report on a topic such as the development of an assay or technique (IMM 2550Y), forming the basis of a Major Research Project. In addition, students studying in the field of Applied Immunology need not conduct "hypothesis driven" research in their Major Research Project. It is important to emphasize that this new field of study is not merely an opportunity to teach Immunological techniques. Instead, students in the Applied Immunology field of study would acquire the theoretical background required to develop novel methodology, refine an existing bio-assay, execute a biological screen, etc. The program would provide the student with an appropriate foundation so that they may be able to critically assess data generated with these techniques. Therefore, the new proposed field provides students with a much-needed coursework-oriented path to prepare for a career in the technology/pharma sector where such knowledge and skills are highly valued. Furthermore, unlike the existing MSc in the thesis-based Fundamental Immunology field of study that is meant to segue into the PhD program via a transfer exam, the Applied Immunology field will have a defined 2-year (six session) program length and students will not be allowed to transfer to the PhD; however, upon graduation, if they wish, students may apply to the PhD in Immunology.

How the proposed field relates to the current state of the discipline: Immunology is a growing inter-disciplinary field that touches almost all areas of biomedical research. In addition to the obvious role of the immune system in autoimmune and infectious diseases, the immune system has emerged as an important driver in other disease states including neurodegenerative, cardiovascular, nephritic and bone diseases etc. Given the high translational relevance of Immunology, there is an increasing demand for highly trained individuals who possess skills in Immunological assays and/or diagnostics to work in academia, industry and government/public health and hospital-based laboratories. This emerging sector demands a cutting edge understanding of the latest techniques in Immunology which can be effectively taught in the context of technology-focused coursework as well as practical experience in the context of a Major Research Project in a host laboratory. Note that the courses that form this technology-focused pedagogy have some resource implications that have been met by the Department of Immunology. These courses have already been approved and are currently listed in the SGS calendar.

Appropriateness and consistency of the field name: The new field remains focused on the study of Immunology but adds the designation of "Applied" to reflect the coursework in standard and emerging Immunological techniques that are used in both academic and industrial settings. This type of field is best named as "Applied" since we will be providing advanced training in an area of specialization, with a particular emphasis on the acquisition of experience in the strategies and experimental methods of modern, original, scientific research. Research could involve the development of novel methodology, refinement of an existing bio-assay,

execution of a biological screen, etc. The name "Fundamental Immunology" is also an apt designator for the basic and translational research that is executed in this field of study. Specifically, in the Fundamental Immunology field of study, the rudimentary workings of the immune system are explored, both in the course work (and interestingly IMM1016/IMM1017 is roughly based on the famous *Fundamental Immunology* text by Dr. William Paul), as well as in the nature of the research project that forms the foundation of a student's thesis work. Such research projects are hypothesis driven, drawing on fundamental knowledge of the immune system. Indeed, the student's ability to defend their over-arching hypothesis and their knowledge of fundamental Immunology are specifically tested during their transfer exam.

Distinctiveness of the new field: In contrast to the existing field Fundamental Immunology, the Applied Immunology field of study will include coursework in specific Immunological techniques that are relevant to the academia/pharma and health care sector. In addition, we have integrated a career-readiness module in transferrable skill acquisition to help prepare students for the job market. Lastly, while the students in this new field will carry out research, the research will not be prepared in a thesis document, but rather a report as part of the Major Research Project. Moreover, the design of the research project will not necessarily be geared towards the objective of generating a first-author peer-reviewed publication on original research, but alternatively may be designed to set up new methodologies/assays and/or techniques. At this moment, to our knowledge the only non-thesis course-work MSc Immunology degree in Ontario was one that was recently established at the Western University (http://www.uwo.ca/mni/graduate/graduate_about.html), however the proposed Applied Immunology field is distinct from the UWO MSc insofar as it provides specific applied training in Immunology techniques. In contrast, the Western University non-thesis MSc provides a condensed version of their traditional MSc whereby the student performs original research with limited course work.

Advanced standing option: The course work in the first year of the MSc in the field of Applied Immunology is designed to prepare the student for the major research project which takes place in year 2 (IMM 2550Y). Because it is expected that some applicants may already have completed sufficient course work in Immunology to prepare for IMM2550Y (especially a lab course), the new proposed Applied Immunology field will have an advanced-standing option for students who meet the outlined requirements.

3 Need and Demand

Needs of the Student: The new field in Applied Immunology will provide students with the necessary skills required to prepare them for the technology/pharma job market through coursework and hands-on research in a host laboratory under the supervision of a faculty member from the Department of Immunology. Engaging our student population has revealed that this new field would provide the necessary academic focus for cultivating expertise in emerging Immunology techniques and bioassays. A recently administered survey to the Undergraduate Immunology Students Association (IMMSA) also revealed that there is high demand for a program that we are proposing here. Specifically, approximately 50% of the

students who responded to the survey expressed an interest in entering the pharma sector. A 2-year course-work field of study in the Immunology program is appropriate for this particular career goal (See Appendix C).

As such, we predict that students with no intention of continuing to the PhD, who would typically enrol in the Immunology field as an MSc student may opt instead for the new proposed Applied Immunology field. We anticipate that some of these students will be derived from our undergraduate Immunology program as advanced standing students. Thus, we would anticipate enrolment in the new Applied Immunology field would *initially* occur at the expense of the existing Fundamental Immunology field and be further supplemented by interested students who are opting to not enrol in the graduate program in Immunology at all due to the absence of a field that meets their career objectives. However, we will also advertise this new field within the U of T environment and beyond since we feel that this new field will fill an obvious curriculum gap for life science students both at U of T and elsewhere. Thus we expect that enrolment in the new Applied Immunology field will grow beyond a mere shift in enrolment derived from the existing Fundamental Immunology field.

Needs of the Department of Immunology: The non-thesis course-work field of study provides an opportunity to renew our graduate curriculum, providing increased career-readiness training that is in-step with the evolving demands of the technology sector. This aligns well with directives 3.2 and 3.3 of the current strategic plan for the Department of Immunology (Appendix D).

Needs of the Faculty of Medicine and the University of Toronto: The proposed MSc field in Applied Immunology is in line with the Faculty of Medicine's strategic plan of Integration, Innovation and Impact. Furthermore, the Report of the Faculty of Medicine Taskforce on Innovation and Transformation in Graduate Education has recommended the development of graduate education as "a purpose-driven network with societal relevance to be used as a mechanism to broaden the engagement of students and faculty with an emphasis on the graduate degree as the career hub that enables future professional choices". Thus, the proposed MSc program in Applied Immunology nicely aligns with this mandate.

(http://medicine.utoronto.ca/sites/default/files/TF_Innovation_Transformation_Graduate_Education_2013.pdf)

Lastly, the MSc program in Applied Immunology is consistent with the U of T strategic plan to "Promote healthy people, healthy communities and a healthy world" (see below).

Needs of Society: Chronic auto-inflammatory diseases pose an immense financial and social burden for Canadians. Therapeutics for these diseases are designed to target and "re-tune" the immune system. Immunology is an emerging and important area of medical research that encompasses multiple disciplines including biochemistry, genetics, histology/pathology, microbiology and nutrition. To prepare students for the workforce in the biotechnology sector, familiarity with multiple immunological techniques is required. The Department of Immunology hosts the necessary course content and faculty expertise to provide this training to prepare highly qualified personnel for this emerging sector. For example, recent interactions with Sanofi Pasteur, a major supporter of Department of Immunology initiatives and local employer of

some of our previous graduates, have suggested strong support for the new Applied Immunology field. In addition, Dr. Nana Lee, who is currently teaching the career module for IMM 2021H which will be a course requirement for the MSc in Applied Immunology, is also coordinating an internship program with *MaRs Innovation*. Dr. Lee asserts that graduates of the MSc in Applied Immunology would be extremely well-suited for such internships which in turn would lead to future employment. While a formal link between Dr. Lee's internship program and the MSc in Applied Immunology does not yet exist, adding this program as a credit course will be explored in the future as a program modification under the UTQAP.

Table 1: Graduate Enrolment Projections^{1,2}

Year in program	2015-16		2016-17		2017-18		2018-19		2019-20	
	Applied Imm	Fund Imm	Applied Imm	Fund Imm	Applied Imm	Fund Imm	Applied Imm	Fund Imm	Applied Imm	Fund Imm
Year 1	8	14	12	10	15 (steady state)	10	15	10	15	10
Year 2	0	14	8	14	12	10	15	10	15	10
Total	36		44		47		50		50	

¹ This model assumes 100% retention in the existing (renamed) Fundamental Immunology field

² The increased enrolment reported here is accounted for in the Faculty of Medicine's graduate enrolment plan

4 Admission Requirements

Standard Admission Requirements for the Immunology Program:

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Immunology's additional admission requirements stated below.
- An appropriate BSc, or its equivalent, normally with at least a B+ average and a strong background in molecular and cellular biology. Acceptance will be conditional on completing the B.Sc. program and having the degree conferred

Admission requirements for the Fundamental Immunology field of study: Applicants lacking adequate training in biological or natural sciences may be advised to complete extra coursework necessary for their research

Admission requirements for the Applied Immunology field of study: A consistent level of background knowledge of Immunology is essential for incoming students for the Applied Immunology field as they will delve directly into Applied Immunology coursework. As such, students will be required to have completed either IMM334Y or course SCS0101H titled "Basic Principles of Immunology" (equivalent to our Undergraduate IMM334Y course – currently in development through the School of Continuing Studies- will be available in January 2015).

Admission requirements for the Advanced-Standing Option (Applied Immunology field only)

It is appreciated that students with a Specialist or Major undergraduate degree in Immunology such as the U of T's Immunology Specialist Program or Immunology Major Program, may have already completed coursework that is equivalent to the courses taken in year 1 of the Applied Immunology field. Such students may be eligible for advanced-standing whereby they will be exempt from year 1 courses.

In contrast, students opting for the Fundamental Immunology field of study will not be eligible for advanced standing since the first year of coursework for the Fundamental Immunology field is of an advanced theoretical nature and is entirely distinct from the coursework in the 1st year of the Applied Immunology field of study. Specifically, IMM 435H, IMM 450Y, IMM 428H, IMM 429H, IMM 430H are not equivalent to IMM1016H and IMM1017H (the coursework required for the first year of the Fundamental Immunology field).

The following criteria must be met for consideration of advanced standing:

- Students must meet the minimum admission requirements (see above).
- Students must have completed the equivalent of the University of Toronto undergraduate courses IMM 435H, IMM 450Y and 2 of the following: IMM 428H, IMM 429H, IMM 430H.
- Students must already have a research supervisor who is a Faculty Member in the Department of Immunology.

The admissions will be administered through our Graduate Committee, which falls under the umbrella of the administration of our existing Immunology Graduate Program.

5 Program Requirements

The new field of Applied Immunology will be course-based and includes a Major Research Project as well as course work in applied immunological techniques in basic Immunology (IMM 1435H) and specific Immunology techniques such as flow cytometry (IMM 2031H) and immunohistology (IMM 2041). The program length is 6 sessions, although students who are admitted with advanced standing will require four sessions to complete the degree.

Requirements of the Coursework 'Applied Immunology' Field: The new field will contain a blend of Immunology, lab-courses, technology-focused courses, research project courses and some Immunology theory (sufficient in order to provide context for the applied courses). The Applied Immunology field of study will comprise 6 sessions: F/W/S/F/W/S or 24 months full-time and 7.5 full course equivalents (FCE).

Relationship of the requirements to those for the program in general: The new Applied Immunology field will host a parallel complement of required coursework that for the most part does not overlap with the existing field (please see Appendix A). The exception to this will be

IMM 1100H (Easton Immunology Seminar Series) and IMM2021H ("Immunology Tonight"). This is actually ideal in that IMM1100H and IMM2021H are required for year 1-2 of the existing MSc program in the Fundamental Immunology field of study thus facilitating interactions between students in both fields and providing opportunities for knowledge exchange that can be mutually helpful for their research projects in each field. Furthermore, the IMM1450Y and IMM1550Y courses that form part of the course load for the Applied Immunology field of study will be hosted by the Department of Immunology research laboratories in that they form the basis of the Major Research Project (see below) that will be supervised by a faculty member of the Department of Immunology. Thus, students in both the thesis and non-thesis programs will be interacting in the context of hands-on research.

The following are the program requirements (7.5 FCEs over 6 sessions):

Year 1 (3.5 FCEs):

Required (2.5 FCEs):

IMM 1435H Practical Immunology
IMM 1450Y Research Project in Immunology I
IMM 1550Y Research Project in Immunology II

2 of the following (1.0 FCE):

IMM 1428H Molecular Immunology
IMM 1429H Developmental Immunology
IMM 1430H Clinical Immunology

Year 2 (4.0 FCE):

Required (2.5 FCE):

IMM 2021H Special Topics in Immunology I, CR/NCR
IMM 1100H Easton Immunology Seminar Series, CR/NCR
IMM 2550Y Research Project in Immunology III (1.5 FCE over three sessions)

3 of the following (1.5 FCEs):

IMM 2031H Flow Cytometry
IMM 2041H Techniques in Immunohistology
IMM 2888H Emerging Infectious Diseases
JBZ 1472H Computational Genomics and Bioinformatics
JTB 2010H Proteomics and Functional Genomics
JTB 2020H Applied Bioinformatics
JFK 1120H Selected Topics in Drug Development I
JFK 1121H Selected Topics in Drug Development II
LMP 1006H Cellular Imaging in Pathobiology
LMP 1019H Research Techniques in Molecular Biology and Pathobiology
LMP 1407H Introductory Biostatistics and Clinical Investigation
BTC 1860H Generation of advanced medicine: Biologics in therapy

Major Research Project

Students will complete a Major Research Project as part of the Applied Immunology field of study. Students will be aligned with a designated Department of Immunology faculty member for the duration of their project (IMM 1450Y, IMM 1550Y, IMM 2550Y). Matching each student with a supervisor will be overseen by the Associate Chair of Graduate Studies as well as the course coordinator for IMM 1450Y. We will emulate the procedure for Faculty matching that is currently in use for the Undergraduate IMM 450Y 4th year research project course. Briefly, students are asked to interview with three faculty members and select the faculty member with whom they will conduct their research project. If a match is not achieved, the student will be provided with further faculty members whom they can approach. Project design will be aligned with the host Faculty member's research interests.

In IMM 1450Y, the basic techniques required for this project will be introduced and typically the student will be assigned a component of a larger lab project. In IMM 1550Y, the over-arching research question and objectives will be designed in consultation with the faculty mentor. In IMM 2550Y, research objectives will be pursued with guidance from the faculty mentor and the project that was proposed in IMM 1550Y will be completed during the final F/W/S sessions. In all three research courses (IMM 1450Y, IMM 1550Y, IMM 2550Y), an oral presentation and a written report will be required and will be graded by the Graduate Faculty Members responsible for each course, also known as the course coordinators.

Advanced Standing Option - Program Requirements:

Students admitted through the Advanced Standing option will have completed the equivalent of all of the **Year 1** requirements as undergraduate courses: (IMM 435H, IMM 450Y and two of the following: IMM 428H, IMM 429H, IMM 430H) with the exception of IMM 1550Y which advanced standing students will take as their first course for the MSc in the Applied Immunology field. Thus, advanced standing students will enroll for 4 sessions (S/F/W/S).

