



FOR INFORMATION

PUBLIC

CLOSED SESSION

TO: Agenda Committee

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PRESENTER: Sioban Nelson, Vice-Provost, Academic Programs
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DATE: April 14, 2014 for April 23, 2014

AGENDA ITEM: 2a

ITEM IDENTIFICATION:

Semi-Annual Report on the Reviews of Academic Units and Programs

JURISDICTIONAL INFORMATION:

Within the *Accountability Framework for Cyclical review of Academic Programs and Units*, the role of the Committee on Academic Policy and Programs is to undertake “a comprehensive overview of review results and administrative responses.” The Committee “receive[s] semi-annual program review reports including summaries of all reviews, identifying key issues and administrative responses,” which are discussed at a “dedicated program review meeting with relevant academic leadership.” (*Policy for Approval and Review of Academic Programs and Units*). The Committee’s role is to ensure that the reviews are conducted in line with the University’s policy and guidelines; to ensure that the Provost’s Office has managed the review process appropriately; to ensure that all issues relative to the quality of academic programs have been addressed or that there is a plan to address them; and to make recommendations concerning the need for a follow up report.

The compendium of review summaries is forwarded, together with the record of the Committee’s discussion, to the Agenda Committee of the Academic Board, which determines whether there are any issues warranting discussion at the Board level. The same documentation is sent to the Executive Committee and the Governing Council for information.

GOVERNANCE PATH:

1. Committee on Academic Policy and Programs (April 1, 2014)
2. **Agenda Committee of the Academic Board (April 23, 2014)**
3. Academic Board (May 1, 2014)
4. Executive Committee of the Governing Council [For Information] (May 12, 2014)

5. Governing Council [For Information] (May 22, 2014)

PREVIOUS ACTION TAKEN:

Governing Council approved the *Policy for Approval and Review of Academic Programs and Units* in 2010. The *Policy* outlines University-wide principles for the approval of proposed new academic programs and review of existing programs and units. Its purpose is to align the University's quality assurance processes with the Province's Quality Assurance Framework through establishing the authority of the University of Toronto's Quality Assurance Process (UTQAP).

The Semi-Annual Report on the Reviews of Academic Units and Programs (April to October, 2013) was previously submitted to the Committee on Academic Policy and Programs on October 29, 2013.

HIGHLIGHTS:

External reviews of academic programs and units are important mechanisms of accountability for the University and a vital part of the academic planning process. Academic reviews are critical to ensuring the quality of our programs through vigorous and consistent processes that assess the quality of new and existing programs and units against our international peers.

In the period between October 2013 and March 2014, since the last report to AP&P, the Office of the Vice-President and Provost received 17 external reviews of units: three commissioned by the Provost and 14 commissioned by the Deans. The submission to AP&P includes summaries of the review reports and the signed administrative responses from each Dean, which highlight action plans in response to reviewer recommendations.

These reviews echoed common themes of previous reviews: the excellence of our faculty and students, the strength of our research reputation, and the innovativeness and quality of programs. In addition, this set of reviews highlighted the many opportunities that students have for experiential learning and research and the University's strong relationships with external institutions.

As always, the reviews noted areas for development such as funding for international graduate students, undergraduate access to upper-level course offerings, and the tension between enrolment growth and quality. The reviews made important recommendations on how these matters could be improved. The administrative responses from the Deans address these issues and others.

Additional reviews of programs are conducted by organizations external to the University. Reviews of academic programs by external bodies form part of collegial self-regulatory systems to ensure that mutually agreed-upon threshold standards of quality are maintained in new and existing programs. A summary listing of these reviews is presented in the Appendix.

FINANCIAL IMPLICATIONS:

n/a

RECOMMENDATION:

This item is *for information and feedback*.

DOCUMENTATION PROVIDED:

Compendium of Reviews of Academic Programs and Units



OFFICE OF THE VICE-PROVOST,
ACADEMIC PROGRAMS

REVIEWS OF ACADEMIC PROGRAMS AND UNITS

October 2013–March 2014

Report to the Committee on Academic Policy and Programs

April 1, 2014

REVIEWS OF ACADEMIC PROGRAMS AND UNITS

1 Provostial Reviews

Faculty of Arts & Science	1
<ul style="list-style-type: none"> • <i>No programs, not a UTQAP review</i> 	
John H. Daniels Faculty of Architecture, Landscape, and Design	17
<ul style="list-style-type: none"> • <i>Graduate:</i> Architecture, M.Arch.; Landscape Architecture, M.L.A.; and Urban Design, M.U.D. • <i>Undergraduate:</i> Architectural Studies, B.A.: Maj 	
Leslie L. Dan Faculty of Pharmacy and its programs	37
<ul style="list-style-type: none"> • <i>Graduate:</i> Pharmaceutical Sciences, M.Sc., Ph.D. • <i>Undergraduate:</i> Bachelor of Pharmacy, B.Sc.Phm.; Doctor of Pharmacy, Pharm.D.; Post-Baccalaureate Pharm.D.; Combined B.Sc.Phm./Post-Baccalaureate Pharm.D. 	

2 Divisional Reviews

2.1 Faculty of Applied Science and Engineering

Department of Mechanical and Industrial Engineering and its programs	57
<ul style="list-style-type: none"> • <i>Graduate:</i> Mechanical and Industrial Engineering, M.A.Sc., M.Eng., Ph.D.; Joint M.Eng. in Design and Manufacturing, M.Eng.D.M. • <i>Undergraduate:</i> Mechanical Engineering, B.A.Sc.; Industrial Engineering, B.A.Sc. 	
Edward S. Rogers Department of Electrical and Computer Engineering and its programs	71
<ul style="list-style-type: none"> • <i>Graduate:</i> Electrical and Computer Engineering, M.Eng., M.A.Sc., Ph.D. • <i>Undergraduate:</i> Computer Engineering, B.A.Sc.; Electrical Engineering, B.A.Sc. 	

2.2 Faculty of Arts & Science

Department of Earth Sciences and its programs	84
<ul style="list-style-type: none"> • <i>Graduate:</i> Geology, M.Sc., Ph.D. • <i>Undergraduate:</i> Geology, B.Sc. (Hons.): Spec; Geophysics, B.Sc., (Hons.): Spec; Geoscience, B.Sc., (Hons.): Major, Minor; Environmental Geosciences, B.Sc., (Hons.): Spec, Major 	
Department of Linguistics and its programs	98
<ul style="list-style-type: none"> • <i>Graduate:</i> Linguistics, M.A., Ph.D. • <i>Undergraduate:</i> Linguistics, B.A. (Hons.): Spec, Maj, Min 	
Department of Mathematics and its programs	115
<ul style="list-style-type: none"> • <i>Graduate:</i> Mathematics, M.Sc., Ph.D.; Mathematical Finance, M.M.F. • <i>Undergraduate:</i> Mathematics, B.Sc. (Hons.): Specialist, Major and Minor; Applied Mathematics, B.Sc. (Hons.): Specialist); Mathematics and Its Applications, B.Sc. (Hons.): Specialist; Mathematics and Philosophy, B.Sc. (Hons.): Specialist; Mathematics and Physics, B.Sc. (Hons.): Specialist Mathematical Applications in Economics and Finance, B.Sc. (Hons.): Specialist 	

Department of Physics and its programs	126
<ul style="list-style-type: none"> • <i>Graduate</i>: Physics, M.Sc., Ph.D. • <i>Undergraduate</i>: Physics, B.Sc. (Hons.): Specialist, Major and Minor; Biological Physics, B.Sc. (Hons.): Specialist; Philosophy and Physics, B.Sc. (Hons.): Specialist; Physics “Life and Environmental”: Minor 	
2.3 Faculty of Medicine	
Medical Radiation Sciences Joint Program with the Michener Institute	139
<ul style="list-style-type: none"> • <i>Undergraduate</i>: Medical Radiation Sciences, B.Sc. (Streams: Nuclear Medicine Technology, Radiological Technology, Radiation Therapy) 	
2.4 University of Toronto Scarborough	
Journalism Joint Program with Centennial College	147
<ul style="list-style-type: none"> • <i>Undergraduate</i>: Journalism, B.A., (Hons.) (Joint Program with Centennial College): Specialist 	
New Media Studies Joint Program with Centennial College	159
<ul style="list-style-type: none"> • <i>Undergraduate</i>: New Media Studies, B.A. (Hons.) (Joint Program with Centennial College): Major 	
Paramedicine Joint Program with Centennial College	174
<ul style="list-style-type: none"> • <i>Undergraduate</i>: Paramedicine, B.Sc. (Hons.) (Joint Program with Centennial College): Specialist 	
Programs in the Department of Anthropology	185
<ul style="list-style-type: none"> • <i>Undergraduate</i>: Anthropology, B.A. (Hons.): Spec, Maj, Min; Anthropology, B.Sc. (Hons.): Spec, Maj 	
Programs in the Department of Human Geography	194
<ul style="list-style-type: none"> • <i>Undergraduate</i>: Human Geography, B.A. (Hons.): Maj, Min; Physical and Human Geography, B.A., Hons.: Maj; City Studies, B.A., Hons.: Maj, Maj (Co-op) 	
Programs in the Department of Political Science	204
<ul style="list-style-type: none"> • <i>Undergraduate</i>: Political Science, B.A. (Hons.): Spec, Maj, Min; Public Policy, B.A. (Hons.): Maj, Maj (Co-op) 	
Programs in the Department of Sociology	215
<ul style="list-style-type: none"> • <i>Undergraduate</i>: Sociology, B.A. (Hons.): Spec, Maj, Min 	
Appendix: Externally-commissioned reviews of academic programs since the last report to AP&P	225

Review Summary

Program(s):	<i>n/a</i>
Division/Unit:	Faculty of Arts & Science
Commissioning Officer:	Vice-President and Provost
Reviewers (Name, Affiliation):	1. Ana Mari Cauce, Provost and Executive Vice President, University of Washington 2. Simon M. Peacock, Dean of Science, University of British Columbia 3. Scott L. Waugh, Executive Vice Chancellor and Provost, University of California, Los Angeles
Date of review visit:	October 28 – 30, 2013

Previous Review

Date: January 24-25, 2008

Summary of Findings and Recommendations:

1. Teaching & Research

The reviewers observed the following strengths:

- Faculty is at the heart of the University's mission of education and research
- Colleges play a critical role in enhancing the student experience
- Units such as the School of the Environment, which bring together graduate and undergraduate programs, result in high quality research and educational opportunities

The reviewers identified the following areas of concern:

- Lack of intermediary tenure review process after departmental decisions

The reviewers made the following recommendations:

- Clarify the role of the Colleges in educating undergraduates, especially via interdisciplinary programs
- Clarify the role of the three campuses with respect to faculty members teaching in graduate and undergraduate programs
- Maintain research masters and PhD programs at the tri-campus level

2. Organizational Structure & Resources

The reviewers observed the following strengths:

- Largest, most diverse unit in the University

- Faculty has weathered recent changes well and continues to find efficiencies

The reviewers identified the following areas of concern:

- Major challenges of provincial fiscal restraint, the undergraduate double cohort, graduate expansion, expansion of the number of units, end of mandatory retirement, and the University's new budget system
- Size and number of interdisciplinary units appears to be unsustainable

The reviewers made the following recommendations:

- Give budgetary power to and redefine the roles of the vice-deans
- Create a chief of staff position
- Rethink the faculty complement and strategic planning processes
- Review interdisciplinary programs and their sustainability

3. Internal & External Relationships

The reviewers observed the following strengths:

- Communication is strong between the three campuses

The reviewers identified the following areas of concern:

- Considerable amount of time devoted to negotiating relationships with institutional partners
- Lack of international benchmarking for the Faculty

The reviewers made the following recommendations:

- Create better, more strategic clarity in the Faculty and with its partners

Last OCGS Review(s) n/a

Date(s):

Current Review: Documentation & Consultation

Documentation Provided to Reviewers:

Terms of Reference; Self-Study and appendices that included the previous review and administrative response, the Faculty's *2010 Academic Plan*, the undergraduate and graduate calendars, a guide to extra-departmental units, the *Statement of the Roles of the Constituent and Federated Colleges* and the *Administrative Procedures of the St. George Colleges*, the listing of the consultations for the Self-Study, Undergraduate and graduate degree objectives, student support services, organizational structure, Arts & Science Constitution.

Consultation Process:

The reviewers met with the Vice-President and Provost; Vice-Provost, Academic Programs; Faculty of Arts & Science Dean and former dean; vice- and Assoc-deans, assistant deans; academic unit chairs and directors; college principals; Deans of cognate University faculties and campuses; faculty members; A&S Council members; administrative staff; and undergraduate and graduate students.

Current Review: Findings & Recommendations

The reviewers praised the Faculty's deep commitment to upholding the highest standards of excellence in research and teaching. They cited the Faculty as a critical factor in the University's position as a world-class institution, noting its status as teaching and research powerhouse and its effectiveness in fostering a culture of excellence.

1 Teaching and Research (Items 1, 2, 3, 4 from Terms of Reference)

The reviewers observed the following strengths:

- Undergraduate education
 - Highly successful curriculum renewal process, with core competencies instituted for all programs, encouraging breadth and exploration of new subjects
 - Very high quality undergraduate students
 - Student appreciate the ability to tailor their degree through various combinations of specializations, majors, and minors
 - Seven Colleges play a fundamental role in the advising and support of undergraduate students, and are doing an excellent job overall
 - Students are strongly supportive of the Colleges
 - Colleges seem well-connected to the Faculty through their Registrars
- Graduate education
 - Full-range of excellent disciplinary and interdisciplinary academic and professional graduate programs, attracting high quality students
 - Concerted effort to expand graduate education, especially professional master's programs, to meet the goals identified in the Faculty's strategic plan and those of the province
 - Tri-campus program system works particularly well in certain disciplines
 - Times-to-completion are in-line with North American norms
- Faculty
 - Faculty is drawn from the very best around the world
 - Highly active and productive research faculty, with entrepreneurial passion
 - Faculty Appointments Committee has given greater coherence to the Faculty and is widely respected
- Research
 - Research excellence extends across the sciences, humanities, and social sciences
 - Research funding is strong
 - Dean's Office is well-structured to support research activity
 - Both the Vice-Dean Research & Infrastructure and the Vice-Dean Graduate Education & Program Reviews play a key role in developing a culture of excellence in achievement in research
 - Faculty play a leading role in realizing the UofT Strategic Research Plan

- Planning/Vision
 - Strategic plan aligns with and supports the University's long range plan
 - Appreciable progress towards meeting the priorities in the strategic plan, which is the basis for yearly resource allocation and departmental and unit-level planning

The reviewers identified the following areas of concern:

- Program delivery (overall)
 - Challenge of maintaining programmatic quality, for both graduate and undergraduate programs, in the context of budget constraints and hiring cutbacks
- Undergraduate education
 - Large-enrolment programs are struggling to sustain innovative programming as transitional funds expire
 - Dramatic increases in student/faculty ratios, as at other large public universities
 - Large classes dominate the 1st and 2nd academic experience, and continue to do so in 3rd and 4th year for large-enrolment programs
 - High demand courses not always offered routinely
 - Students concerned about variable TA quality
 - Notable concern about the extent to which students rely on external tutoring services
- Graduate education
 - Unclear how well tri-campus system is working for certain disciplines
 - In certain instances, Ph.D. time-to-completion is outside the norm (e.g., 7 – 9 years)
 - Graduate students expressed concern about the levels of funding that they receive; discrepancies between average graduate stipends in the Divisions
 - Concern about the levels of funding available to international graduate students
 - TA placements at UTM and UTSC require long commute times
- Faculty
 - Faculty complement planning not tied directly to Faculty's strategic plan
 - Chairs note the challenge of rising student enrolment, and expressed reservations about hiring teaching-stream faculty at the expense of tenure-stream faculty
 - Absence of committee of the whole Faculty in the tenure review process
- Research
 - Challenge of engaging in interdisciplinary research within a decentralized structure
- Planning/Vision
 - Concern about whether the overall strategic vision for the Faculty informs planning departments, colleges, campuses, and EDUs

The reviewers made the following recommendations:

- Undergraduate education
 - Determine how best to respond to the challenges of increasing numbers and class size including the best way to manage access to courses; consider recording lectures and online engagement
 - Create a formal evaluation system, including feedback mechanisms, for TAs

- Examine why students are seeking external tutoring support
- Consider adding undergraduate co-op programs on all campuses, with the goal of increasing student participation
- Graduate education
 - Encourage students' awareness of rewarding non-academic career options as there are fewer tenure track positions available
 - Emphasize the creation of professional master's programs aligned with non-academic employment opportunities
 - Continue to pay attention to and leverage the strength of the tri-campus system
 - Examine in detail the actual range of graduate student support as a function of year and discipline
 - Ensure that TA placement is seen as an opportunity for professional development and employment
 - Address problem of international graduate student funding through lowering graduate student tuition and/or increasing the funding available to these students
- Faculty
 - Cluster hiring as a means to strengthen interdisciplinary and breadth
 - Rethink the tenure process to include a thorough review by a Faculty-level tenure committee
- Research
 - Develop approaches to large-scale initiatives that span the sciences, social sciences, and humanities and take advantage of interdisciplinary research opportunities

2 Organizational Structure & Resources (Item 5 from Terms of Reference)

The reviewers observed the following strengths:

- Morale
 - Faculty, staff, and students continue to create pathways to excellence through their dedication, ingenuity, and entrepreneurial spirit
- Financial resources
 - Financial and administrative stability of the Faculty has been supported in particular by the hiring of the CAO
 - Current financial direction appears to be healthy
- Organizational structure
 - Administrative structure is practical, effective, and works surprisingly well in carrying out the academic mission of the faculty; gives a high degree of independence to academic leaders
 - Though the administrative structure is complex, the regular meetings councils and coalitions serve as venues to discuss academic and administrative issues among FAS leaders

- Chairs praised the work of the vice-deans, emphasizing their impressive planning, knowledge, responsiveness, creativity, and service-orientation; they are glue that holds together the complex administrative system
- Numerous EDUs provide faculty and students with important niches
- Intention to establish more centralized system of IT support
- Excellent HR support

The reviewers identified the following areas of concern:

- Space and infrastructure
 - Urgent need for new facilities in order to remain competitive in research, especially in the sciences
- Financial resources
 - Faculty's ability to take on new initiatives is limited by extreme budgetary constraints at the University
 - Budget model may not be transparent for department chairs or EDU directors
- Organizational structure
 - Organizational structure is complex and decentralized
 - Autonomy of chairs and directors increases their responsibility for managing units effectively
 - Unclear how and who addresses the specific needs of chairs, though chairs meet with Dean and vice-deans on an as-needed basis
 - Exception to this is the science chairs who meet with the Vice-Dean for Research & Infrastructure
 - Some affiliated groups of chairs, principals, and unit heads, but these are not necessarily cohesive groupings that participate in shared strategic planning and initiatives
 - The number of EDUs might be detracting from energy and effort that might be better directed toward departmental units or work across department
 - Concern that new Faculty (and University) initiatives, like STEP Forward, do not always get the buy-in that is needed to make them successful

The reviewers made the following recommendations:

- Space and infrastructure
 - In order to sustain excellence, Faculty will require additional support from the University, particularly physical infrastructure
 - Engage in creative ways to finance at least one major project and refurbish existing space
- Financial resources
 - Need for additional support from the Province terms of funding and/or tuition flexibility
- Organizational structure
 - Though the complex organizational structure currently works, consider how to increase communication and integrate planning across all units
 - Consider carefully the creation of additional structures

- Encourage the new dean to communicate often and clearly with academic leaders and the faculty at large so that they not only understand actions taken by the context in which decisions are made

3 Internal & External Relationships (Items 6, 7 from Terms of Reference)

The reviewers observed the following strengths:

- Internal relationships
 - Relations between the three campuses are cordial with a sense of disciplinary commonality
 - The size of UofT and the number of Divisions offer remarkable opportunities for academic development
- External relationships
 - Students and faculty take advantage of UofT's diverse, rich, urban environment, connect with the community, and strive to make an impact on the world
 - Increased number of courses that offer a service learning component and the number of professional master's programs with internships in government, industry, and not-for-profit organizations
 - Many students involved in activities with community impact
 - FAS is in a good position to bring evidence-based direction and advice to a host of social problems and issues at the local, national, and international levels
 - Gains in technology transfer over the past five years
 - Strong commitment to community involvement, globalization, and conducting internationally-relevant research

The reviewers identified the following areas of concern:

- Internal relationships
 - In recent years, the rate of faculty hiring and capital improvements has decreased at St. George, while it has increased at UTM and UTSC
 - Engineering, Medicine and FAS raised the issue of funding for students taking courses in the others' Faculty

The reviewers made the following recommendations:

- Internal relationships
 - Create robust cross-campus relations and provide space where tri-campus faculty members can interact on a regular basis
 - Clarify cross-Divisional issues, chiefly teaching across Divisions
 - Explore new academic initiatives involving the entire campus and encourage FAS to be a leader in these endeavours

- External relationships
 - Engage in peer benchmarking in the areas of service learning, study abroad, and commercialization/technology transfer activities

ADMINISTRATIVE RESPONSE – Appended



12 March 2014

Professor Sioban Nelson
Vice-Provost Academic Programs
University of Toronto

Re: External Review of the Faculty of Arts & Science

Dear Sioban,

Following the external review of the Faculty of Arts & Science, I am pleased to provide you with my administrative response to the review.

The reviewers visited the Faculty in October 2013, during which time they met with students, faculty and staff, academic administrators within the Faculty as well as senior University administrators and cognate deans. The reviewers commented that their discussions were lively, and “people felt comfortable being frank and open.” It was clear in my discussions with the reviewers, that they considered the Arts & Science community to be justifiably proud of the accomplishments of our outstanding faculty, staff and students.

I am grateful to the reviewers for their thoughtful analysis of the Faculty in their Report. They presented their findings in relation to undergraduate and graduate education, research, planning, organization and resources, our relationships with other University units and our social impact.¹ They were impressed by the Faculty-wide deep appreciation of the importance of and commitment to upholding the highest standards of excellence in research and teaching. They praised our units’ engagement in undergraduate curricular renewal which has supported enhanced breadth and the exploration of new subjects. Describing Arts & Science as a “teaching and research powerhouse,” the reviewers were struck by our dedication, ingenuity, and entrepreneurial spirit. They noted the strengths of our colleges and their importance in advising and supporting our students. The reviewers concluded that “there is no question about the overall excellence of the Faculty of Arts & Science at the University” and that we have “excellent faculty, staff, and students that are energetically committed to conducting world-class research and scholarship.”