The following are the program requirements (5.0 FCEs over 4 sessions):

Session 1 (Summer - 1.0 FCE):

IMM 1550Y Research Project in Immunology II

Sessions 2-4 (Year 2 - 4.0 FCE):

Required:

IMM 2021H Special Topics in Immunology I, CR/NCR
IMM 1100H Easton Immunology Seminar Series, CR/NCR
IMM 2550Y Research Project in Immunology III (1.5 FCEs over three sessions)

3 courses from of the following list:

IMM 2031H Flow Cytometry
IMM 2041H Techniques in Immunohistology
IMM 2888H Emerging Infectious Diseases
JBZ 1472H Computational Genomics and Bioinformatics
JTB 2010H Proteomics and Functional Genomics
JTB 2020H Applied Bioinformatics
JFK 1120H Selected Topics in Drug Development I
JFK 1121H Selected Topics in Drug Development II

LMP 1006H	Cellular Imaging in Pathobiology
LMP 1019H	Research techniques in Molecular Biology and Pathobiology
LMP 1407H	Introductory Biostatistics and Clinical Investigation
BTC 1860H	Generation of advanced medicine: Biologics in therapy

Major Research Project

Students admitted under advanced standing option in the Applied Immunology field will complete a Major Research Project as part of the Applied Immunology field of study in the same manner as regular admitted students. The research project will be hosted by the same lab as where they have done their undergraduate IMM 450Y (which is equivalent to IMM 1450Y). The research project for advanced standing students will be composed of IMM 1550Y and IMM 2550Y.

6 Degree Level Expectations, Program Learning Outcomes and Program Structure

Table 2: Master's DLEs

MASTER'S DEGREE LEVEL EXPECTATIONS (based on the Ontario Council of Academic Vice Presidents (OCAV) DLEs)	MASTER'S PROGRAM LEARNING OBJECTIVES AND OUTCOMES	HOW THE PROGRAM DESIGN AND REQUIREMENTS SUPPORT THE ATTAINMENT OF STUDENT LEARNING OUTCOMES
<p>EXPECTATIONS:</p> <p>The Immunology Program will offer 2 fields of study: Fundamental Immunology (MSc and PhD) and Applied Immunology (MSc Only). While the two fields have different course requirements and methods of evaluation, they are similar in that they both endow the student with a systematic understanding of the working of the Immune system at the forefront of current Immunology research (in the case of the Fundamental Immunology field) or at the forefront of cutting edge Immunology techniques (in the case of the Applied Immunology field). Furthermore, both fields enable a comprehension in how to carry out experiments - whether to advance a theoretical concept (Fundamental Immunology) or to explore and refine a technical approach (Applied Immunology). As such, both fields will enable a competence in the research process and will provide the student with transferrable skills necessary for their next stage of employment and/or education. Lastly, both fields provide ample opportunities to refine the student's communication skills in that they are evaluated based on written and oral communication in the form of a thesis defense (Fundamental Immunology) or in coursework and a Major Research Project (Applied Immunology).</p> <p>As summarized here, an MSc in the Immunology program is awarded to students in the field of Applied Immunology who have demonstrated:</p>		
<p>1. Depth and Breadth of Knowledge</p> <p>A systematic understanding of knowledge, and a critical awareness of current problems and/or new insights, much of which is at, or informed by, the forefront of the</p>	<p>Depth and breadth of knowledge is defined in the Applied Immunology field as an understanding of the fundamental concepts of how the Immune system develops, is maintained, functions during</p>	<p>The program design and requirement elements that ensure these student outcomes for depth and breadth of knowledge are:</p> <p>The following "background courses" will provide a breadth of knowledge</p>

MASTER'S DEGREE LEVEL EXPECTATIONS (based on the Ontario Council of Academic Vice Presidents (OCAV) DLEs)	MASTER'S PROGRAM LEARNING OBJECTIVES AND OUTCOMES	HOW THE PROGRAM DESIGN AND REQUIREMENTS SUPPORT THE ATTAINMENT OF STUDENT LEARNING OUTCOMES
<p>academic discipline, field of study, or area of professional practice.</p>	<p>infection and malfunctions during disease. The Applied Immunology field of study will also endow a student with a theoretical understanding of techniques in Immunology that are used at the forefront of medical research in industry and academia.</p> <p>This is reflected in students who have a broad knowledge of Immunological concepts relevant to health and disease as well as specialized knowledge on advanced techniques in Immunological research.</p>	<p>of Immunological concepts relevant to health and disease and thus serve as a foundation for the technology-based coursework and the Major Research Project (the "core courses"): IMM 1429H, IMM 1428H, IMM 1430H</p> <p>The following courses will provide a theoretical understanding of techniques in Immunology used at the forefront of medical research (NB, students will be required to take a minimum of 2 of the following): IMM 1435H, IMM 2031H (Recent advances in Flow Cytometry, in development), IMM 2041H (Recent advances in Immunohistology, in development), JBZ 1472H, JTB 2010H, JTB 2020H, JFK 1120H, JFK 1121H, MSC 1060H, LMP 1006H, LMP 1019H, LMP 1407H, BTC 1860H.</p> <p>Note: Advanced standing students will have completed the equivalent of Year 1 background courses prior to entering the program</p>
<p>2. Research and Scholarship</p> <p>A conceptual understanding and methodological competence that i) Enables a working comprehension of how established techniques of research and inquiry are used to create and interpret knowledge in the discipline; ii) Enables a critical evaluation of current research and advanced research and scholarship in the discipline or area of professional competence; and iii) Enables a treatment of complex issues and judgments based on established principles and techniques; and, on the basis of that competence, has shown at least one</p>	<p>Research and Scholarship is defined in the Applied Immunology field of study as advanced training in an area of specialization, with a particular emphasis on the acquisition of experience in the strategies and experimental methods of modern, original, scientific research. Research need not be "hypothesis driven" but rather could involve the development of novel methodology, refinement of an existing bio-assay, execution of a biological screen, etc.</p> <p>This is reflected in students that have mastered technique(s) in a specialized area of research and can</p>	<p>The program design and requirements that ensure these student outcomes for research and scholarship are:</p> <p>The following "core" courses, which take place after completion of the "background courses" will require the student to design an experiment that tests a hypothesis with emphasis on cutting edge Immunological techniques, and articulate this in the form of a written report: IMM 1450Y, IMM 1550Y, IMM 2550Y</p>

MASTER'S DEGREE LEVEL EXPECTATIONS (based on the Ontario Council of Academic Vice Presidents (OCAV) DLEs)	MASTER'S PROGRAM LEARNING OBJECTIVES AND OUTCOMES	HOW THE PROGRAM DESIGN AND REQUIREMENTS SUPPORT THE ATTAINMENT OF STUDENT LEARNING OUTCOMES
<p>of the following: i) The development and support of a sustained argument in written form; or ii) Originality in the application of knowledge.</p>	<p>design and carry out controlled informative experiments in this area. The Applied Immunology field of study is not intended to comprise a finished piece of research but should be a competent report of the student's mastery of certain relevant techniques and their application to a specific problem*.</p>	
<p>3. Level of Application of Knowledge</p> <p>Competence in the research process by applying an existing body of knowledge in the critical analysis of a new question or of a specific problem or issue in a new setting.</p>	<p>Application of Knowledge is defined in the Applied Immunology field of study as the mastering of a technique(s) and an understanding of how this technique(s) can be used to answer questions in the area of Immunological research.</p> <p>This is reflected in students who are able to master a technique in an area of Immunological research such as flow cytometry, immunohistology, microscopy or molecular Immunology methods.</p>	<p>The program design and requirements that ensure these student outcomes for level and application of knowledge are:</p> <p>The following core courses will allow the student to master a technique in the area of Immunological research: IMM 1435H, IMM 2031H (Recent advances in Flow Cytometry, in development), IMM 2041H (Recent advances in Immunohistology, in development), JBZ 1472H, JTB 2010H, JTB 2020H, JFK1120H, JFK 1121H, MSC 1060H, LMP 1006H, LMP 1019H, LMP 1407H, BTC 1860H.</p>
<p>4. Professional Capacity/Autonomy</p> <p>a. The qualities and transferable skills necessary for employment requiring i) The exercise of initiative and of personal responsibility and accountability; and ii) Decision-making in complex situations; b. The intellectual independence required for continuing professional development; c. The ethical behavior consistent with academic integrity and the use of appropriate guidelines and procedures for responsible conduct of research; and d. The ability to appreciate the broader implications of applying knowledge to particular contexts.</p>	<p>Professional Capacity/Autonomy is defined in Applied Immunology field of study as the acquisition of transferrable skills in (1) communication (written and oral) of Immunological research and techniques and (2) the ability to complete an independent study testing an Immunological hypothesis whilst applying state-of-the-art Immunological techniques.</p> <p>This is reflected in students who are (1) able to conduct an ethically responsible independent research project of modest scope (2) ability to articulate future directions for the research that they conducted as</p>	<p>The program design and requirements that ensure these student outcomes for professional capacity/autonomy are:</p> <p>The following core courses will develop independent study skills. These courses are supervised by a designated faculty member overseeing the ethical responsibility and continued professional development of the student: IMM 1450Y, IMM 1550Y, IMM 2550Y</p> <p>The following additional courses are designed to bring to the forefront emerging areas in Immunological research, enabling the student to conceptualize the full potential of</p>

MASTER'S DEGREE LEVEL EXPECTATIONS (based on the Ontario Council of Academic Vice Presidents (OCAV) DLEs)	MASTER'S PROGRAM LEARNING OBJECTIVES AND OUTCOMES	HOW THE PROGRAM DESIGN AND REQUIREMENTS SUPPORT THE ATTAINMENT OF STUDENT LEARNING OUTCOMES
	it pertains to health and disease.	their learning outcomes: IMM 1100H, IMM 2021H.
<p>5. Level of Communications Skills</p> <p>The ability to communicate ideas, issues and conclusions clearly.</p>	<p>Communications Skills is defined in the Applied Immunology field of study as the ability to describe their research to a technical as well as lay public and to work effectively in a team environment.</p> <p>This is reflected in students who are able to present their research in both oral and written formats (in the form of a graded seminar and research report), to contribute to the overall research goals of a working laboratory (team work) and can succeed in obtaining employment in the pharma/academic technology sector.</p>	<p>The program design and requirements that ensure these student outcomes for level of communication skills are:</p> <p>The following courses will develop communication and team work skills in the context of a host laboratory: IMM 1450Y, IMM 1550Y, IMM 2550Y</p> <p>The following course will provide additional career-readiness preparation as well as skills in communicating with the lay public: IMM 2021H.</p>

7 Assessment of Teaching and Learning

Methods of evaluation of teaching: Success in teaching will be monitored by course evaluations distributed in class. In addition, we will track graduates of the program following graduation to determine where they are obtaining employment, of if they are continuing to other professional degree or graduate degree programs.

Methods of evaluation of learning: The Applied Immunology field of study learning objectives will be evaluated as per the syllabus of each individual course. In general, this will be done during in-class exams (short answer questions) and in-class presentations. In addition, for IMM 1450Y, IMM 1550Y and IMM 2550Y, a research project report will be generated and an oral presentation will be graded.

Appropriateness of methods of evaluation of student achievement: The course-work grades will provide an unambiguous mechanism for evaluating how well the student has grasped the concepts of basic and applied Immunology. IMM 1100H and IMM 2021H are credit/no credit courses with mandatory attendance but no formal evaluation. For IMM 1450Y, IMM 1550Y and IMM 2550Y research reports will detail the hypotheses tested, techniques that were used and/or developed, technical hurdles that were encountered/surmounted and conclusions from the research. Such technical reports are typical of industrial/pharma technical reports and will

provide good preparation for this job sector. Lastly, the 3 oral presentations required of the student (IMM 1450Y, IMM 1550Y, IMM 2550Y) will provide opportunities for the student to hone their communication skills. It is expected that students who excel in the written exams, written reports and oral presentations (all of which are evaluated in the context of course work) will be well-prepared and competitive for the tech/pharma job sector.

How will the program document and demonstrate the level of performance of students' consistent with the University's DLEs:

- Depth and Breadth of knowledge will be assessed in the theoretical coursework, particularly in year 1.
- Research and Scholarship will be assessed in the written and oral reports for IMM1450, IMM 1550Y and IMM 2550Y.
- Level of application of knowledge will be demonstrated in the half courses that are taken in the second year as well as IMM 1435H where students will be evaluated for their technical skills in standard as well as emerging Immunological techniques.
- Professional Capacity and Autonomy skills will be measured in IMM 1450Y, IMM 1550Y and IMM 2550Y based on the progress in their research projects, which will be reflected in the written and oral reports.
- Level of communication skills will also be assessed in IMM 1450Y, IMM 1550Y and IMM 2550Y whereby students will be graded on their oral presentations.

8 Consultation

Broad consultation has occurred. In particular, an in depth strategic planning exercise has taken place within the Department of Immunology (see Appendix), and the 2-year Applied Immunology field of study within the MSc was a major recommendation moving forward. The proposed new field Applied Immunology was introduced to all faculty of the Department of Immunology at the semi-annual faculty meeting on November 4th, 2013 and received full support. In addition, we have consulted with the Department of Pharmacology. Pharmacology has recently received approval for a non-thesis coursework based field of study, and we incorporated some common elements into our own proposal where suitable.

Furthermore, consultation with the Immunology Graduate Student Association has taken place. Dr. Catherine Whiteside (Dean, Faculty of Medicine), Dr. Avrum Gotlieb (interim Vice-Dean, Graduate and Life Science Education, Faculty of Medicine), Drs. Brian Corman, Jane Alderdice and Liz Smyth (School of Graduate Studies), and Drs. Sioban Nelson and Jane Harrison (Vice-Provost, Academic Programs) have also been consulted.

Lastly, we consulted the Immunology undergraduate program to gauge interest in the Applied Immunology field of study. Approximately 100 students responded to a survey. Strong support for the new field was demonstrated (see Appendix C).

9 Resources

9.1 Faculty Complement

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Comment on the expertise of the faculty who will actively support/participate in the field/concentration: The Department of Immunology faculty have broad expertise in theoretical and practical Immunology in multiple areas including developmental immunology, innate immunity, vaccine strategies, infectious disease, autoimmunity, mucosal immunology and immunogenetics. We also have a core cluster of faculty who have technological expertise including flow cytometry, molecular techniques, microscopy, histology, high throughput genomics and proteomics etc. that are essential to this new field of study.

Comment on the impact of the field on the parent program, focusing on the extent of the diversion of faculty from existing graduate courses and/or supervision: The impact of the new field on the parent program of Immunology will be to increase the scope of our graduate program offerings, providing a field tailored to the needs of students who wish to obtain employment in the biotech/pharma sector whilst retaining similar learning outcomes for the thesis-based Doctoral stream field in Fundamental Immunology. In year 2, students will be integrated into a host lab and would work along with Immunology MSc and PhD students. Rather than this being a diversion of resources (ie existing graduate supervision), this arrangement may be viewed as synergistic, with students in the new field designing and executing a project that is related to the ongoing laboratory work in order to achieve a larger project goal for the lab. In addition, the existing course work for year 1 of the Applied Immunology field of study draws upon existing courses, several of which are under-subscribed, thus not requiring significant new resources for teaching.

Discuss the role of any adjunct or contractual faculty: There will be a limited role for adjunct or contractual faculty: We have employed a part-time lecturer to assist with IMM 1435H and plan to do the same for the flow cytometry and immunohistochemistry courses under development.

Comment on the provision of supervision of experiential learning opportunities, as appropriate: As mentioned, in year 2, students will be integrated into a host lab where they will have a faculty mentor supervising work for IMM 1450Y, IMM 1550Y and IMM 2550Y. This faculty mentor will oversee project development, monitoring of progress and grading of the research report.

Table 3: Detailed Listing of Committed Faculty

Faculty name and SGS status	Home unit	Area(s) of Specialization
Anderson, Michele - Full Member	Immunology	Fundamental Immunology
Berger, Stuart - Full Member	Immunology	Fundamental and Applied Immunology
Berinstein, Neil L - Full Member	Immunology	Fundamental Immunology
Carlyle, James - Full Member	Immunology	Fundamental Immunology
Danska, Jayne - Full Member	Immunology	Fundamental and Applied Immunology
Dosch, Hans - Full Member	Immunology	Fundamental Immunology
Fish, Eleanor - Full Member	Immunology	Fundamental and Applied Immunology
Gommerman, Jennifer - Full Member	Immunology	Fundamental and Applied Immunology

Faculty name and SGS status	Home unit	Area(s) of Specialization
(Associate Chair Graduate Studies)		
Gorczynski, Reginald - Full Member	Immunology	Fundamental Immunology
Grunebaum, Eyal - Full Member	Immunology	Fundamental Immunology
Guidos, Cynthia - Full Member	Immunology	Fundamental and Applied Immunology
Hakem, Razqallah - Full Member	Immunology	Fundamental Immunology
Hirano, Naoto - Full Member	Immunology	Fundamental Immunology
Iscove, Norman - Full Member	Immunology	Fundamental Immunology
Isenman, David - Full Member	Immunology	Fundamental Immunology
Jeschke, Marc - Full Member	Immunology	Fundamental Immunology
Jongstra, Jan - Full Member	Immunology	Fundamental and Applied Immunology
Julius, Michael - Full Member	Immunology	Fundamental Immunology
Kaul, Rupert - Full Member	Immunology	Fundamental Immunology
Kelvin, David - Full Member	Immunology	Fundamental and Applied Immunology
Letarte, Michelle - Emeritus	Immunology	Fundamental Immunology
Levy, Gary - Full Member	Immunology	Fundamental Immunology
MacDonald, Kelly - Full Member	Immunology	Fundamental Immunology
Mak, Tak - Full Member	Immunology	Fundamental Immunology
Martin, Alberto - Full Member	Immunology	Fundamental Immunology
Ohashi, Pam - Full Member	Immunology	Fundamental Immunology
Ostrowski, Mario - Full Member	Immunology	Fundamental Immunology
Paige, Christopher - Full Member	Immunology	Fundamental Immunology
Philpott, Dana - Full Member	Immunology	Fundamental and Applied Immunology
Poussier, Philippe - Full Member	Immunology	Fundamental Immunology
Ratcliffe, Michael - Full Member	Immunology	Fundamental Immunology
Robbins, Clint - Associate Member	Immunology	Fundamental Immunology
Roifman, Chaim - Full Member	Immunology	Fundamental Immunology
Rottapel, Robert - Full Member	Immunology	Fundamental Immunology
Rubin, Laurence - Full Member	Immunology	Fundamental Immunology
Schuh, Andre - Full Member	Immunology	Fundamental Immunology
Siminovitch, Katherine - Full Member	Immunology	Fundamental and Applied Immunology
Spanner, David - Full Member	Immunology	Fundamental Immunology
Trainor, Bebhinn - Associate Member	Immunology	Fundamental Immunology
Tsui, Florence - Full Member	Immunology	Fundamental Immunology
Watts, Tania - Full Member	Immunology	Fundamental and Applied Immunology
Williams, David - Full Member	Immunology	Fundamental Immunology
WIner, Dan - Associate Member	Immunology	Fundamental Immunology
Wither, Joan - Full Member	Immunology	Fundamental Immunology
Yeung, Rae - Full Member	Immunology	Fundamental Immunology
Zhang, Li - Full Member	Immunology	Fundamental Immunology
Zuniga-Pflucker, Juan Carlos - Full Member	Immunology	Fundamental and Applied Immunology
(Chair and Graduate Chair)		
Hay, John - Emeritus	Immunology	Fundamental Immunology
Shulman, Marc - Emeritus	Immunology	Fundamental Immunology
Dunn, Shannon - Full Member	Immunology	Fundamental Immunology
Ehrhardt, Rudolf - Full Member	Immunology	Fundamental and Applied Immunology
Hirano, Naoto - Associate Member	Immunology	Fundamental Immunology
Jongstra-Bilen, Jenny - Associate Member	Immunology	Fundamental Immunology
Keystone, Edward - Associate Member	Immunology	Fundamental Immunology
Mallevaey, Thierry - Full Member	Immunology	Fundamental Immunology
Rast, Jonathan - Full Member	Immunology	Fundamental Immunology

9.2 Space/Infrastructure

Address any unique space/infrastructure requirements including information technology, laboratory space and equipment, etc.:

Laboratory space will be required but is in place, and is not unique to the Applied Immunology field of study since the existing Immunology Doctoral stream programs access the same host labs. The existing space is adequate for an additional 15 students a year as is projected for the new field.

With respect to the technology-focused courses (IMM 2031H, IMM 2041H), these will rely on pre-existing core facilities located at the Medical Sciences Building. The costs associated with running these courses will be covered by the Department of Immunology as outlined in the application that was made for these new courses (Minor Modifications – New Course or Change to Existing Course Governance Form C). These courses have been approved and are listed in the current SGS calendar.

10 Governance Process

	Levels of Approval Required
Provostial Sign-Off	
	Graduate unit approval
	Faculty/Divisional Council
Submission to Provost's Office	
Report to AP&P	
Report to Ontario Quality Council	

APPENDIX A: SGS Calendar Entry

Immunology

Faculty Affiliation

Medicine

Degree Programs Offered

Immunology - MSc, PhD

Fields (MSc):

Applied Immunology

Fundamental Immunology

Fields (PhD):

Fundamental Immunology

Collaborative Programs

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

1. **Developmental Biology.** Immunology, MSc, PhD.
2. **Resuscitation Sciences.** Immunology, MSc, PhD.
3. **Women's Health.** Immunology, MSc, PhD.

Overview

The Department of Immunology provides a common forum for investigators in many areas of the University of Toronto and an interdisciplinary research experience in immunology.

Members and students in the department are located at the Medical Sciences Building, at the Ontario Cancer Institute, and at the Research Institutes of Mt. Sinai Hospital, Toronto General Hospital, Toronto Western Hospital, the Hospital for Sick Children, and Sunnybrook Hospital.

The Immunology program offers study programs in two distinct fields of study: (1)

Fundamental Immunology and (2) ***Applied Immunology***.

These degrees cover a wide range of immunological sub-disciplines including molecular mechanisms of lymphocyte development and selection, T-cell and B-cell receptors, cell interactions, growth factor receptors, cytokine networks, antigen processing and presentation, signal transduction in lymphocytes, V(D)J recombination, anergy, apoptosis, transgenic and knock-out models, immuno-targeting and vaccine design, autoimmunity, AIDS, diabetes, and transplantation. For more detailed information, see the graduate handbook available from the department or consult the Immunology home page on the website listed below.

Contact and Address

Web: www.immunology.utoronto.ca
Email: graduate.immunology@utoronto.ca
Telephone: (416) 978-6382 Fax: (416) 978-1938
Department of Immunology
University of Toronto
Medical Sciences Building
Room 7207, 1 King's College Circle
Toronto, Ontario M5S 1A8
Canada

Degree Programs
Immunology
Master of Science

Minimum Admission Requirements:

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Immunology's additional admission requirements stated below.
- An appropriate BSc, or its equivalent, normally with at least a B+ average and a strong background in molecular and cellular biology.

Field: Fundamental Immunology
Additional Admission Requirements

- Applicants lacking adequate training in biological or natural sciences may be advised to do extra coursework necessary for their research.

Field: Applied Immunology
Additional Admission Requirements

- Applicants from outside North America are required to provide Graduate Record Examination (GRE) (general) scores with their application.
- Students will be required to take either IMM334Y or SCS0101H.
- Applied Immunology students are not eligible to participate in collaborative programs.

Field: Applied Immunology (Advanced-Standing Option)
Additional Admission Requirements

- Students must meet the minimum admission requirements for Immunology program and the field (see above).
- Students with an Immunology Specialist or Major undergraduate degree from the University of Toronto may be eligible for advanced-standing.
- Students must have completed the following University of Toronto undergraduate

courses IMM 435H, IMM 450Y and two of the following courses: IMM 428H, IMM 429H, IMM 430H.

- Students must already have a research supervisor who is a Graduate Faculty Member in the Department of Immunology.
- Applied Immunology students are not eligible to participate in collaborative programs.

Program Requirements

Field: Fundamental Immunology

- Successful completion of IMM 1100H, IMM 1016H, IMM 1019H and IMM 2021H.
- A satisfactory thesis embodying the student's research.
- Pass an oral examination based on research.

Field: Applied Immunology

- Successful completion of 7.5 FCEs as follows:
 - Year One:
 - IMM 1435H, IMM 1450Y, IMM 1550Y (2.5 FCEs)
 - 1.0 FCE selected from: IMM 1428H, IMM 1429H, or IMM 1430H
 - Year Two:
 - IMM 2021H, IMM 1100H (1.0 FCE)
 - IMM 2550Y (completed over three sessions) (1.5 FCEs)
 - 1.5 FCE selected from the course list below.
- Students are required to be on campus and participating full-time until the program requirements of research and coursework have been completed.

Course List

Not all courses are offered every year. Please consult the department for details.

IMM 1435H	Practical Immunology
IMM 1450Y	Research Project in Immunology I
IMM 1428H	Molecular Immunology
IMM 1429H	Developmental Immunology
IMM 1430H	Clinical Immunology
IMM1550Y	Research Project in Immunology II
IMM 1100H	Easton Immunology Seminar Series, CR/NCR
IMM 2021H	Special Topics in Immunology
IMM 2550Y	Research Project in Immunology III
IMM 2031H	Flow Cytometry
IMM 2041H	Techniques in Immunohistology
IMM 2888H	Emerging Infectious Diseases
JBZ 1472H	Computational Genomics and Bioinformatics
JTB 2010H	Proteomics and Functional Genomics
JTB 2020H	Applied Bioinformatics

JFK 1120H	Selected Topics in Drug Development I
JFK 1121H	Selected Topics in Drug Development II
LMP 1006H	Cellular Imaging in Pathobiology
LMP 1019H	Research techniques in Molecular Biology and Pathobiology
LMP 1407H	Introductory Biostatistics and Clinical Investigation
BTC 1860H	Generation of advanced medicine: Biologics in therapy

Field: Applied Immunology (Advanced-Standing option)

- Successful completion of 5.0 FCEs as follows:
- IMM1550Y (completed in first summer session) (1 FCE)
- IMM2550Y (completed over last three sessions) (1.5 FCEs)
- IMM 1100H and IMM 2021H (1.0 FCE)
- 1.5 FCEs selected from course list below.

Course list:

Not all courses are offered every year. Please consult the department for details.

IMM 2031H	Flow Cytometry
IMM 2041H	Techniques in Immunohistology
IMM 2888H	Emerging Infectious Diseases
JBZ 1472H	Computational Genomics and Bioinformatics
JTB 2010H	Proteomics and Functional Genomics
JTB 2020H	Applied Bioinformatics
JFK 1120H	Selected Topics in Drug Development I
JFK 1121H	Selected Topics in Drug Development II
LMP 1006H	Cellular Imaging in Pathobiology
LMP 1019H	Research techniques in Molecular Biology and Pathobiology
LMP 1407H	Introductory Biostatistics and Clinical Investigation
BTC 1860H	Generation of advanced medicine: Biologics in therapy

Program Length: 6 sessions full-time (F/W/S/F/W/S), 4 sessions advanced-standing (S/F/W/S)

Time Limit: 3 years full-time

Degree Programs

Immunology

Doctor of Philosophy

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Immunology's additional admission requirements stated below.
- There are three admission routes to the PhD program:
 1. Applicants may be accepted for direct-entry with a BSc degree, with at least an A-average in their final year.
 2. Applicants may be accepted first into the MSc program from a bachelor's program

with at least a B+ average and, conditional on excellent performance in the first year, may transfer into the PhD program. Transfer students must successfully complete a transfer exam after 18 months in the MSc program (Fundamental Immunology field only).

3. Applicants already holding an MSc with at least a B+ average may be accepted directly into the PhD program.

Program Requirements

- The PhD program emphasizes research. In addition, the program requirements include completion of IMM 1016H, IMM 1017H, IMM 1019H, IMM 2100H, and an additional 0.5 full-course equivalent (FCE) from either Immunology or outside the department in a subject relevant to the thesis topic.
- Students are required to be on campus and participating full-time until the program requirements of research and coursework have been completed.
- All students are examined in the second year of the program on a submitted research proposal and on relevant course material.
- Candidates must submit a thesis and defend it at a Doctoral Final Oral Examination conducted by the School of Graduate Studies.

Program Length: 4 years full-time; 5 years direct-entry

Time Limit: 6 years full-time; 7 years direct-entry

Course List

Not all courses are offered every year. Please consult the department for details.

IMM 1016H Recent Advances in Basic Immunology: Part I (Fall)

IMM 1017H+ Recent Advances in Basic Immunology: Part II (Spring)

IMM 1019H0 Immunology Student Seminar Series (Credit/No Credit)

IMM 1020H Recent Advances in Clinical Immunology (Spring)

IMM 1019H Master's Seminar Course (Credit/No Credit)

IMM 1429H Developmental Immunology (Fall)

IMM 1430H Advanced Immunobiology (Spring)

IMM 2021H Special Topics in Immunology I (Credit/No Credit)

IMM 2100H Special Topics in Immunology II (Credit/No Credit)

IMM 1428H Molecular Immunology (Fall)

Graduate Faculty

Full Members

Anderson, Michele - BS, PhD

Berger, Stuart - BSc, MSc, PhD

Berinstein, Neil L - MD

Carlyle, James - PhD

Danska, Jayne - AB, PhD

Dosch, Hans - MD

Dunn, Shannon - BSc, MSc, PhD
Ehrhardt, Rudolf - MS, PhD
Fish, Eleanor - BSc, MPH, PhD
Gommerman, Jennifer - BSc, PhD (**Associate Chair of Graduate Studies**)
Gorczyński, Reginald - BSc, BA, MA, MD, PhD
Guidos, Cynthia - BSc, PhD
Grunebaum, Eyal - MD
Hakem, Razqallah - PhD
Inman, Robert - BA, MD
Iscove, Norman - MD, PhD
Jeschke, Marc - DrMed, PhD
Jongstra, Jan - MSc, PhD
Julius, Michael - BSc, PhD
Kaul, Rupert - MD, PhD
Kelvin, David - MASc, PhD
Levy, Gary - BSc, MD
MacDonald, Kelly - MD
Mak, Tak - BSc, MSc, PhD
Mallevaey, Thierry - MSc, PhD
Martin, Alberto - BSc, MSc, PhD
Ohashi, Pam - BSc, PhD
Ostrowski, Mario - MD
Paige, Christopher - BSc, PhD
Philpott, Dana - BS, PhD
Poussier, Philippe - MD
Ratcliffe, Michael - PhD
Rast, Jonathan - MS, PhD
Roifman, Chaim - MD
Rottapel, Robert - BA, MD
Rubin, Laurence - MD
Schuh, Andre - MD
Siminovitch, Katherine - MD
Spanner, David - PhD
Tsui, Florence - BSc, MSc, PhD
Watts, Tania - BSc, PhD
Williams, David - BSc, MSc, PhD
Wither, Joan - MD, PhD
Yeung, Rae - DrMed, MD
Zhang, Li - MSc, MD, PhD
Zuniga-Pflucker, Juan Carlos - BSc, PhD (**Chair and Graduate Chair**)

Members Emeriti

Hay, John - BSc, MSc, PhD
Shulman, Marc - AB, PhD
Isenman, David - BSc, BSc, PhD

Letarte, Michelle - BSc, PhD

Wu, Gillian - PhD

Associate Members

Hirano, Naoto - MD, PhD

Jongstra-Bilen, Jenny - BSc, MSc, PhD

Keystone, Edward - BSc, MD

Robbins, Clint - PhD

Trainor, Bebhinn - PhD

Winer, Daniel – MD

APPENDIX B: Courses In Development

IMM 1450Y Research Project in Immunology I (1 FCE)
IMM 1550Y Research Project in Immunology II (1 FCE)
IMM 2550Y Research Project in Immunology III (1.5 FCE)

University of Toronto

Minor Modification Proposal – New Graduate Courses, or Changes to Existing Graduate Courses

This template should be used to: create a new graduate course; reactivate a closed/deactivated course; rename an existing course; renumber an existing course; etc. A complete list of all course changes is available on the [Vice-Provost, Academic Programs website](#).