The Report was received in December and circulated to the Arts & Science community. In January, the Faculty senior leadership embarked upon two rounds of consultations with Arts & Science Council, the Council of Chairs, Principals & Academic Directors (CPAD), the Coalition of Arts & Science Directors (CASD), administrative groups, student representatives, and with other members of the University. We first had a general discussion regarding the Report and its recommendations. We then followed with a second round of discussion, focusing on the draft contents of an administrative response to the Report.

Before proceeding to discuss their specific recommendations, the reviewers acknowledged two factors that frame the context for their Report: the “extreme budgetary constraints at the University and within the Faculty”, and, the “complexity and extreme decentralization of the organizational structure.” We

¹ The Report, Self-Study, administrative response, and related documents, are posted at <http://www.artsci.utoronto.ca/main/about/reports/review>

agree that our financial situation is deeply challenging given the misalignment between our revenues and expenses. With regards to the former, our provincial per-student grant has not increased in value for the past 20 years, even to offset inflation. Undergraduate domestic tuition fees are also closely regulated. Within the Faculty, these past five years we have had to make difficult strategic choices to contain costs and raise revenue. We implemented a careful approach to enrolment planning, an undergraduate program fee, expenditure controls, and strategic resource allocation mechanisms for hiring of teaching staff so that we could avoid a hiring freeze. The Faculty's organizational structure echoes that of the University as a whole which displays a decentralized structure. Arts & Science departments, extra-departmental units (EDUs), and colleges help us to manage both the breadth of our scholarly interests as well as to create homes for our faculty and students.

The reviewers have provided a thoughtful report, highlighting our strengths and challenges as well as recommending opportunities where we might further improve our Faculty across a spectrum of issues. This administrative response has been informed by the discussions and consultations we have engaged in to date in the Faculty as outlined above. Although not mentioned specifically by the reviewers, as part of our Self-Study process and our consultations identified areas that we will continue to work on, for example, regularly reviewing questions of equity as it relates to our professoriate and staff.

We have structured our response to align with the review's Terms of Reference, commenting on academic planning, and priorities last, as this section is informed by our Faculty's discussions of the reviewers' insights and recommendations related to teaching, research, internal organization and finances.

The Faculty's commitment to excellence in undergraduate and graduate teaching

Undergraduate

- *The reviewers noted that large undergraduate classes are a challenge for all public universities and they strongly recommended a plan to improve student learning and student experience in the Faculty's large lecture courses.*

Within Arts & Science we have aimed to ensure that classes with large enrolments are taught by our best teaching staff and are accompanied by smaller group tutorials and/or labs in order to maximize students' learning opportunities. We also offer an array of smaller-scale experiences. During our initial consultations this term, we have heard from students that classes that include a tutorial or lab section, as well as our smaller class opportunities, do in fact create a more engaging experience for them.

The reviewers suggested that we consider technological supports that could be put in place to further enhance our students' learning experience. This year's Advancing Teaching and Learning in Arts & Science (ATLAS) initiatives are expected to generate new opportunities to deploy technologies in creative ways, and to permit greater levels of engagement in and outside of the classroom. These past two years, we have supported Massive Open Online Course (MOOCs) pilots which may suggest new technologies that can support student learning in large classes. The reviewers also suggested that we record our large classes and make these available to students. We will work with teaching staff that are eager to have their class recorded, and undertake a pilot project to make these recordings available online for a selection courses in the 2014-15 academic year. The pilots will be evaluated and considered as part of our planning for large enrolment courses.

The Vice-Dean, Teaching & Learning will develop a plan to support our teaching staff and further enhance student learning in large lecture classes. The plan will be informed by specific disciplinary

pedagogies and perspectives within our academic units, as well as research into large class pedagogy in general.

We are also considering a broader analysis of all our first year offerings including a review of the balance between large and small classes. First year offerings and experiences include our First Year Learning Communities, First Year Seminars (199s), College Ones, and Big Ideas. As the Big Ideas courses and the One programs expansion were just recently launched the appropriate time for such an analysis will need to be considered.

- *The reviewers suggested the Faculty explore the possibility of offering guidance in future career preparation and work opportunities for students.*

This academic year we launched our STEP Forward initiative whose aim is to guide students through reflective thinking about their professional goals and choices, and prepare and support them in selecting programs at university, planning for their future careers, and forming connections with mentors among alumni, teaching staff, career advisors, and more senior students. Key aims of STEP Forward include making explicit the importance of connecting academic knowledge and skills to personal values and growth while actively integrating such personal development skills with academic knowledge, critical thinking and the actualization of professional skills. Our first call for STEP Forward proposals in the fall of 2013 resulted in 55 proposals from our academic units and colleges. We will evaluate the success of these pilot projects and will consider funding them on an ongoing basis. As part STEP Forward we are also considering how to best provide support in the Dean's Office for our academic units which wish to offer more professional experiences for students. In discussions with the Arts & Science community, we heard of the benefits of the variety of options currently available for our students including service learning, experiential learning, and internships. A small percentage of our students also participate in the Professional Year Experience program, administered by the Faculty of Applied Science & Engineering. During our consultations, we heard that such a program might be desirable for the Arts & Science community, as would a more prominent emphasis on the possibilities and benefits of research experiences within the Faculty. We will explore such possibilities in discussion with our academic units.

Graduate

- *The reviewers recommended that enrolment growth be aligned with professional master's programs to enhance employment opportunities for graduates.*

Arts & Science offers a broad array of doctoral-stream masters and PhD programs as well as professional master's programs. Three new professional masters programs in high demand areas were proposed and approved during 2008-13, and two departments are currently developing proposals. This past year the Dean's Office has ramped up its ability to provide financial modelling and advice for units who wish to propose professional masters programs.

We also are working to promote a broader, multi-faceted strategy to support the academic and non-academic professional development of our students outside of programs. Students in our doctoral stream masters and PhD programs have expressed greater interest in having more opportunities facilitated by their academic units to explore disciplinary, non-academic career opportunities. This term we have initiated a process to gather information about the current activities of our units in this area, with the aim of sharing best practices. We will also explore the potential to partner with the School of Graduate Studies and Career Services.

- *The reviewers suggested the monitoring of the time taken for students to complete their degrees.*

Time-to-completion (TTC) for our graduate programs is monitored and discussed in depth during individual graduate program reviews. The Faculty's tri-campus average TTC for our programs and by sector compares favourably to our international comparators. However, annual TTC across the sectors has gradually increased over the past 4 years and data show increasing numbers of students enrolled in years 6-9. Although TTC is often discipline-specific, we have begun a more in-depth analysis and conversation with Arts & Science chairs, directors, and graduate coordinators regarding curricular planning and alignment, supervisory practices, and student advising enhancements to decrease time to candidacy and completion. The Vice-Dean, Graduate Education & Program Reviews launched a 'PhD Time to Completion' Consultation and Review process. Phase I involved analysis of enrolment, program, CGPSS, and other data, completion of an environment scan of best practices related to TTC at other universities, and consultation with Faculty tri-campus program stakeholders. Presentations have been made to academic administrators, the Graduate Advisory Committee (GAC), the Graduate Curriculum Committee, and Council. These presentations have resulted in lively and serious discussion of TTC issues. Several units have brought forward their program-specific information for discussion with their faculty and graduate students. We are developing a clearer understanding of the factors affecting TTC. We will be working with the Graduate Advisory Committee in 2014 to: develop a process for a formative review of unit-level TTC and identify areas needing improvement; identify potential IT and other Arts & Science support needed to assist program-level monitoring of students; and, develop a TTC best practices document based on our own and other universities' experiences.