If you have questions while you are filling out this document, please contact your Dean's Office.

Graduate Department /Unit/Centre/Institute: <i>For courses offered by collaborative programs list supporting unit.</i>	Immunology
Faculty / Academic Division:	Medicine
Dean's Office contact:	

Part 1: ROSI *Please complete this section. The data will be used to complete the ROSI record.*

New Course – fill out all fields	
Course Designator and Number:	IMM1450Y
FCE Weight:	1.0
Full Course Title for Transcript:	Major Research Project in Immunology (I)
Abbreviated Title:	Major Research Project (I)
Available via Student Web Service:	Yes
Course Type:	Regular
Online Course:	No
Required Course:	Yes
Grading Scale:	Letter Grade
Course Prerequisites, if yes please list:	IMM1435H or IMM435H
Course Credit Exclusions, if yes please list:	None
Or Changes to an Existing Course (require unit level approval only) – fill out applicable fields	
Current Course Designator and Number (required):	n/a
Deactivated Course designator, number and weight:	n/a
Splitting or Amalgamating Courses:	n/a
New Designator and Number:	n/a
New/Renamed Full Course Title for Transcript:	n/a
New/Renamed Abbreviated Title:	n/a
New FCE Weight:	n/a
Change to Grading Scale (Letter Grades or CR/NCR):	n/a
Change to Course Type:	n/a

Effective Date

Fall, 2015

Part 2: Other Changes to Existing Courses

Optional Field – This section may be used to describe other types of changes to existing courses your Faculty/Division tracks. These changes are not posted to the GCT.

--

Part 3: New Course Documentation

For Faculty / Divisional approval of new courses, please append the approved course documentation, or complete the template below.

Course Description

IMM1450Y is a full credit course in which the student takes part in an original research project in the laboratory of a faculty member associated with the Immunology Department. The course is designed to provide an opportunity for the student to discover in detail, through active participation, the research projects being undertaken in a specific laboratory.

The student is expected to devote a minimum of eight hours per week (normally one full day or two half days) to the course from the week the fall term lectures begin to the last week of the spring term in which lectures are given. This time is to be spent in the laboratory designing and carrying out experiments. Data evaluation, literature reading, report and oral presentation preparation and web page preparation (see below) are to be done outside of the laboratory time. The time available should be sufficient for the student to complete a project and to become familiar with a number of techniques used in cellular or molecular biology.

The course is a required credit for the MSc in the Applied Immunology field. Students who enter the Applied Immunology MSc with advanced standing will have taken this course at the undergraduate level (IMM450Y) although since IMM1450Y has an additional evaluation component beyond that required for IMM450, (see learning outcomes section), Advanced Standing students will be expected to complete this extra assignment during the first session of their program (Summer Session I).

Academic Rationale

A major core component of the MSc in the Applied Immunology field is a Major Research Project (MRP) that is hosted by a laboratory of a Department of Immunology faculty member. The MRP is comprised of IMM1450Y, IMM1550Y and IMM2550Y. Each of these courses play a particular role in the development and execution of the MRP. As IMM1450Y is the first of this course series, the intent of IMM1450Y is to provide the student with an introduction to the techniques and assays that are performed in the host laboratory. The student will use this time to hone their laboratory skills in a range of techniques. Based on the student's experience in IMM1450Y, the MRP will be further developed in IMM1550Y and IMM2550Y.

Learning Outcomes (if applicable)

The student will learn how to design an experiment, how to perform the techniques required for executing the experiment, how to analyze the data obtained from the experiment and how to report and interpret the data. Competency in these learning outcomes will be evaluated in the

form of a written report and an oral presentation. The report will contain the rationale, results, discussion and conclusions of the project. The oral presentation of about 10 minutes will be given by the student to other students in the course and their supervisors. These learning outcomes are the same as those for the undergraduate version of the course (IMM450Y).

In addition, the student will learn how to communicate their science to a lay audience. Competency in this learning outcome will be evaluated in the form of a splash page (web page) assignment where the student is required to display their IMM1450Y work (question, methods, results, interpretation) in a format that is understandable to a lay audience. This is an important learning outcome that does not exist in any of our other Immunology course work and will not be an assignment for IMM450Y (i.e. it distinguishes the graduate versus undergraduate version of this course). For those students who enrol in the MSc in Applied Immunology MSc with Advanced Standing and have already completed IMM450Y, they will be required to complete this assignment during their first summer term. The web page assignment will not be graded.

The overall grade awarded for IMM1450Y will be based on the oral presentation 10%; report 20%; evaluation by supervisor 70%.

Similarity/Overlap with other Courses & Consultation

As explained, there is similarity/overlap with IMM450Y, an undergraduate course offered to Immunology Major and Specialist students. A distinguishing feature between IMM1450Y and IMM450Y is the web page assignment.

Consultation with the Chair of the Department of Immunology (Dr. Juan Carlos Zuniga-Pflucker) and the Associate Chair of Undergraduate studies for the Department of Immunology (Dr. Alberto Martin) has taken place to ensure we have the capacity to accommodate students in host laboratories and to ensure a good fit for this course within the Immunology unit.

Resource Requirements (if required)

Host labs will be required to carry out the Major Research project.

Governance Approval

Unit Sign-Off (Committee name and meeting date)	Immunology Graduate Committee on October 15th, 2014 Graduate and Life Sciences Education Curriculum Committee, November 19, 2014
Faculty/Division Council (or delegated body) approval, if applicable (Name and Date)	

University of Toronto Minor Modification Proposal – New Graduate Courses, or Changes to Existing Graduate Courses

This template should be used to: create a new graduate course; reactivate a closed/deactivated course; rename an existing course; renumber an existing course; etc. A complete list of all course changes is available on the [Vice-Provost, Academic Programs website](#).

If you have questions while you are filling out this document, please contact your Dean's Office.

Graduate Department /Unit/Centre/Institute: <i>For courses offered by collaborative programs list supporting unit.</i>	Immunology
Faculty / Academic Division:	Medicine
Dean's Office contact:	

Part 1: ROSI *Please complete this section. The data will be used to complete the ROSI record.*

New Course – fill out all fields	
Course Designator and Number:	IMM1550Y
FCE Weight:	1.0
Full Course Title for Transcript:	Major Research Project in Immunology (II)
Abbreviated Title:	Major Research Project (II)
Available via Student Web Service:	Yes
Course Type:	Regular
Online Course:	No
Required Course:	Yes
Grading Scale:	Letter Grade
Course Prerequisites, if yes please list:	IMM1435H or IMM435H, IMM1450Y or IMM450Y
Course Credit Exclusions, if yes please list:	None
Or Changes to an Existing Course (require unit level approval only) – fill out applicable fields	
Current Course Designator and Number (required):	n/a
Deactivated Course designator, number and weight:	n/a
Splitting or Amalgamating Courses:	n/a
New Designator and Number:	n/a
New/Renamed Full Course Title for Transcript:	n/a
New/Renamed Abbreviated Title:	n/a
New FCE Weight:	n/a
Change to Grading Scale (Letter Grades or CR/NCR):	n/a
Change to Course Type:	n/a

Effective Date

Summer, 2015

Part 2: Other Changes to Existing Courses

Optional Field – This section may be used to describe other types of changes to existing courses your Faculty/Division tracks. These changes are not posted to the GCT.

Part 3: New Course Documentation

For Faculty / Divisional approval of new courses, please append the approved course documentation, or complete the template below.

Course Description

IMM1550Y is a full credit required course that forms part of the Major Research Project (MRP) for the MSc in the Applied Immunology field of study, which consists of IMM1450Y, IMM1550Y and IMM2550Y. In IMM1550Y, which takes place in the first summer session of the Applied Immunology MSc, the student will write and defend an industry-style research proposal that will form the basis of their research that will be executed in IMM2550Y.

The proposal design is overseen by two faculty members: (1) A faculty mentor from the Department of Immunology who hosts the MRP of the Applied Immunology student, including the IMM1550Y course. (2) The course coordinator for IMM1550Y who ensures that the project design is aligned with the learning objectives of the Applied Immunology field of study. Specifically, the research proposed should be tailored around a self-contained project that develops a new assay or technique that is relevant to the host laboratory. An initial project outline will be submitted to the faculty supervisor and the course coordinator, and a grade for the outline will be provided to the student prior to the drop-date for May-August session Y courses.

Following the submission of the proposal outline, the student will then develop the full proposal, including generating preliminary data to support the proposal and writing the proposal. The proposal is then presented as an oral presentation to a panel of 3 faculty members who will assign a grade based on the written proposal and the oral defense of the research objectives. The proposal itself will include an introduction (state of the field), rationale for why the new assay or technique would provide an important advance in the field, approach for designing the assay/technique, expected milestones (with a timetable) and, if applicable, "go/no-go" decision points along the timetable, contingency plans and possible interpretation of results and a detailed budget. The presentation of the written proposal takes place in August.

Throughout the IMM1550Y course, the student is expected to devote 40 hours per week in the host laboratory towards completing the outline and the full proposal.

Academic Rationale

A major core component of the MSc in the Applied Immunology field is a Major Research Project (MRP) that is hosted by a laboratory of a Department of Immunology faculty member. The MRP is comprised of IMM1450Y, IMM1550Y and IMM2550Y. Each of these courses play a particular role in the development and execution of the MPR. For IMM1550Y, the student will devote their first summer session towards developing their research proposal, which will be

executed during IMM2550Y. This course will provide the student with a framework to effectively execute their MRP objectives and will also serve as a "quality control" check to ensure that the design of the MRP is in keeping with the learning objectives for the MSc in Applied Immunology.

Learning Outcomes (if applicable)

The student will learn to write a research proposal including background, aims, methodology, contingency plans, interpretation of results, milestones, and budget planning. The student will also learn how to put together a formal oral presentation that captures this information.

The overall grade awarded for IMM1550 will be based on the written outline of the MRP (15%), the final MRP report (45%) and oral defense of the report (40%).

Similarity/Overlap with other Courses & Consultation

There is no similarity/overlap with other courses.

Consultation with the Chair of the Department of Immunology (Dr. Juan Carlos Zuniga-Pflucker) and the Graduate Committee has taken place.

Resource Requirements (if required)

Host labs will be required to carry out the Major Research project.

Governance Approval

Unit Sign-Off (Committee name and meeting date)	Immunology Graduate Committee on October 15th, 2014 Graduate and Life Sciences Education Curriculum Committee, November 19, 2014
Faculty/Division Council (or delegated body) approval, if applicable (Name and Date)	

University of Toronto Minor Modification Proposal – New Graduate Courses, or Changes to Existing Graduate Courses

This template should be used to: create a new graduate course; reactivate a closed/deactivated course; rename an existing course; renumber an existing course; etc. A complete list of all course changes is available on the [Vice-Provost, Academic Programs website](#).

If you have questions while you are filling out this document, please contact your Dean's Office.

Graduate Department /Unit/Centre/Institute: <i>For courses offered by collaborative programs list supporting unit.</i>	Immunology
Faculty / Academic Division:	Medicine
Dean's Office contact:	

Part 1: ROSI *Please complete this section. The data will be used to complete the ROSI record.*

New Course – fill out all fields	
Course Designator and Number:	IMM2550Y
FCE Weight:	1.5
Full Course Title for Transcript:	Major Research Project in Immunology (III)
Abbreviated Title:	Major Research Project (III)
Available via Student Web Service:	Yes
Course Type:	Regular
Online Course:	No
Required Course:	Yes
Grading Scale:	Letter Grade
Course Prerequisites, if yes please list:	IMM1435H or IMM435H, IMM1450Y or IMM450Y, IMM1550Y
Course Credit Exclusions, if yes please list:	None
Or Changes to an Existing Course (require unit level approval only) – fill out applicable fields	
Current Course Designator and Number (required):	n/a
Deactivated Course designator, number and weight:	n/a
Splitting or Amalgamating Courses:	n/a
New Designator and Number:	n/a
New/Renamed Full Course Title for Transcript:	n/a
New/Renamed Abbreviated Title:	n/a
New FCE Weight:	n/a
Change to Grading Scale (Letter Grades or CR/NCR):	n/a
Change to Course Type:	n/a

Effective Date

Fall, 2015

Part 2: Other Changes to Existing Courses

Optional Field – This section may be used to describe other types of changes to existing courses your Faculty/Division tracks. These changes are not posted to the GCT.

Part 3: New Course Documentation

For Faculty / Divisional approval of new courses, please append the approved course documentation, or complete the template below.

Course Description

IMM2550Y is a 1.5 credit required course that forms part of the Major Research Project (MRP) for the MSc in the Applied Immunology field of study, which consists of IMM1450Y, IMM1550Y and IMM2550Y. In IMM2550Y, which takes place in the second Fall, Winter and Summer sessions of the Applied Immunology MSc, the student will execute a research proposal that they have designed during IMM1550Y.

Supervision of the student is overseen by two faculty members: (1) A faculty mentor from the Department of Immunology, who hosts the MRP of the Applied Immunology student, including the IMM2550Y course; and, (2) The course coordinator for IMM2550Y, who ensures that the student is meeting the expected milestones.

The research undertaken in IMM2550Y is tailored around a self-contained project that develops a new assay or technique that is relevant to the host laboratory. The research will follow the Aims outlined in the student's proposal, which will have been completed and graded during the previous session (IMM1550Y). IMM2550Y contains the following 3 components:

1. A mid-way project update in the form of a "work in progress" written report will be due prior to the drop date for full-year courses (mid-February). This report will be graded by the course coordinator. The marking will provide an opportunity for feedback if the student has experienced technical difficulties with their project and feedback on their written skills, which they can work on for their final report and oral presentation.
2. A final presentation of the work as well as a written report will be due by late April. The final oral presentation will be graded by the course coordinator and attended by the MRP supervisor, as well as the other members of the IMM2550Y student cohort. The final report will detail the background for the project, the methodology used, the results obtained (this forms the majority of the report) and the interpretation of the results as well as future directions and recommendations and a financial report (cost of the research).
3. A Graduate Professional Development (GPD) module that will take place in the final summer session. The GPD module, coordinated by Dr. Nana Lee, will consist of seminars on preparation for a career in industry, a 10-hour shadowing opportunity in an industry setting, and pending confirmation of numbers of students admitted into the Applied Immunology field, we will arrange for internship placements through MaRS Innovation. Specifically, the GPD module will consist of the following:

Class One:

- 1) How to write for the general public
- 2) How to write an effective resume and cover letter
- 3) Career options for MSc graduates
- 4) Panel of experts from Career Centre, GPS, LinkedIn Expert

Class Two:

- 1) Feedback on assignments – and resume building
- 2) Panel of experts on how to network including Alumni (Innovations Analyst, Technicians from companies, e.g., Sanofi, Patent Agent, Sales)

Class Three:

Student Presentations for the lay public. (30%)

Assignments:

- 1) Summarize your research project for the general public (20%)
- 2) Write a cover letter and resume for a real job opening (20%)
- 3) Oral presentation like 3MT for a general audience (30%)
- 4) 10-hour practicum in an industry setting (15%)
- 5) Class Participation (15%)

Throughout the IMM2550Y course, the student is expected to devote 30-40 hours per week in the host laboratory (depending on whether they are taking concurrent half course requirements).

Academic Rationale

A major core component of the MSc in the Applied Immunology field is a Major Research Project (MRP) that is hosted by a laboratory of a Department of Immunology faculty member. The MRP is comprised of IMM1450Y, IMM1550Y and IMM2550Y. Each of these courses plays a particular role in the development and execution of the MPR. For IMM2550Y, the student will execute the research that is proposed in IMM1550Y and will obtain professional development training (GPD I) and an internship experience (GPD II).

Learning Outcomes (if applicable)

The student will learn about the industry environment in the GPD I and GPD II components of IMM2550Y. The student will also learn how to optimize a new method/technique/assay, how to apply it to a research question, how to present and report research findings, will learn how to prepare and report on a research budget.

The overall grade awarded for IMM2550 will be based on the mid-way report (20%), the final MRP report (40%) the final oral presentation (25%) and the GPD module (15%).

Similarity/Overlap with other Courses & Consultation

There is no similarity/overlap with other courses.

Consultation with the Chair of the Department of Immunology (Dr. Juan Carlos Zuniga-Pflucker) and the Graduate Committee has taken place.

Resource Requirements (if required)

Host labs will be required to carry out the Major Research project. The GPD module will be conducted by Dr. Nana Lee.

Governance Approval

Unit Sign-Off (Committee name and meeting date)	Immunology Graduate Committee on October 15th, 2014 Graduate and Life Sciences Education Curriculum Committee, November 19, 2014
Faculty/Division Council (or delegated body) approval, if applicable (Name and Date)	



UNIVERSITY OF TORONTO
FACULTY OF MEDICINE

FOR APPROVAL

TO: Faculty Council

SPONSOR: Jay Rosenfield, Vice-Dean, Undergraduate Medical Professions Education

CONTACT INFO: jay.rosenfield@utoronto.ca

DATE: February 9, 2015

AGENDA ITEM: 5.3.1

ITEM OF BUSINESS: Major Modification to the UME Preclerkship Curriculum

JURISDICTIONAL INFORMATION:

The University of Toronto Quality Assurance Process (UTQAP) indicates that the approval of Major Modifications to undergraduate and graduate programs are approved by divisional governance (Faculty Council) and reported to the Office of the Vice-Provost, Academic Programs for information.

The Education Committee of the Faculty of Medicine Faculty Council reviews and recommends to Council for approval proposals for major modifications to existing academic programs.

GOVERNANCE PATH:

1. Education Committee [For recommendation to Council] – December 4, 2014
2. Faculty Council [For approval] – February 9, 2015
3. Quality Council [For information]

HIGHLIGHTS:

We are proposing a significant revision to the University of Toronto Faculty of Medicine's Undergraduate Medical Education preclerkship program, with the goal of making the program more effective by aligning it with important modern trends in medical education. The proposed effective date is August, 2016.

The major overarching goals that we seek to develop are:

1. A curriculum model that promotes integration and individualized learning.
2. A curriculum with increased clinical relevance, based on early contact with patients and integration of basic and clinical sciences.
3. A curriculum delivery model that values contact with faculty members to support clinically relevant learning, but reduces passive, lecture-based learning.

4. An assessment model that supports guided self-assessment and more support for learning via frequent exercises with feedback rather than infrequent, high-stakes summative tests, using portfolio-based evaluation strategies.
5. Explicit teaching of competencies pertinent to developing cognitive capacities such as cognitive science, affective regulation, self-care.
6. Opportunities for students to pursue combined degree programs such as the MD/PhD combined degree program.

We propose to achieve this via four courses: first, the Toronto Online Patient-Centred Integrated Curriculum includes a weekly case on an electronic platform, discussed in small groups with a faculty facilitator. There is a small number of lectures and an expert-led case-based seminar contribute to the learning each week. Second, the Integrated Clinical Experience (ICE) provides instruction in clinical skills similar to the existing Art and Science of Clinical Medicine, more fully integrated with the concurrent content of TOPIC. ICE also includes early patient contact via learning in various clinical contexts including family practice clinics, home care visits, and chronic care facilities. Third, a portfolio course provides a venue for students to work with a small group of classmates and a faculty facilitator, to develop reflective capacity, to work on their professional identity formation, and to assemble an assessment dossier comprised of multiple, frequently administered formative assessments. Fourth, the Health Science Research course provides instruction on how to take part in the conduct of research and how to apply the results of research to patient care.

These four courses are layered on top of four sequential units. Unit 1 (11 weeks in first year) is an introduction to biomedical and social sciences, at all levels of organization from the gene to the individual to society. Unit 2 (25 weeks in year 1 and 16 weeks in year 2) addresses health and disease as it affects all the body's systems. Unit 3 (nine weeks in year 2) addresses health issues that affect people at each stage of life. Unit 4 rounds out the preclerkship through a consideration of complex and chronic illness. Longitudinal themes, including CanMEDs roles, priority diversity groups (indigenous health, LGBTQ, geriatric, global health) and special content areas (e.g. medical imaging, pharmacology) are woven throughout the two years. A new faculty development office will provide support for teachers. The whole program will be carefully evaluated and subjected to iterative revision.

The Existing Preclerkship Program and the Proposed Program

The proposed renewed preclerkship program (The Foundations Curriculum) replaces the existing two-year preclerkship (72 weeks in length) that includes two kinds of courses: block courses and continuity courses. There are currently four sequential block courses: STF (Structure and Function), MNU (Metabolism and Nutrition), and BRB (Brain and Behaviour) in first year; and, MMD (Mechanisms, Manifestations, and Management of Disease) in second year. These courses use lectures as the predominant teaching method, but also include case-based seminars, problem-based learning tutorials, and laboratory sessions to deliver mainly basic science content in first year, and teaching of laboratory sciences, and of disease diagnosis and management in second year. There are also two "continuity" courses that each occupy one half-day per week over the first two years of the program: ASCM (Art and Science of Clinical Medicine), which teaches history-taking and physical examination; and, CPPH (Community, Public, and Population Health) a course that covers community, population and public

health, and relevant research methods. In second year, all students currently complete a family medicine longitudinal experience (FMLE) over six half-days.

Despite consistent efforts to achieve integration between the courses, it has been difficult to do as the courses are organized independently, such that the timing of schedules and teacher resources across courses has been difficult to reconcile.

The renewed preclerkship program will continue to consist of 36 weeks in each of years 1 and 2. It has four courses: TOPIC (Toronto Patient-centred Integrated Curriculum); ICE (Integrated Clinical Experience); Portfolio; and, HSR (Health Sciences Research). These courses will run through the entire two-year program and will be coordinated centrally in terms of content and scheduling, in order to achieve maximal integration in terms of curriculum, content, and teaching methods. There will also be a shift in the balance of teaching methods from a predominance of lectures to a more diverse approach, including case-based learning, carefully curated online learning materials, a much smaller number of large group lectures, continued use of interactive case-based seminars, continued teaching of history-taking and physical examination, enhanced community experiences.

Learning outcomes

The goal of the preclerkship program will still be to help students learn the essential knowledge and skills, and to develop the appropriate professional attitudes, necessary to achieve the required CanMEDS competencies and the four principles of Family Medicine in order to prepare students for the clerkship and their role beyond. The renewed preclerkship curriculum is designed to offer a fully integrated, centrally coordinated program to support students' development of the current institutionally defined learning outcomes.

In addition, the renewed preclerkship will facilitate greater exposure to content from the humanities, and cognitive and social sciences with direct relevance to areas of competence. These are currently defined by national and international medical education accreditation and regulatory bodies (including the new Medical Council of Canada Blueprint, CanMEDS 2015, and the AFMC Future of Medical Education in Canada Reports) as essential for today's physician: professional identity formation; reflective capacity; critical reasoning; prevention and public health; understanding and working with complexity within the health care system; patient safety and quality improvement; cultural competence; interprofessional practice; understanding and use of e-health technologies; socially responsible practice; and, models of patient-centred care. Additional emerging areas of knowledge and competence necessary for contemporary healthcare professionals that will be incorporated into the renewed curriculum are described in more detail in the comprehensive proposal description and Appendix 4.

Each session, week, course and unit has explicit alignment with the existing UME learning outcomes. A spiral curriculum model is used to reinforce learning within preclerkship. Content is integrated between on the one hand basic and social science topics; and, on the other, clinical and public health issues, and identified content gaps can be readily addressed owing to the centralized management structure to an extent that has not previously been feasible. There is a minimum of 14 hours

unscheduled time each week to permit students greater individualization and flexibility within the curriculum. Students may use the time to study specific topics in greater depth; address identified areas of weakness; pursue research and other clinical opportunities; and, where relevant, enroll in combined degree programs.

PROPOSED MOTION:

“THAT the proposed Major Modification to the Undergraduate Medical Education Preclerkship Curriculum be approved as submitted.”

THE FOUNDATIONS CURRICULUM: A NEW APPROACH TO THE PRECLERKSHIP PROGRAM

Pier Bryden
Director of Preclerkship

Marcus Law
Deputy Director of Preclerkship and Director of Academic Innovation,
UME

Martin Schreiber
Director, UME Curriculum

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EXECUTIVE SUMMARY

We are proposing a significant revision to the University of Toronto Faculty of Medicine's Undergraduate Medical Education preclerkship program, with the goal of making the program more effective by aligning it with important modern trends in medical education. The major overarching goals that we seek to develop are:

1. A curriculum model that promotes integration and individualized learning.
2. A curriculum with increased clinical relevance, based on early contact with patients and integration of basic and clinical sciences
3. A curriculum delivery model that values contact with faculty members to support clinically relevant learning, but reduces passive, lecture-based learning.
4. An assessment model that supports guided self-assessment and more support for learning via frequent exercises with feedback rather than infrequent, high-stakes summative tests, using portfolio-based evaluation strategies.
5. Explicit teaching of competencies pertinent to developing cognitive capacities such as cognitive science, affective regulation, self-care.
6. Opportunities for students to pursue combined degree programs such as the MD/PhD combined degree program.

We propose to achieve this via four courses: first, the Toronto Online Patient-Centred Integrated Curriculum includes a weekly case on an electronic platform, discussed in small groups with a faculty facilitator. There is a small number of lectures and an expert-led case-based seminar contribute to the learning each week. Second, the Integrated Clinical Experience (ICE) provides instruction in clinical skills similar to the existing Art and Science of Clinical Medicine, more fully integrated with the concurrent content of TOPIC. ICE also includes early patient contact via learning in various clinical contexts including family practice clinics, home care visits, and chronic care facilities. Third, a portfolio course provides a venue for students to work with a small group of classmates and a faculty facilitator, to develop reflective capacity, to work on their professional identity formation, and to assemble an assessment dossier comprised of multiple, frequently administered formative assessments. Fourth, the Health Science Research course provides instruction on how to take part in the conduct of research and how to apply the results of research to patient care.

These four courses are layered on top of four sequential units. Unit 1 (11 weeks in first year) is an introduction to biomedical and social sciences, at all levels of organization from the gene to the individual to society. Unit 2 (25 weeks in year 1 and 16 weeks in year 2) addresses health and disease as it affects all the body's systems. Unit 3 (nine weeks in year 2) addresses health issues that affect people at each stage of life. Unit 4 rounds out the preclerkship through a consideration of complex and chronic illness. Longitudinal themes, including CanMEDs roles, priority diversity groups (indigenous health, LGBTQ, geriatric, global health) and special content areas (e.g. medical imaging, pharmacology) are woven throughout the two years. A new faculty development office will provide support for teachers. The whole program will be carefully evaluated and subjected to iterative revision.

BACKGROUND AND RATIONALE

Numerous reports in the recent medical education literature persuasively support substantial changes in how medical education should be delivered, including the 2010 Carnegie Report¹, the Lancet Commission², and the Future of Medical Education in Canada Project³, among others. Multiple medical schools, in Canada and around the world, are pursuing substantial curricular revisions in keeping with these recommendations. The preclerkship program in the University of Toronto MD program was last fully revised in 1992. While several significant improvements have been made in the intervening years, and while the program has been well-regarded (including during the 2012 CACMS-LCME accreditation survey site visit), the medical school leadership has identified a need for a more comprehensive renewal in line with the directions advocated by the reports cited above. The overarching rationale for the planned modification to the curriculum is to create a program better suited to educating physicians for the 21st century. Our specific goals are to better address the following priorities in modern medical school planning:

Related to curriculum planning

- A competency-based approach to organizing the program with enhanced, centralized coordination
- Flexibility in learning pathways (including options for combined degrees)
- Integration of basic and clinical sciences, with early clinical immersion

Related to curriculum delivery

- A more active learning model, with less reliance on passive lectures
- Effective use of technology in education
- Community-based learning
- Interprofessional education (IPE)

Related to curriculum content

- Explicit teaching of cognitive sciences
- Teaching to support professional identity formation and reflective capacity
- Teaching about prevention and public health
- Teaching about the health care system, patient safety, and quality improvement

Related to assessment

- An assessment program with multiple types and points of assessment including longitudinal formative and cumulative assessment procedures that support student learning and permit better early identification of gaps in learning, allowing for more timely intervention

Related to faculty development

- A comprehensive faculty development program to support these new initiatives

¹ Cooke, M. Irby, D. O'Brien, B. Educating Physicians: A Call for Reform of Medical School and Residency. Jossey-Bass. 2010: San Francisco.

² Frenk, J., Chen, L., Bhutta, Z. et al. Health professionals for a new century: Transforming education to strengthen health systems in an interdependent world. *Lancet* 2010;376:1923-1958.