- *The reviewers recommended enhancing the training of teaching assistants (TAs) and improving mechanisms for feedback on their teaching performance.*

The University's Faculty and teaching assistants share a common interest in ensuring the effectiveness of undergraduate teaching. During our consultations we heard that graduate students consider the existing university offerings such as the Faculty's expanded Writing Instruction for Teaching Assistants (WIT), and the University's Teaching Assistants' Training Program (TATP) and English Language and Writing Support (ELWS), to be helpful. We are proud that the A&S WIT program has recently been awarded the University's Northrop Frye Award in recognition of its achievements in linking teaching and research. Chairs and directors whose units are participating in the program praised its effectiveness. We will ensure we can respond to all Arts & Science academic units that are interested in participating in WIT. We will work with the University's Centre for Teaching Support and Innovation, the School of Graduate Studies, and our academic units to ensure that opportunities for general training are well known.

Graduate students also expressed a desire for more discipline-focused guidance around what is expected of them. This is a priority we share; we have been working with our teaching and learning committees in consultation with the Teaching Assistants' Training Program to identify ways to provide TAs with student feedback on their teaching. TA appointments and responsibilities in Arts & Science vary significantly by course, making standardized TA evaluations unfeasible. However, the online course evaluation framework allows instructors to select questions about TAs and tutorials or laboratories. We have drafted a recommendation that units include these questions on course evaluations wherever possible and that they administer paper evaluations of TAs where online evaluation is not possible, and will be consulting on this proposal with faculty, staff and students. Several departments already provide course-specific training for TAs. For example, Physics has begun to offer TA training that consists of weekly sessions in which TAs get an overview and practice with the equipment used in the upcoming practicals. In addition, each year the Department runs a 'microteaching' workshop for new graduate students.

The University is working on ways to consider how to provide guidance and support to graduate students and academic divisions with respect to TA training and feedback mechanisms.

- *The reviewers raised the issue of funding for domestic and visa graduate students.*

Our ability to attract more high quality graduate students depends on the continued academic excellence of our programs, improvements to the student experience, and the competitiveness of our funding packages.

With regard to the funding, we know one of the most effective strategies for attracting high quality graduate domestic students is to be explicit in our offer letters with respect to the funding that will be available to them. Our units' ability to compete with institutions offering more generous funding packages continues to be a central concern and priority. In 2012-13, we piloted a top-up funding program aimed at helping units attract their top domestic candidates. The Dean's Office worked with many units to put together competitive multi-year packages, with several including a sixth year of funding. The pilot program was successful based on the number of applicants accepting our offers. We are continuing the program for the current admissions cycle. The one-time-only MTCU funds distributed to FAS to help our units attract top tier domestic graduate students for fall 2014 was a welcome source of additional recruitment funds for this admissions cycle.

The provincial government's focus on expanding domestic student growth and lack of funding for international students, has limited our ability to admit international graduate students. In this context, any increase in funding for international graduate students may result from endowed international scholarships, or an increase in international students arriving with their own support. Given the strong consensus on the need to grow our international PhD enrolment, as a Faculty we have also committed to include international PhD students in the allocation of the Provost's PhD Enhancement Fund (PPEF) matching program, which provides an excellent opportunity to leverage support from benefactors. We will continue our advocacy to the government for international graduate student funding.

We are working with our units to ensure funding communications with our students are helpful. During our consultations we have learned that offer letters and annual letters could be clearer in terms of specifying their funding. Graduate students have also suggested that it would also be helpful to have a schedule outlining when various funding components are released (e.g. scholarships, TA pay, RA stipends).

This academic term, the Vice-Dean, Graduate Education & Program Reviews has mounted workshops, by disciplinary sector, for our graduate coordinators and chairs. We have provided a detailed breakdown of the funds available for graduate student recruitment to each Arts & Science unit offering graduate programs, including DEIF, FAS funds and restricted funds. This allows to chairs have the up-to-date information they need on the recruitment resources they have available to them. In other words, we have worked with our units to increase their "graduate financial literacy." We have also developed a series of workshops for Graduate Coordinators and Graduate Assistants designed to improve our application and success rates and have seen significant advances in some units.

Effectiveness in fostering a culture of excellence and achievement in research

- *The reviewers recommended an assessment of how the Faculty could best facilitate the development of large-scale faculty-wide research initiatives.*

Across our discussions there was recognition that faculty-wide research initiatives were valuable but needed to begin from the bottom-up with respect to faculty members' research strengths and interests.

The Vice-Dean, Research & Infrastructure will facilitate discussions with the chairs and directors to see if any cross-sectoral (humanities, social sciences, and sciences) initiatives can be identified and enabled. It may be that some of the existing funding opportunities (such as the University's Connaught Fund aimed at bringing together leading researchers from multiple disciplines) can be accessed. Our consultations have indicated that providing support to interdisciplinary working groups of faculty on topics they identify of interest would be helpful, as would enhancing our capacity to support faculty in thinking about these kinds of research opportunities.

- *The reviewers emphasized the importance of improved physical infrastructure and enhanced research space to support the Faculty's continued excellence.*

The reviewers were clear that for the Faculty "to remain competitive, especially in the sciences, there is an urgent need for new facilities." The physical spaces in which teaching, learning and research are carried out play an important role in shaping the quality of the overall academic experience for faculty, students and staff, as well as the impact of what can be accomplished. It is important that we undertake a number of infrastructure planning activities to ensure we are strongly positioned to seize future funding opportunities with governments and donors.

As a first step towards understanding our physical infrastructure, we expect that the comprehensive space benchmark study that Arts & Science Office of Infrastructure Planning, initiated last year will be complete in 2014-15. This information will serve to identify the space needs of users as well as opportunities for better utilization of our space, including consolidating departments that are currently spread across the St. George campus and providing state-of-art research facilities for multiple user groups. While this work is still in the planning phase, we are undertaking strategically targeted renovations, the largest of which is the teaching laboratory renovations in the Ramsay Wright building. We are pursuing federal and provincial research infrastructure grants to contribute funds to several Faculty facilities.

Effectiveness of internal organization and financial structure

- *The reviewers noted that by and large the Faculty's organization appears to be working well but noted that it will be critical for the Dean's office to communicate often and clearly with academic administrative leaders and the faculty at large to ensure that they not only understand the actions taken by the Dean but the context in which decisions are being made.*

Our faculty, staff, students, and academic administrators are clear that we need to have opportunities in place to listen to and engage our community. We have discussed how the Dean's Office can better interact with our academic administrators, undergraduate and graduate students. We have begun to convene smaller and more informal groupings of chairs and directors to discuss faculty-wide matters. We are considering how to change the format of our monthly CPAD meetings in order to allow more time for discussion and engagement at an earlier stage in the development of proposed Faculty initiatives. There may be other informal groupings as well. We will work to ensure that we make use of existing committees to discuss Faculty-wide issues. While dean, I will also initiate visits to academic units in order to meet directly with faculty, students, and staff.

- *The reviewers raised the issue of 'terms of trade' on interdivisional teaching and the importance of its satisfactory resolution.*

Arts & Science is the biggest provider of interdivisional teaching services, currently offering support to several divisions and facing growing demand for cross-divisional teaching engagement from professional faculties. For the past academic year, senior members of the Dean's Office have been working with the

Provost's Office and the University's Planning & Budget Office, as well as with the leadership of our partner divisions, to put these arrangements on a rational footing so that the academic priorities of the participating divisions can be effectively addressed and financially sustained. Our aim is that a number of these arrangements will be in place for the 2015-16 academic year.