³ Association of Faculties of Medicine of Canada. (2010). *The Future of Medical Education in Canada (FMEC): A Collective Vision for MD Education*. Ottawa, ON: Author. Retrieved from <http://www.afmc.ca/future-of-medical-education-in-canada/medical-doctor-project/index.php>

DESCRIPTION OF PROPOSED MAJOR MODIFICATION

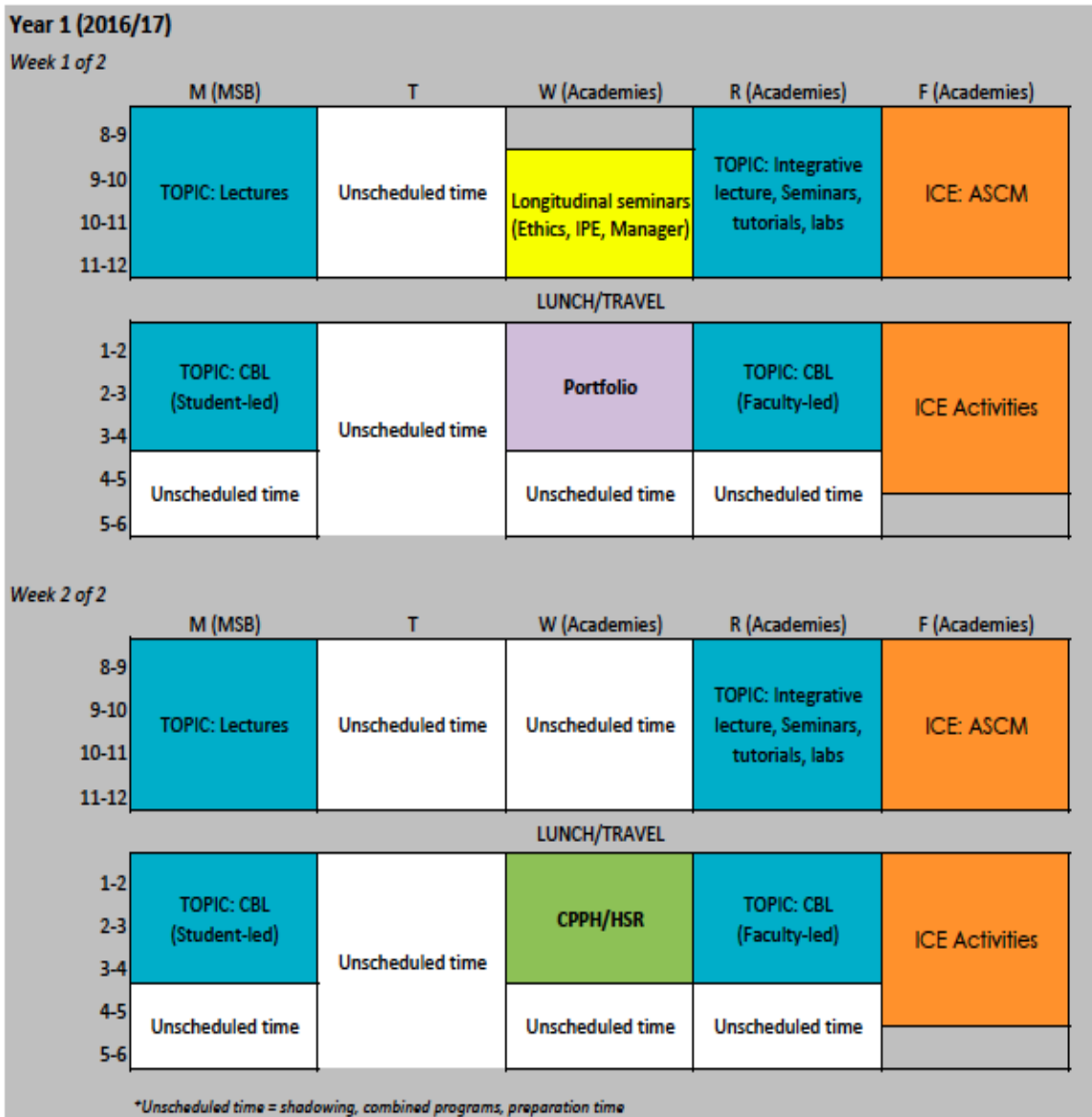
Principles Guiding the Planning of the Foundations Curriculum

The major overarching principles for the preclerkship program as a whole that we seek to follow are:

1. A curriculum model that promotes integration and individualized learning
 - a. Horizontal and vertical integration of activities via a centrally-managed curricular structure
 - b. Increased student-directed time throughout the two-year Foundations Curriculum during which students may pursue areas of interest including career exploration activities
 - c. Abundant use of carefully designed and curated online materials
2. A curriculum with increased clinical relevance, based on:
 - a. Earlier introduction of exposure to patients
 - b. Greater exposure to the multidisciplinary health care team
 - c. Greater emphasis on learning biomedical science in a context that makes it clinically relevant
3. A curriculum delivery model that maximizes the value of contact with faculty members to support clinically relevant learning, but reduces the reliance on passive, lecture-based learning
4. An assessment model that supports guided self-assessment and more support for learning via
 - a. Assessment that focuses on frequent exercises with feedback rather than infrequent, high-stakes summative tests
 - b. Portfolio-based evaluation strategies
5. Explicit teaching of competencies pertinent to developing cognitive capacities such as cognitive science, affective regulation, self-care
6. Opportunities for students to pursue collaborative programs such as the MD/PhD and MD-MPH

Specific Proposed Elements

There are four major elements in our proposal, although they are all intended to work together harmoniously: ICE, TOPIC, Portfolio and the Health Sciences Research stream, which run concurrently during the 72-week preclerkship. Each element is described below. The diagram below illustrates in a timetable how these four elements will fit together in a typical two-week period.



- TOPIC – Toronto Online Patient-centred Integrated Curriculum
- CBL – Case-based learning
- IPE – Interprofessional Education
- ICE – Integrated Clinical Experience
- ASCM – Art & Science of Clinical Medicine
- CPPH – Community, Population & Public Health
- HSR – Health Science Research

Integrated Clinical Experience (ICE)

The Integrated Clinical Experience (ICE) serves two major purposes:

1. First, it is the setting in which students will learn clinical skills, so ICE constitutes the successor of the Art and Science of Clinical Medicine course.
2. Second, ICE will serve to provide students with a deep understanding of the experience of being a patient receiving care in the health care system.

This experience will be scheduled for one day per week for the entire two-year preclerkship. Students will be assigned to a variety of academy-linked clinical settings in which they will have the opportunity to be attached to a panel of patients, getting to know them, their families and support network, and learning what assistance their patients require to navigate the complexities of our healthcare system. Students will be able to acquire clinical skills in the context of interviewing and examining a panel of patients rather than being limited to examining a different patient every week. Patients and family members will also be asked to provide feedback to the students on the latter's communication, interviewing, and physical examination skills, using modified clinical encounter cards.

Every attempt will be made to coordinate the clinical skills and health care setting learning in ICE with the curricular content being addressed in the concurrent TOPIC sessions.

Students will also have the opportunity to interact with other members of the health care team, to gain an appreciation of their roles in the care of patients, and also to learn from them in support of learning objectives in the MD program.

In second year students will be offered opportunities for career exploration within a variety of specialties. Previously these opportunities have been offered outside the core curriculum.

Core tutors will provide the majority of instruction in clinical skills, in a manner similar to the existing ASCM-1 program.

More specialized clinical skills learning opportunities will also continue to be provided in a manner similar to that currently used for ASCM-2.

Toronto Online Patient-centred Integrated Curriculum (TOPIC)

1. Integration as the overarching principle

The “TOPIC” program constitutes the core content delivery vehicle for the revised preclerkship. The fundamental organizing principle is to provide an *integrated* exposure to the breadth of issues relevant to a deep understanding of clinical medicine.

2. A two-year spiral curriculum based on a series of online patient-based modules constituting a “virtual clinic”, which permits four intersecting organizational frameworks:

- a. sequential coverage of body systems;
- b. the person as an interconnected organism traversing gene to global world;
- c. developmental stages of the life cycle; and
- d. longitudinal themes, including but not limited to the CanMEDS roles.

3. Organization of individual weeks within the course

We have heard from our course directors that to properly integrate the program along the lines described above requires a reconsideration of our existing course structure. We propose the following delivery model:

a. Online case-based modules

Each week will have as its core feature an online case-based module drawn from the ‘virtual clinic’. This module will be carefully designed to provide the opportunity of integrated learning across all relevant domains, from the individual patient to the community, and to fit into a scheme that captures the full spectrum of systems and stages of the life cycle. These modules will support the achievement of the same curricular objectives as we have presently. Each module will include the following elements:

- A set of specific learning objectives
- A vivid clinical case with a description of the virtual patient’s demographics, presenting symptoms, physical findings, and relevant diagnostic data. Where appropriate, images and videos of physical findings, recordings of auscultatory findings, and images of radiographs and other data will be provided.
- Questions to guide student learning about the case and related topics will be provided.
- Links to appropriate resources
- Self-test questions will also be provided to ensure students have achieved sufficiently deep learning that they are able to apply the concepts learned with respect to the case in question to other related cases.

b. Resources to assist students with learning about issues in the modules

We will continue to use our many excellent existing teaching methods – lectures, labs, community visits, expert seminars, small group learning – to

- support student's learning of the relevant biomedical science, applied social science, and relevant humanities, *in the context of each week's case*. The central cognitive scaffolding for student learning in TOPIC will be: *concepts, patients, and communities*, with key concepts from the basic and biomedical sciences, social sciences and humanities, embedded in patient cases that illustrate a diverse group of communities. This scaffolding will allow application (and re-application) of these concepts in different patient and environmental contexts.
- c. Small-group facilitated case-based learning sessions
Students will spend a 2 ½ hour session each week with their small group, without their tutors, reviewing the preparatory work done on the online virtual patient-based modules with reference to the patient-centred narrative provided, and working together to summarize their learning and to identify knowledge and/or skill gaps that need to be rectified. They will then spend a second 2 ½ hour session later in the week meeting with their faculty tutors. In these sessions, they will identify additional objectives and educational opportunities relevant to understanding the concepts in the patient narrative, and integrating the knowledge they have acquired from different sources into a coherent understanding of the patient and all of the learning objectives for the week.
 - d. Expert-led problem-solving seminars
In addition, using a flipped classroom model, subject experts will provide weekly case-based problem-solving seminars for the relevant disciplines to assure students have the opportunity to practice and demonstrate successful transfer of learning to applied situations.
 - e. Lectures
To start the week, a half-day of lectures will be given to set the stage for the week, by providing an overview of the key content areas.
4. Teaching of Community, Population, and Public Health
This will take place via both sessions in ICE and also integrated throughout the TOPIC cases and supplementary learning opportunities.
 5. Student-directed time
A major goal of the revised preclerkship program is to augment substantially the amount of available student-directed time. At this stage of planning, it is anticipated that students will be occupied for the following amounts of time in scheduled, required settings (with total hours per week in parentheses):
 - a. ICE sessions – one day per week (7 hours)
 - b. TOPIC small group sessions – two 2 ½ hour sessions each week (5 hours)
 - c. Portfolio (see below) – one 2 ½ hour session every two weeks (1.25 hours)
 - d. HSR – one half-day assigned every two weeks, with at least half of these free for students to work on online modules (described below; 1 hour)

- e. Seminar, Lab, Lectures – two half days every week (6 hours)
- f. Longitudinal theme sessions (e.g. interprofessional education events; manager/leader teaching; ethics seminars; longitudinal experiences in family medicine and other clinical disciplines) for one-half day every two weeks (1.5 hours).

This adds up to an average of 22 hours per week scheduled time, leaving 14 hours unscheduled each week. In contrast, the current preclerkship program has 24 hours scheduled per week in first year and 23 in second year.

This will therefore leave approximately 40% of the time unscheduled. However, students will need to complete a variety of activities in this relatively unscheduled time, related to their learning around each module. The goal is for students to have flexibility in how they use their time so that they maximize their chances to meet their individualized learning needs. This includes in particular the following opportunities:

- a. Career exploration
- b. Collaborative program activities for MD/PhD and MD-MPH students
- c. Students who require extra work or remediation

Portfolio

The third major element of this proposed new approach to the preclerkship program involves an expansion of the portfolio program. This has been successfully deployed into the clerkship for the last four years, and in 2013-14 has been introduced in a limited manner into the first year program, and for 2014-15 into second year as well. We propose a further substantial expansion of the portfolio course so that in addition to its current role in encouraging reflective practice for our students, the portfolio meetings will also serve as a tool and an educational space for guided self-assessment.

Students will meet in groups of 6 – 8 with two faculty academy scholars approximately once every two weeks for approximately two and a half hours. Students will collect multiple assessment tools (OSCE scores, results of progress tests, of written examinations, of bell ringer assessments, encounter cards, reflective papers etc.). They will review these results with peers, and their Academy scholars in order for students to decide on their ongoing individualized learning needs. The resulting education plans will be designed to meet standardized definitions of competence established by UME, as well as the students' own career aspirations.

The students' portfolios and proposed education plans will be reviewed at the end of each unit by a different portfolio Academy Scholar. Portfolios that do not meet the program standards for competence set by the Student Evaluation Committee will be reviewed by a Students in Difficulty sub-committee and a remedial learning plan provided for the student. On completion of the remedial learning plan, the student's readiness for the next stage of training will be reviewed by the Students in Difficulty Committee. Students who continue to not meet the program standards for competence will be presented to the Board of Examiners where decisions regarding their promotion will be made.

Health Science Research Course

All UME students will be expected to participate in the Health Science Research course, which is being launched as part of the existing curriculum in 2015-16 for the second year class. As part of their experience they will learn about posing a research question, research methods, research ethics, critical appraisal, evidence-based medicine and knowledge translation skills, critical to the role of an informed clinician. The learning is via both online modules (for core topics in the design and implementation of research work as well as its interpretation), and small-group, faculty-led tutorial sessions approximately once per month (for work on student practicum exercises).

Students may also choose to participate in research projects within the humanities, social sciences, basic or applied life sciences as long as they are in good academic standing. Support to identify an appropriate supervisor and research project will be provided to those students by the HSR Course Committee and the CREMS program director.

Principles Guiding the Creation of Content Framework

1. *Respect for existing curricular content.* While it is acknowledged that the curriculum now is in need of revision, the substantial amount of quality biomedical content and organization in the existing curriculum needs to be considered prior to introducing any new changes related to the CanMEDS Medical Expert Role.
2. *Spiral model.* In keeping with a “spiral” model, all broad content areas should be encountered at least twice during the preclerkship.
3. *Flexible and adaptable framework.* The curricular organizational framework must be sufficiently flexible and adaptable that new subject areas can be introduced and obsolete areas discarded with relative ease.
4. *The medical humanities and social sciences provide relevant and important contributions alongside the traditional biomedical sciences.* Students will be introduced in Unit One to basic social science principles and to the educational contributions of the medical humanities, as formal preparation for success in the new curriculum.
5. *Multiple complementary organizing frameworks.* There is no single metaphor or organizing principle that straightforwardly captures all of the content that medical students need to learn in the preclinical phase of their education. Four different organizing frameworks are proposed, with students expected to demonstrate competence in moving between different perspectives as required for thorough understanding. The details of each of these frameworks is found in Appendices 1-4:
 - a. A *body systems*-based approach captures the majority of the biomedical content, but by no means all. (Appendix 1)
 - b. A perspective that looks at the *level of organization within the person and surrounding the person* is also valuable. The levels progress from the gene and chromosome right up to the family, society and the globalized world. (Appendix 2)
 - c. A perspective that looks at the *person during their development* is also useful. This includes the life stages listed in Appendix 3.
 - d. A perspective that incorporates a variety of *thematic elements that are applicable to all systems and life cycle stages* is also of value. The major thematic topics to be considered are grouped into the most relevant CanMEDS roles, and are listed in Appendix 4.
6. *Both “basic science” and clinical elements are relevant to the body systems.* The “coverage” of a body system includes both “basic science” and “clinical” elements. These are listed in Appendix 5. Basic science content that is

presented should be chosen because of its explicit clinical relevance, and this relevance should be demonstrated in the course of the presentation.

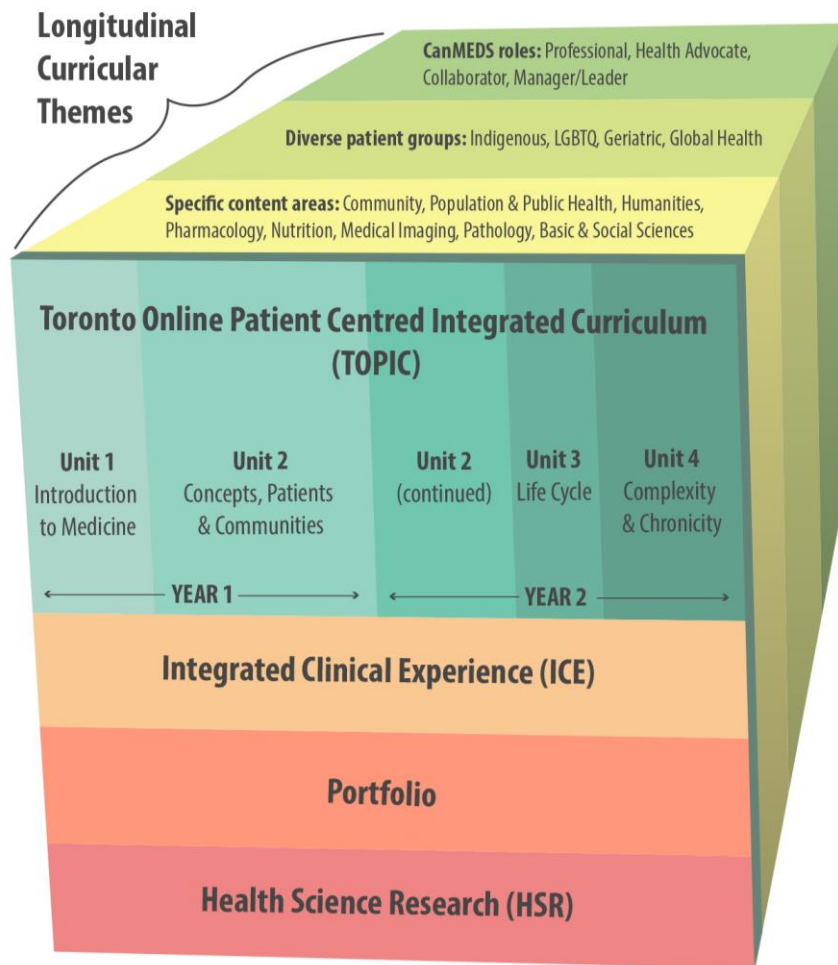
7. *Specification of prerequisite basic and social science knowledge, and familiarity with the medical humanities among students entering the Foundations Curriculum.* It will be essential to be precise about the extent of basic science knowledge (and other preparatory Unit One knowledge) available to students as they begin the core part of the Foundations Curriculum, whether this has been acquired by students prior to entry into medical school or imparted to them during the “Introduction to Medicine” in Unit One of the program at the start of the first year. This knowledge will allow us to give students greater flexibility to focus on areas of relative deficit in more depth, and to move through areas where they have demonstrated mastery more quickly.
8. *Need to connect with existing competency frameworks.* The connection of the content to several constructs needs to be established, as follows:
 - a. To the UME Program Competencies and CanMEDS roles.
 - b. To the MCC clinical presentations and other objectives.

Content Framework

The outline below presents a draft of how the content of the revised preclerkship, i.e. The Foundations Curriculum, is expected to be arranged. This would apply to all elements of the integrated curriculum (i.e., TOPIC, ICE, Portfolio and HSR), but would especially govern the delivery of TOPIC. In order to present a realistic model, an attempt has been made to assign defined numbers of weeks to four sequential units, and to elements within those units. This proposed distribution of weeks is intended to stimulate discussion and debate, and is subject to revision. The four units are referred to as follows:

- Unit 1 – Introduction to Medicine
- Unit 2 – Concepts, Patients and Communities
- Unit 3 – Life Cycle
- Unit 4 – Complexity and Chronicity

A diagram of the proposed timetable is as follows:



Unit 1: Introduction to Medicine (11 weeks in Year 1)

Unit 1 is designed to provide instruction in the major biomedical or “basic” sciences, together with an introduction to the most relevant topics in the social and cognitive sciences, in order to prepare students for their subsequent study of the diagnosis and management of illness and disease.

The organizing framework for a substantial fraction of Unit 1 is expected to be the “Context of Health and Disease from Genes to Society” construct. The emphasis at each level of the framework is to develop an understanding of the normal structure and function of that level, and a beginning of an understanding of how these can be affected by disease and social determinants of health.

The elements of the “Genes to Society” framework together with a breakdown in weeks assigned to each element is roughly expected to be as follows:

Element of framework	Number of weeks
Genes, chromosomes	2
Cell and tissue	2
Whole body homeostasis	1
Before birth	1
Neonate and infant	1
Child and adolescent	1
Older person	1
Family and community	1
Society as a whole	1

Unit 1 includes *basic* instruction in the following biomedical disciplines:

- Gross anatomy (regional) – a major “stream” running across all 11 weeks
- Histology (mainly in the cell and tissue section)
- Embryology (mainly in the “before birth” section)
- Genetics (mainly in the genes and chromosomes section)
- Cell biology (mainly in the cell and tissue section)
- Biochemistry (mainly in the genes & chromosomes and cell & tissue sections)
- Pharmacology (mainly in the whole body homeostasis section)
- Introduction to pathology (a major stream running across all 11 weeks, and answering the question throughout – “why does this matter to the future physician?”)

Furthermore, Unit 1 also addresses a variety of other disciplines. Students arrive in medical school from a wide variety of backgrounds. They are generally (though not universally) well-prepared for many of the biomedical disciplines, but less well-prepared for many of the other crucial aspects of MD education. Therefore, Unit 1 addresses how:

- cognitive science can assist in the clinical reasoning process

- social psychology and an understanding of group dynamics can assist in improving interactions with patients and other members of the health care team
- epistemology can assist one in learning the breadth of medical knowledge required for effective practice
- affective regulation can assist one to stay emotionally healthy
- a focus on wellness is essential to stay generally healthy

Unit 2: Concepts, Patients, and Communities (25 weeks in Year 1)

The TOPIC system-based program in Unit 2 will address the following aspects of each system:

- Systemic anatomy, both gross and microscopic
- Embryologic development
- Physiology
- Biochemistry
- Diseases affecting that system
- Clinical presentations which suggest that system is affected
- Therapeutic options available for diseases affecting that system

Unit 2 also covers – within each of TOPIC, ICE, and Portfolio – the longitudinal themes listed in Appendix 1.

The draft distribution of weeks below reflects (approximately) the current coverage of the systems in the existing two-year preclerkship, as per Appendix 2.

Unit 2 in Year 1 (25 weeks)

Section (Number of Weeks)	System	Number of Weeks for System
Host Defense (5)	Microbiology & Immunology	4
	Skin	1
Oxygen Delivery (9)	Cardiovascular	4
	Respiratory	3
	Blood	2
Metabolism and Homeostasis (11)	Gastrointestinal and Liver	4
	Endocrine and Metabolic	4
	Renal and Urinary Tract	3

Unit 2 in Year 2 (16 weeks)

Section (Number of Weeks)	System	Number of Weeks for System
Movement, Sensation and Behaviour (14)	Musculoskeletal	3
	Neurologic	6
	Special Senses (Eye and ENT)	3
	Psychiatric	4

Unit 3: Life Cycle (9 weeks)

The draft distribution of weeks below reflects (approximately) the current coverage of the systems and life cycle stages in the existing two-year preclerkship, as per appendix 1.

This phase focuses on deepening students’ ability to integrate what they have learned to this point in their medical education into a humanist, empathic, and sophisticated approach, which employs multiple lenses, to patient care at different points in the life cycle. Those lenses include but are not limited to: the impact of development and aging on patients’ biological and psychological selves; patients’ changing roles and rights in society at different ages and developmental stages; patients’ changing healthcare needs; the impact of sociocultural contexts on both patients and healthcare professionals; the epidemiology of healthcare trends, and, the impact of these on healthcare economics and resource allocation.

Life cycle stage	Number of weeks
Reproductive and women's health	4
Life stages (infant, child, adolescent, elderly)	4
Palliative care	1

Unit 4: Complexity and Chronicity (11 weeks)

Occurring at the conclusion of the two-year Foundations curriculum, the final Unit, Complexity and Chronicity, will have three main foci:

1. Further integration of different knowledge bases and skills in the context of undifferentiated, complex and chronic virtual patient presentations that require students to demonstrate competence in all of the CanMEDS roles.

Examples might include:

- Widespread neoplastic disease
- Obesity, metabolic syndrome, diabetes mellitus
- Congestive heart failure
- End-stage renal disease
- Chronic fatigue syndrome and fibromyalgia
- Chronic pain (including inter-faculty pain curriculum)
- Psychosomatic disorders
- Multisystem disease (e.g., vasculitis, sarcoidosis, pituitary failure)
- Multi-organ trauma

Development of prominent themes would include:

- The patient experience
- Roles of the physician and of other health-care practitioners
- Opportunities and skills for advocacy
- Revisiting of epistemology and cognitive science applied to practice

These case exercises and related activities will permit a review of disorders with emphasis on their management affecting each of the systems to provide a second “turn” to the spiral curriculum. There will be very careful mapping of systems to the case-based content to ensure that disorders affecting each of the body systems are addressed, while emphasizing that diseases often affect multiple systems.

2. Transferring academic knowledge to work place experiences. Students will have extended clinical experiences that will take place in generalist settings such as family medicine and internal medicine, and which occur in tandem with their academic curriculum. This will address preparing the senior Foundations student for their role as a clinical clerk.
3. Learning how to function as a team member with increased responsibility.

An example of a Unit 4 activity would be students working together in their TOPIC groups to identify the evidence base and health care costs associated with a patient they are currently following in their clinical setting, and to present their findings, together with proposed resulting modifications to the patient’s treatment plan to their clinical team.

STUDENT ASSESSMENT

Recent advances in the education sciences and in medical education have pointed to novel ways of utilizing assessment beyond traditional practice. Evidence in psychology and increasingly in application to medical education suggests that assessments can be an opportunity to support learning. For example, the phenomenon of test-enhanced learning suggests that testing can actually teach students concepts directly in comparison to simply studying material or other forms of review^{4,5}. Assessment is also an opportunity to generate feedback and change learner's self-regulation of their study habits⁶.

Moreover, lack of alignment between curricular goals and assessment practice is a serious obstacle in achieving the higher level outcomes identified as priorities for UME.

Ultimately, assessment is an opportunity for conversation and reflection between students, their teachers, and the wider curriculum. The aim of the assessment program is to create these conversations by providing multiple, robust, reliable, and comprehensive pieces of information that spur reflection and growth.

As we develop the new preclerkship Foundations curriculum, we have also conceptualized an assessment system that promotes the following principles:

1. Maximizing student engagement and wellness.⁷
2. Assessments that allow for testing of integration of concepts, knowledge and skills.
3. More individualized formative feedback to students to drive student learning
4. Multidimensional assessment based on achievement of milestones and competencies.
5. Longitudinal assessment of CanMEDS based competencies.
6. A systematic and centralized approach.
7. The use of individualized professional judgment by faculty while addressing subjectivity by the use of thorough sampling and procedural bias reduction methods.⁸
8. Earlier intervention to identify and support students in difficulty
9. Flexibility within the curriculum to allow students to address personal learning needs

⁴ Larsen DP, Butler AC, Roediger HL 3rd. Test-enhanced learning in medical education. *Medical Education* 2008;42:955-66.

⁵ Larsen DP, Butler AC, Roediger HL 3rd. Repeated testing improves long-term retention relative to repeated study: a randomized, controlled trial. *Medical Education* 2009;43:1174-81.

⁶ Kornell, N., Hays, M. J., & Bjork, R. A. (2009). Unsuccessful retrieval attempts enhance subsequent learning. *Journal of Experimental Psychology: Learning, Memory, & Cognition*, 35, 989-998.

⁷ Slavin, S. et al. "Medical Student Mental Health 3.0: Improving Student Health Through Curricular Changes" *Academic Medicine*, vol. 89, no 4, April 2014, pp 573-577.

⁸ Cees van der Vleuten, The Hodges Education Scholarship International Symposium, March 2014 – a good reference on this is the Question of Competence.

MODALITIES

There will be both ongoing mainly formative assessments and end-of-unit and end-of year summative assessments.

Students will collect in an assessment dossier multiple forms of frequently administered assessments as part of a personalized progress testing procedure: OSCEs, written multiple-choice question-based examinations, online pre- and post-learning formative tests, clinical application exercises, encounter cards, and reflective papers. These dossiers will be aligned with competencies and program objectives. They will review their results with peers and their faculty facilitators, with whom they will have a longitudinal relationship, to generate independent learning plans. These will be designed to ensure competency milestones are being achieved, and remedial plans established for students not meeting the standards.

Summative assessments, administered at the end of each unit and the end of each year, will include written tests, and at the end of the year students will complete a summative OSCE.

PROGRAM EVALUATION

The full curriculum will be carefully evaluated via appraising the quality of the activities in and outcomes of the revised program. The review procedure will be managed by a collaboration of the Undergraduate Medical Education Curriculum Evaluation Committee, the Preclerkship Committee, and education scientists from the Wilson Centre for Research in Education, and they will report jointly to UMECC.

The activities in the new program will be evaluated by our existing course evaluation procedures (which have extensive student representation). We will also administer additional surveys, and conduct interviews and focus groups with students and with teachers, about the perceived quality of all elements of the program, including online materials, small- and large-group teaching sessions, placements at community sites, and the success of achieving curricular objectives.

Outcome measures will be carefully scrutinized using results of objective assessments (examinations, clinical skills assessments including OSCEs, assessments of integration and application of basic science knowledge to clinical scenarios, and written submissions). Further sources of data are our preparedness-for-clerkship survey administered to students and to clerkship supervisors, for which comparative baseline data are available, as well as relevant information from the Canadian graduation questionnaire. This comprehensive approach to evaluation will permit timely and iterative adjustments to program delivery as needed to ensure the highest quality experience for students and teachers.

RESOURCES

Teachers

The current UME program has a large cadre of dedicated and effective teachers. It is the intent of this newly proposed preclerkship program to engage as many of these teachers as possible in the revamped program. The following are major considerations.

1. ICE program

It is expected that many of the core tutors in the ICE program will be those who have provided teaching during ASCM. This will include specialty tutors, who will continue to be invited to provide instruction on specialized topics including pediatrics, psychiatry, geriatrics and specialized surgical topics.

The venues for ICE will need to be carefully recruited. The associated multidisciplinary team members who are expected to provide teaching will need to be carefully recruited.

2. Teachers who support TOPIC

a. Small group core sessions

It is expected that many of these will be led by those who have served as PBL tutors.

b. Resource people

A wide variety of individuals will be called upon to provide assistance to students with specific learning needs. It is anticipated that these resource people will include many of the individuals who have served in various functions in the UME program, together with others who have had less or even no exposure.

c. Expert teachers

For the teaching of case-based application exercises, a variety of subject experts will be recruited, including those who have formerly taught lectures and seminars in the existing program.

d. Development of modules

It is expected that the modules will be developed by committees of individuals consisting of the following:

- Course directors
- Subject leaders from within courses including unit heads in first year block courses and week managers from MMMD
- Lecturers
- Other interested teachers

3. Portfolio group leaders

It is expected that many of the existing portfolio group leaders will be recruited to take part in the expanded portfolio program.

4. Faculty Development

A newly created Office of Faculty Development will provide the required support for the teachers in the program, who will be taking on teaching roles in case-based learning and portfolio supervision that will be new for many of them.