Campus relationships

- *The reviewers commented on the challenges inherent in the University's tri-campus model and large scope. They recommended continued focus on how best to leverage our tri-campus structure and cross-divisional strengths.*

Arts & Science collaborates extensively with the other campuses in order to take advantage of the University's tremendous breadth in research and teaching. The process of careful tri-campus planning, coordination, identification of principles for program development and collaboration has continued to evolve constructively. A key contributor to our communications is the Tri-campus Deans Committee, which meets every two to three weeks during the academic year to ensure the coordination of activities at the graduate level, as well as consultation and discussion on many other important academic policies and practices, such as those involving undergraduate issues, research, academic human resources, and student evaluation of courses.

Societal impact and outreach

- *The reviewers applauded the Faculty's commitment to community involvement, globalization, and conducting research of significant impact and recommend that we engage in peer bench-marking.*

Our commitment to globalization and community engagement is evident in our service-learning initiatives, International Course Modules, Research Opportunities, Research Excursions and study abroad programs. We also strive to ensure support and understanding from many audiences, including the public and government. In concert with our academic units, our Office of Communications will work over the course of the next academic year, to better record the activities and achievements of our faculty, staff, and students and to promote them within Faculty, University, and externally.

Academic planning and progress toward academic priorities

- *The reviewers suggested that the new dean should work to enhance communication across departments, colleges and EDUs in support of a common conversation about priorities and integrative planning.*

We engaged in Faculty-wide academic planning in 2009-10, and have followed with a Self-Study process in the 2012-13 academic year and into the fall of 2013. At this time, we are not proposing that we launch a Faculty-wide academic planning process over the next two years of my term as dean. Rather, we propose to identify specific Faculty-wide priorities on which we can focus our efforts.

Having consulted both within the Faculty and with the Provost on this way to move forward, this term I have initiated a discussion for us to consider a small number of priorities. Some of these have resulted from the recommendations of the reviewers, others have arisen through discussion in the Faculty. Examples of initiatives identified to date include the following:

- Comprehensively reviewing our large course learning environment with the aim of further enhancing student learning and the student experience.
- Assessing the experience of our international undergraduate students in order to improve the benefits they receive from the education we have to offer. This can include consideration of services and supports provided in tandem with our academic units, colleges, and the University.
- Enhancing the graduate student experience through continued improvements to our recruitment, to students' progress through their programs, and preparation for future careers.
- Strengthening the Faculty's information technology capacity, and the ability of Arts & Science to assist our academic units in meeting their IT needs.
- Unit-by-unit consultation: with the assistance of a "360 internal review" of a department's operations, developing a plan or a series of initiatives to help the given unit meet its academic aspirations.

These priorities will be further discussed and more fully developed as appropriate during 2014-15.

Summary

The Report and its recommendations have been discussed within the Arts & Science community these past three months and will certainly continue to generate discussion and provide guidance for the Faculty. The reviewers identified the Faculty's major challenges, along with our achievements.

Despite our accomplishments, we continue to face even greater financial constraints. Through our consultations, we have heard about the continued need to increase our faculty complement. This has been and will continue to be a challenge to do at the level required for Arts & Science. The provincial four-year tuition framework will result in decreased provincial funding for us. Even more significantly, the provincial government has changed its policy related to undergraduate arts and science program fees. These changes will have a substantial impact on our budget and, thus, on our ability to hire teaching staff, and deliver our academic programs.

Our administrative response highlights how we have begun the process of addressing the Report recommendations. We have also initiated a process for identification of a number of specific Faculty academic priorities that we will focus on over the short- to medium-term in order to build on our strengths, enhance our collaborations within the University, and advance our leadership in research and the academic experience of our students.

Sincerely,



David Cameron
Dean, Faculty of Arts & Science

Review Summary

Program(s):	Architectural Studies, B.A., Hons. (Major) Master of Architecture, M.Arch. Master of Landscape Architecture, M.L.A. Master of Urban Design, M.U.D.
Division/Unit:	John H. Daniels Faculty of Architecture Landscape and Design
Commissioning Officer:	Vice-President and Provost, University of Toronto
Reviewers (Name, Affiliation):	1. Professor Christine Macy, Dean, Faculty of Architecture & Planning, Dalhousie University 2. Professor Sacha Menz, Past Dean, Departement Architektur, ETH Zürich 3. Professor Adèle Naudé Santos, Dean, School of Architecture and Planning, Massachusetts Institute of Technology
Date of review visit:	November 5–7, 2013

Previous Review

Date: October 22-23, 2008

Summary of Findings and Recommendations:

1. Undergraduate Programs: Bachelor of Arts, Architectural Studies, (with the Faculty of Arts and Science)

The reviewers observed the following strengths:

- Courses are attractive to students; steady increases in enrolments
- Bright, energetic students

The reviewers identified the following areas of concern:

- Need increased space to support studio-based components of the program and workshops, in addition to more computer labs
- Need for more technology, research, and independent study opportunities

The reviewers made the following recommendations:

- Provide additional resources and attention to make the program viable

2. Graduate Programs (Master of Architecture, M.Arch; Master of Landscape Architecture, MLA; Master of Urban Design, MUD)

The reviewers observed the following strengths:

- One of the top schools in Canada for educating architects and landscape architects
- Success transition to graduate programs as entry to practice
- Enthusiastic, high quality students in M.Arch and MLA programs

The reviewers identified the following areas of concern:

- Master of Urban Design program has not reached target enrolments or reached its potential
- Increasing enrolments have placed stress on the faculty

The reviewers made the following recommendations:

- Consider the best use of faculty resources, especially in supervising theses
- Consider changes to improve the MUD, including streaming the Master of Arts in Urban Design Studies (FAS) and the M.Arch in Urban Design into one program
- Establish a Ph.D. program to educate future scholars and teachers of architecture

3. Faculty/Research

The reviewers observed the following strengths:

- Rising stars added to an already strong faculty with many active scholars

The reviewers identified the following areas of concern:

- Little sponsored research being conducted by faculty

The reviewers made the following recommendations:

- Encourage faculty to prepare proposals for specific grants to HSRC, the CURA program or the Research/Creation program

4. Administration

The reviewers observed the following strengths:

- Faculty is well on its way to resolving longstanding space problems
- Successful collaborations at the University and with external organizations

The reviewers identified the following areas of concern:

- Concerns about annual fundraising

The reviewers made the following recommendations:

- Make alumni fundraising a priority
- Pursue a comprehensive Faculty academic and strategic plan

Last OCGS Review(s) 2006

Date(s):

Current Review: Documentation & Consultation

Documentation Provided to Reviewers:

- Daniels Faculty of Architecture, Landscape, and Design Self Study, October 2013
- Towards 2030: The View from 2012
- UTQAP Template for the Cyclical Review: Terms of Reference
- External [Cyclical] Review, October 22-23, 2008
- Presentation of the new building on One Spadina Circle

- Samples of student work from the option studios in all three programs
- Transition to a new Budget Model at the University of Toronto, CAUBO June 17, 2008
- FALD Administrative Organizational Structure
- FALD Constitution and By-Laws of [Faculty] Council
- FALD Academic Plan Draft, October 29, 2013.
- FALD Curriculum Committee Report, 2012-13
- PhD Graduate Program proposal, December 12, 2012
- Program charts (degree requirements) for: Master of Architecture, Master of Landscape Architecture, Master of Urban Design and the Architectural Studies Major
- Comparative summary of Faculty budget allocated to academic and support staff and operating expenses (2008/09 and 2013/14)
- Historical Admissions Statistics in the graduate programs from 1999 to 2013

Consultation Process:

The reviewers met with the Vice-Provost, Academic Programs; Program Directors, Master of Architecture, Master of Landscape Architecture and, Master of Urban Design Programs; Chief Administrative Officer; Faculty Registrar; Assistant Dean, Academic Programming; Associate Dean, Research; Associate Dean, Academic; GALDSU (Graduate Architecture, Landscape, and Design Student Union); Director, Bachelor of Arts in Architectural Studies; Director, Visual Studies Program; Deans of Cognate University Faculties; tenure stream, adjunct and sessional faculty members; Faculty Librarian; Director of Advancement; Dean, School of Graduate Studies; alumni; and the Architect for the One Spadina Project as well as a senior member of the Daniels Building Project Committee.