5. Number of teachers and teacher hours

Modeling of the total teacher hours with the revised preclerkship program suggests that there will be substantially fewer lectures, and some increase in small group hours, numbering approximately 3000 more hours overall, compared to the existing curriculum. The distribution of the required teaching time will be carefully worked out in collaboration with course leaders and Academy Directors.

Educational space

A careful space analysis has indicated that no new teaching space is needed to accommodate the didactic sessions in the renewed curriculum.

Library resources

The current library resources are more than adequate for the preclerkship program. No new library resources will be needed to support the renewed program.

Student assessment

The student assessment approach is described above. The resources for the novel methodologies are available via the Office of Evaluations and the Wilson Centre for Research in Education, supported by the Discovery Commons as needed for online testing materials.

Information technology

The Discovery Commons of the Undergraduate Medical Education program is able to provide the required support for the e-modules and other e-learning supports.

Financial resources

The major costs associated with this renewal are expenditures for new community-based faculty, new administrative hires, and IT support for hosting of e-modules and other resources. A detailed cost analysis has been completed, and financial resources for these new expenditures have been made available to the UME budget.

Clinical facilities

Some new clinical placements will be needed to for students' ICE placements. An appraisal of available sites has indicated that there are sufficient such placements available, both at sites currently used in our FMLE community health courses, and also at our 33 affiliated teaching sites (24 hospitals, including nine full affiliates, four

associated sites, and 11 community affiliates, as well as nine non-hospital clinical sites).

Patients (real and standardized)

The program already makes substantial use of standardized patients and this will not need to increase. Real patients will continue to be used as currently for clinical skills teaching, and additional real patients will be identified via the ICE clinical placements.

Academic counseling services

Our office of Health Professions Student Awards is well equipped with an Associate Dean, and also a recently recruited Academic Coach, to provide academic counseling as needed. In addition we have a well-established additional program (“SCORE”) to support students who require additional coaching in clinical skills.

Career counseling services

A very substantial program of career counseling for all students, including in particular preclerkship students, is already in place via the Office of Health Professions Student Affairs. This includes one-on-one appointments offered to all students in each year that they are in the program. It is not expected that the proposed curricular change will augment the demand for career counseling.

IMPACT ON STUDENTS

Students enrolled in the medical school currently and students entering in 2015/16 will be able to complete their degree requirements under the current curriculum. Students applying to enter the medical school in 2016/17 will be informed of the revisions to the preclerkship curriculum in all admissions communications, and will enter the new preclerkship curriculum. Any existing students enrolled prior to the introduction of the new curriculum who interrupt or modify their program of studies for any reason and return to the new curriculum, will receive applicable supports and resources to complete their course of study.

Current students enrolled in the UME program have been consulted through monthly meetings with the student leadership, class councils, and question and entire class question answer sessions with the preclerkship leadership. Students have also been active participants in the preclerkship working groups that have developed the various curricular streams. Students also sit on the UME Curriculum Committee where the proposal has been reviewed in depth and approved. Student feedback on the first two phases of implementation will be gathered by the usual program evaluation tools, with the addition of invited participation to provide more in depth feedback in focus groups.

POTENTIAL RISKS REQUIRING ONGOING CONSIDERATION

It is clear that major curriculum change is never easy, and the proposed revisions described above are quite sweeping and therefore inevitably carry with them certain risks. We believe that by identifying up front some of the more likely risks, we can monitor for their occurrence and address them more proactively.

The following are some of the more likely challenges to watch for and attempt to mitigate:

1. Students do not respond to the abstract teaching during Unit One.
2. Students end up deficient in their fundamental biomedical knowledge owing to a lack of the systematic and concentrated exposure to gross anatomy, histology and embryology that is currently delivered at the start of the first year program.
3. We cannot find sufficient locales for the ICE program.
4. The community health teaching is lost in the absence of an identified course.
5. The pharmacology teaching is lost in the absence of an identified course.
6. Other themes may also get lost.
7. The online modules are not sufficiently comprehensive and/or user-friendly to achieve the substantial goals attached to them.
8. Students have difficulty focusing their learning, as they will lack the “boundaries” on their required learning that are currently provided by lectures.
9. The burden of change in the UME program as a whole (MAM, LIC pilot, recent revamping of clerkship with introduction of TTR and portfolio) means the system cannot absorb yet more sweeping change.
10. Students get overwhelmed by the sheer volume of available resources.
11. The frequent smaller assessments fail to identify students in difficulty as effectively as is done by the current system of less frequent high stakes summative assessments.
12. Teachers are unwilling to teach outside of their areas of subject expertise, making it difficult to achieve continuity in the TOPIC core sessions.

IMPLEMENTATION STRATEGY

The goal is to introduce the revised Preclerkship program for the 2016-17 academic year, rolling it out to the first year class in that year. (Therefore, the class taking second year of the MD program in 2016-17 will continue with the current curriculum.)

In preparation for a full curriculum renewal in 2016-17 we will implement key aspects of the Foundations Curriculum in both 2014-15 and 2015-16.

In 2014-15 the cardiorespiratory section of the current first year course Structure and Function will be delivered in a case-based format with integration of clinical skills teaching and community, population, and public health (CPPH) teaching with the cases. Students will also be introduced to the educational theory and research supporting integrated learning as a key skill for medical practice.

Similarly in 2015-16, the first part of the second year course Mechanisms, Manifestations, and Management of Disease, which comprises the majority of basic science and clinical teaching in the second year, will be delivered in a case-based format, again with curricular integration of the relevant clinical skills and CPPH teaching. In addition, the Health Science Research (HSR) course will be introduced with tutorials and online modules developed with the goal of maximal integration with the other curricular streams.

Introducing aspects of the Foundations Curriculum prior to a full implementation fulfills two purposes: 1) to provide current students with increasingly essential learning opportunities for integrated learning that are not provided in our existing curriculum; and, 2) to allow us to learn from these initial curriculum initiatives about potential challenges that will need to be addressed for a successful full curriculum renewal.

CONSULTATION PROCESS

The proposed revision of the preclerkship has undergone a lengthy and extensive process of consultation and iterative feedback, and will continue to do so as we evaluate its initial implementation phases in 2014/15 and 2015/16.

Please see Appendix 7-8 for a full description of the working groups, meetings, consultations, committee meetings and presentations, and required approvals related to the proposal that have occurred.

GOVERNANCE PROCESS

	LEVELS OF APPROVAL REQUIRED
Faculty Council Education Committee	Pending
Faculty Council	Pending
CACMS (Committee on Accreditation of Canadian Medical Schools)	Pending

Appendix 1: Body systems framework

- Respiratory
- Cardiovascular
- Blood
- Gastrointestinal
- Renal and urinary
- Endocrine
- Reproductive
- Host defense (immunologic)
- Dermatologic
- Musculoskeletal
- Neurological (including special senses)
- Psychiatric (Behavioural and personality)

Appendix 2: The levels of organization within and surrounding the person

- The gene and chromosome
- The cell and tissue
- The organ
- The body system
- The person as a whole
- The family
- The community
- Canadian society and the globalized world

Appendix 3: The stages of the life cycle

- The embryo and fetus
- The neonate, infant, child, and adolescent
- The parent
- The adult
- The aging person
- The dying person

Appendix 4: Longitudinal themes addressed in TOPIC

- Medical Expert
 - Community, population and public health
 - Preventive care
 - Nutrition
 - Medical Imaging
 - Therapeutics
 - Pharmacological
 - Surgical
 - Radiation-based
- Collaborator
 - Inter-professional team work
 - Healthcare history
 - Social psychology
- Manager/Leader
 - Patient Safety: cognition, communication, and systems
 - Healthcare economics and resource allocation
- Communicator
 - Clinical skills
 - Therapeutic communication
 - Patient safety
- Health Advocate
 - Care of diverse populations (including but not limited to):
 - People of Aboriginal descent
 - People identifying as LGBTQ
 - Immigrants and refugees
 - Disabled people
 - Poor people
 - Homeless people
 - People from other racially, culturally, religiously and/or ethnically minoritized groups
 - Patient Experiences and Medical Culture
- Scholar
 - Critical appraisal of research
 - Evidence-based medicine
 - Epistemology/Philosophy of Science
- Professional
 - Ethics and professionalism
 - Professional identity formation
 - Cognitive psychology
 - Physician resilience

Appendix 5: Issues addressed during considerations of each of the systems and life-cycle stages in TOPIC

- Anatomy, both gross and microscopic
- Embryologic development
- Physiology
- Biochemistry
- Diseases affecting that system
- Clinical presentations which suggest that system is affected
- Therapeutic options available for diseases affecting that system

Appendix 6: Coverage of systems and life cycle stages—proposed Foundations Curriculum vs. existing preclerkship

System / Life-cycle stage – number of weeks in proposed new Foundations Curriculum	Number of “weeks” in existing preclerkship (2013-14 for STF, otherwise for 2014-15). (This scheme does not count time in STF devoted to gross anatomy, histology or embryology as these do not follow a true systems-based approach.)	
Cardiovascular – 4	STF	(1.3) - Week 14 (0.3) - Week 15 (1.0)
	MMMD	(2.5) - Week 32 (Cardiology I) - Week 33 (Cardiology II) - Week 36 (Cardiac/Vascular surgery 0.5)
Respiratory – 3	STF	(2) - Week 12 (1.0) - Week 13 & 14 (0.5 each)
	MMMD	(1) - Week 28 (Respirology)
Blood – 2	STF	1 (parts of week 10 & 11)
	MMMD	1 (week 24 - Hematology)
Gastrointestinal and liver - 4	MNU	(2) - Week 7 (GI) - Week 8 (Liver)
	MMMD	(3) - Week 18 (GI I) - Week 19 (GI II) - Week 20 (GI Surgery)
Endocrine and metabolism – 4	MNU	(4) - Week 1 (0.5 - introduction) - Week 2 (1.0 - Endocrine) - Week 4 (0.3 – Adrenal) - Week 5 (0.2 – Metabolism) - Week 6 (1.0 – lipids) - Week 9 (1.0 – DM)
	MMMD	(1) - Week 16 (Endocrinology)
Renal and urinary tract (i.e. nephrologic and urologic issues) - 3	MNU	(1) (Half of week 4 & half of week 5)
	MMMD	(2) - Week 30 (Urology) - Week 31 (Nephrology)

System / Life-cycle stage - and number of weeks in proposed new preclerkship	Number of "weeks" in existing preclerkship (2013-14 for STF, otherwise for 2014-15)	
Immunology and Microbiology - 4	MMMD	(5) - Weeks 2,3 (Immunology 1 & 2) - Weeks 4,5,6 (Microbiology 1, 2, &3)
Skin - 1	MMMD	(1) Week 35 (Dermatology)
Musculoskeletal - 3	STF	(0.5) - Week 14 (muscle)
	MMMD	(2) Week 25 (Orthopedics) Week 21 (rheumatology)
Neurologic - 6	BRB	(6) Weeks 1,2,3,4,5,7
	MMMD	(1) Week 23 (Neurology)
Special senses (eye and ENT) - 3	BRB	(1) - Week 6 (Vision) (0.2) - Weeks 3 & 4 (Hearing, vestibular)
	MMMD	(2) - Week 22 - Ophthalmology - Week 29 - Otolaryngology
Psychiatric - 4	BRB	(1) Week 8 (Psychiatry)
	MMMD	(1) Week 15 - Psychiatry (0.3) Parts of: weeks 14 & 34
Reproductive and women's health - 4	MNU	1 (week 3 = Reproduction)
	MMMD	3 (Week 10 - ObGyn I) (Week 11 - ObGyn II)) (Week 17 - ObGyn III)
Life-cycle (infant, child, adolescent, elderly) - 4	MMMD	Infant (1) (Week 12 - Normal infant))
		Child (1) (Week 13 - Young & Older Child)
		Adolescent - (1) - Week 14 - Adolescent)
		Elderly - (0.3) (part of end of life week)
Palliative care - 1	MMMD	End of life care (0.7) - Week 34

Appendix 7: Preclerkship curriculum renewal consultations and approvals—September 2013 to December 2014

Faculty of Medicine Committees

Faculty Council	February 9, 2015 (projected)
Faculty Council Education Committee	December 4, 2014 (projected)
Management Committees of the Dean	
Dean's Executive	November 5, 2014
Clinical Chairs Committee	May 14, 2014

Operational Committees, UME

UME Executive Committee	February 18, 2014; October 21, 2014; November 18, 2014
Academy Directors Committee	January 30, 2014 and monthly updates
UME Software Portfolio Committee	Ongoing updates

Curriculum Committees, UME

UME Curriculum Committee	October 15, 2013; October 21, 2014; November 18, 2014; monthly updates
Preclerkship Committee	September 16, 2013; monthly updates
Course Committees:	
- ASCM 1	January 8, 2014
- ASCM 2	January 27, 2014
- BRB (Course Directors only)	February 28, 2014
- STF	January 8, 2014
- FMLE	February 5, 2014
- MNU	January 21, 2014
- MMMD	January 29, 2014; October 8, 2014
Clerkship Committee	March 25, 2014

Other Committees and meetings

Vice-Dean PGME – Meeting	November 29, 2013
MAM Preclerkship Committee	November 14, 2013 and monthly updates
Wightman-Berris Academy Council	December 4, 2013
MAM Advisory Council	September 24, 2013
ASCM 1 & 2 Site-Coordinators Committee	January 29, 2014
MMMD Retreat	June 18, 2014
Director of Evaluations - Meetings	Monthly and ongoing consultation
Research Scientist, Evaluations	Monthly and ongoing consultation
Meetings with Chair, Department of Anatomy	Monthly since July 2014

Office of Admissions and Student Financial Services Committees, UME

Admissions Committee Meeting	December 18, 2013
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Meetings with Students and Student Groups

MedSoc President	December 16, 2013
1T6 Class Council	December 13, 2013
1T7 Class Council	December 16, 2013
Preclerkship student representatives	Monthly since September 2013
Preclerkship class presidents	Monthly since September 2013

UofT Preclerkship Think Tank Meeting

Think Tank Meeting #1	September 20, 2013
Think Tank Meeting #2	February 3, 2014
Think Tank Meeting #3	September 9, 2014

Departmental Meetings

Department of Laboratory Medicine and Pathology	June 17, 2014
Child & Adolescent Psychiatry UME Retreat	April 7, 2014
Department of Medicine	June 17, 2014

Extra-departmental Units

Wilson Centre	Ongoing consultations since September 20, 2013
Centre for Faculty Development	Ongoing consultations since September 20, 2013

Appendix 8: Preclerkship curriculum working groups—List of meetings during the period November 2013 to November 2014

Working Group	Date
TOPIC	November 18, 2013
TOPIC	January 15, 2014
TOPIC	February 19, 2014
TOPIC	March 19, 2014
TOPIC	May 21, 2014
TOPIC	August 13, 2014
TOPIC	October 1, 2014
Integrated Clinical Experience	November 22, 2013
Integrated Clinical Experience	January 20, 2014
Integrated Clinical Experience	February 24, 2014
Integrated Clinical Experience	March 24, 2014
Integrated Clinical Experience	May 12, 2014
Integrated Clinical Experience	June 25, 2014
Integrated Clinical Experience	August 13, 2014
Integrated Clinical Experience	October 15, 2014
Integrated Clinical Experience	November 19, 2014
Portfolio and Assessment	November 11, 2013
Portfolio and Assessment	January 15, 2014
Portfolio and Assessment	March 3, 2014
Portfolio and Assessment	May 16, 2014
Portfolio and Assessment	July 4, 2014
Portfolio and Assessment	September 10, 2014