Current Review: Findings & Recommendations

- Positive distinction between undergraduate program as non-professional and graduate programs as professional, providing a clear identity for the programs in a Canadian context

1 Undergraduate Program

Architectural Studies, B.A., Hons. (Major): The reviewers, in their report, restricted the scope of their formal assessment to graduate programs, and did not include the undergraduate program in Architectural Studies, which was recently transferred to the Faculty.

The reviewers observed the following strengths:

- Curriculum and program delivery
 - Four areas of emphasis in program—generalist, design, society, and technology—make sense

2 Graduate Program

Master of Architecture, M.Arch.; Master of Landscape Architecture, M.L.A.; Master of Urban Design, M.U.D.

The reviewers observed the following strengths:

- Objectives
 - Positive vision of integrating architecture, landscape architecture and urban design
- Admissions requirements
 - Appropriate for each program
 - Students feel well-prepared to enter programs
- Curriculum and program delivery
 - *All programs*
 - Superstudio is excellent and in keeping with the Faculty's vision
 - Many studios take on projects in the larger urban and global contexts
 - *Architecture*
 - Positive about alignment of student theses with faculty research interests
 - Options studios in the architecture sixth semester collectively focus students in working groups on specific design topics, methods, and/or questions relevant to the discipline
- Quality indicators
 - Virtually all students complete their programs on time or with just one additional term
 - Students feel prepared for their future in practice
 - Students very satisfied with the programs and their chosen career paths
 - Alumni are well-represented in the design professions in Toronto
- Student funding
 - Newly established Daniels scholarship has great potential to support students

The reviewers identified the following areas of concern:

- Overall quality
 - Programs have yet to realize their full potential
- Objectives
 - Learning outcomes are unclear
 - Dominance of architecture inhibits the integrated vision for the programs
- Curriculum and program delivery
 - *All programs*
 - Cohort of advanced placement students in architecture and landscape architecture comprise a significant portion of students entering in the second year
 - Skill levels of advanced placement and continuing students are divergent
 - Curriculum is in a state of evolution, with some parts working well and others requiring reconsideration

- Faculty differ in their philosophical approach to the curriculum, resulting in lack of integration and rational sequencing
- Students do not have sufficient disciplinary understanding to take full advantage of the Superstudio structure
- Intensity and pace of programs do not allow students to engage in learning outside the classroom, though this is normal for three-year master's programs
- *Urban Design*
 - Urban design is small, lacking critical mass and focus
- *Architecture*
 - Current first year architecture design brief requires additional development
 - Comprehensive building studio takes place before architecture students have a sufficient breadth of knowledge in structures, building systems, construction, and tectonics
 - Only one thesis advisor available per student, and only a small number of faculty are engaged in thesis
 - Students rarely compile thesis design work into a booklet, limiting students' ability to learn from each other across the years
 - Structure of architecture program is not rigorous enough compared to international peers
- *Landscape*
 - Unclear how ecology and technology courses are integrated into the first year landscape studio sequence
 - Landscape students' visualization and modeling skills are behind those of architecture students
- Enrolment
 - Recruitment strategies are still in their early stages
 - Applicant pools are not yet deep

The reviewers made the following recommendations:

- Objectives
 - Engage in further consideration of learning outcomes
 - Create a clearer vision for the ambitions of the Landscape program
- Curriculum and program delivery
 - *All programs*
 - Engage in curricular review, with attention the sequence of required courses and synergies between courses
 - Study the impact of the growing advancement placement cohort on the programs
 - Consider adding sociological contexts, urban geography, and urban economics and process to the core sequence of all three programs
 - Better position Superstudio in the sequence of study
 - *Urban Design*
 - Work to ensure program viability
 - *Architecture*

- Add supporting disciplines to the first year architecture outcomes to better support studio goals
- Broaden the knowledge base that students have before they take Comprehensive building studio
- Reconsider the current practice of having Options Studio tutors become thesis supervisors
- *Landscape*
 - Develop case studies in first year landscape design to correspond with landscape history offerings
- Enrolment
 - Work to expand applicant pools, develop a recruitment strategy, and retain exceptional students who are admitted
 - Track admissions statistics for advanced placement students
- Student funding
 - Leverage Daniels scholarship to raise the Faculty's profile

3 Faculty/Research

The reviewers observed the following strengths:

- Overall quality
 - Faculty are highly dedicated and committed to teaching
 - Practitioners hold an international reputation as the leading thinkers in innovative professional practice in Canada
- Research
 - Recently appointed hires with a humanities orientation are well positioned to make an impact on their fields
 - Recent hires are publishing in significant scholarly venues
 - Research conducted in technology and applied sciences has been the most effective in securing external funding and partnerships
 - Strong innovative practice research despite economic constraints of Canadian market
- Faculty
 - Complement plan is on track with the increase in undergraduate enrolments and planned steady states for the graduate programs

The reviewers identified the following areas of concern:

- Research
 - Research in the Faculty has yet to achieve its full potential
 - Technology research is not apace with global comparators
 - Limited number of faculty with clearly established research agendas
- Faculty
 - Complement continues to be stretched
 - Faculty being over-utilized in developing core programs

- Difficulty in finding faculty to fill academic leadership roles due to full teaching loads

The reviewers made the following recommendations:

- Overall quality
 - Raise the Faculty's research profile
- Research
 - Give more attention to securing external funding and partnerships
 - Develop a strategic research plan that benefits from the University's Strategic Research Plan
- Faculty
 - Provide support to recent hires so that they can develop their full potential, especially in research
 - Engage new faculty in articulating and implementing the vision for the Faculty
 - Maintain a strategy for recruiting and retaining faculty in professional practice

4 Administration

The reviewers observed the following strengths:

- Relationships
 - EDU structure creates opportunities for engagement across the University
 - Recent coordination with Visual Studies is evidence of interdisciplinary academic programming
 - New building will enhance relationships and visibility
- Organizational and financial structure
 - Faculty has undergone tremendous change in the past five years since the appointment of the Dean and the adoption of the new budget model
 - Positive recent hires in advancement, recruitment, operations, and finances
 - Effective reorganization of the Dean's Office
 - Active engagement in revenue generation via advancement and recruitment efforts
 - Significant recent gifts in support of student aid and new building
- Planning / Vision
 - Faculty is in the midst of reconceptualising its internal structure, external linkages, and wider impact
 - Strong leadership has brought collective commitment to vision for the Faculty
 - Good ambition to create a Ph.D. program
 - Space and infrastructure improvements and plans are positive for the Faculty and the work of its students, faculty, and alumni
 - Draft strategic plan accurately reflects the collective vision for the Faculty and connects with the University's Strategic Plan
- Department/unit/programs relative to the best in Canada/North America and internationally

- Significant international profile, which aids the Faculty in recruiting excellent new faculty
- Current strategies to raise Faculty profile are appropriate

The reviewers identified the following areas of concern:

- Organizational and financial structure
 - Decision-making processes and organizational structure are not widely understood by the faculty
- Planning / Vision
 - Ph.D. slow in development; appears to be some internal disagreement about the correct direction for the program
- Department/unit/programs relative to the best in Canada/North America and internationally
 - Unclear how the Faculty has used its profile to identify and develop its research agenda and recruit students

The reviewers made the following recommendations:

- Relationships
 - Further develop University relationships in the areas of digital visualization, materials science, engineering, and sustainable cities
 - Seize opportunities to develop research partnerships (including with the professional and industrial sector), strengthen professional practice components of the accredited programs, and enhance relationships with professional organizations of architects and landscape architects
- Organizational and financial structure
 - Consolidate some of the Associate Deans' functions into a single, substantive appointment
 - Adequately support the new space and its infrastructure
- Planning / Vision
 - Raise the research profile and create a Ph.D. program so that the Faculty can continue to thrive
 - Narrow the focus of the proposed Ph.D. towards more traditional scope
 - Design Ph.D. based on current faculty strengths

ADMINISTRATIVE RESPONSE – Appended

ADMINISTRATIVE RESPONSE: EXTERNAL REVIEWERS' REPORT
John H. Daniels Faculty of Architecture, Landscape, and Design
University of Toronto

FINAL, March 2014

We appreciate the time, thinking, and insights that the visiting external team brought to the review process and their report on the Daniels Faculty. As acknowledged in the report, the Daniels Faculty has undertaken substantial growth in the depth and breadth of its programs, including adding undergraduate teaching, making substantial reforms to its exiting professional graduate programs and recently absorbing UofT's programs in Visual Studies. The Faculty has also embarked on an extensive program of public outreach, the development of a stronger research agenda and research partnerships, and is pursuing a major expansion of its facilities by building a new platform at One Spadina Crescent. Only a few years into these changes, the report acknowledges that the Faculty should still be very much understood as a work in progress.

The external reviewers endorsed the Daniels Faculty's "vision of an integrated interdisciplinary faculty and student body" as "bold", but identified some specific difficulties in the delivery of this vision. Their concerns were mainly with aspects of the Faculty's professional masters curricula, its research agenda, and in its planned doctoral program. There were also important questions about how leadership could be better spread across the faculty.

Many of the questions posed by the review and external report's findings are relevant and warrant response and action from the Faculty. In our response, we want to emphasize the context in which our Faculty and programs must be understood. These are: 1) the University of Toronto's policies and organizational model, 2) the Canadian field of professional design programs, and pool of candidates, and 3) (the nature of) stand-alone professional graduate programs in Architecture and Landscape Architecture combined with 4) (non-professional) Bachelor of Arts in Architectural Studies programs.

We have organized our response under of series of themes highlighted by the external evaluators report.

Academic Planning and Development

The external report notes that the current draft of the Academic Plan "appears to accurately reflect the collective vision for where the Faculty is headed" and "is widely shared in principle and [...] maps well onto the University's Strategic Plan".

The review and consultation process for the Faculty's Academic Plan is currently underway, as is an initiative to further expand and support our research initiatives through a Strategic Research Plan and the installment of a research officer.

We are currently undergoing a period of consultation regarding the plan with faculty, students, alumni, professional bodies, and cognate faculties within the University of Toronto. In addition to this, we have been conducting breakout sessions with smaller groups of faculty members around key issues like thesis, the core curriculum, integration of the technology sequence, recruitment, etc.

We are concurrently developing a strategic research plan for the Faculty, which includes expanded support for the research activities of our faculty members. This includes increasing our collaboration with cognate faculties and an international network of academic, non-profit, community, government and industry partners; and improving upon our existing strengths in urban metrics, urban sustainability, the visualization of information and built environments, and computation-driven fabrication. An Associate Dean of Research, appointed in 2011 has been working with the University Research Office and assisting faculty with the identification of appropriate grants and opportunities for sponsored research with a focus upon younger pre-tenured faculty to increase their access to grants as they move toward promotion and tenure. The installment of a research officer will further support new research initiatives at the Faculty.

Leadership and Administration

The report highlighted the importance of deepening faculty participation in leadership roles and the need for mentorship of new faculty, and we believe these are both essential issues that must be addressed now and in the coming years. The report acknowledges the strength of the Dean's vision, and the great extent to which this vision was shared by the faculty, and a newly invigorated, and expanded staff.

In recognition of the fact that the substantial growth of the Faculty in recent years has placed new strains upon our staff in areas including the mentorship of our new faculty and the redefinition of leadership positions, we are currently reviewing our organizational structure with the aid of the Vice President for Human Resources.

Several changes have recently occurred that may not have been in place long enough for the external committee to see or evaluate, or for the faculty and staff to be able to measure. In September 2013, the position of Assistant Dean, Academic Programs and Outreach was established, and an individual was hired to work with faculty and staff to do academic planning, engage in ongoing program development, monitoring, and progress, and to forge new external relationships.

Change in the administration has been in-progress for three years. The Student Services, IT, and Dean's staff have been restructured. Of the 15 academic staff that were serving 5 years ago, after the last external review, only 4 had college or university credentials. Of those 15 staff, only five of the highest performing staff remain today, and each have been promoted in areas such Finance, IT, and Advancement. The 20 staff today (more are needed and planned) are well-educated, highly motivated, and focused on working collaboratively, with those in key leadership positions possessing masters degrees in relevant areas (MBA for CAO, M.Ed. for Registrar, etc.).

The report was correct in identifying that there have been challenges in filling key leadership positions, particularly at the level of Associate Deans and Program Directors. The core, full-time faculty is young, relatively small, and focused on their research and teaching. The four or five faculty that have been at the faculty for more than 10 years all served in leadership roles prior to the recent changes, and some had to be recruited for a second, more recent tour of duty. Now, with a few faculty newly promoted with tenure, and one or two senior hires, we are beginning to cultivate a new generation of leadership.

Pending the completion and recommendations of our review of the Faculty's administrative structure and current functions in collaboration with the Vice President for Human Resources, we foresee making any recommended changes to the organization of the Faculty.

Relative Size and Balance of Professional Programs

The external report expressed the view that the Faculty's intra-disciplinary vision is being challenged by the imbalance between the size of the urban design, landscape architecture, and architecture programs.

The size of each of our graduate programs, and the relative proportion of one to the next, is calibrated to the size of the field, the pool of prospective students, and the possibility of placement after study. All these are measured and balanced with the Faculty's concept of what constitutes a critical mass of students in each program. The relative size of our programs is similar to what is found at many peer schools of design. Any perceived imbalance is actually a reflection of the corresponding demand for each of our degree programs and opportunities for graduates in these respective fields.

The proportion of graduate enrollment at DFALD, and that of our peers, is typically in the following range: 70-75% Master of Architecture, 20% Master of Landscape Architecture, and 5-10% Urban Design. Schools with this mix of programs and these ratios include University of Pennsylvania's Design School, University of California at Berkeley's College of Environmental Design, University of British Columbia's School of Architecture and Landscape Architecture, and Harvard's Graduate School of Design.

Strength of Application Pool

The external review team suggested that DFALD should work to expand and strengthen our applicant pools by developing a recruitment strategy and redoubling our efforts to retain exceptional students who are admitted.

The arc of performance of our applications and yield is, over time, strong. The applicant pool to our combined professional graduate programs has nearly tripled in the past decade, more than doubling since the last external review, and has increased 27% in just the past year.

As documented in figures provided to the external evaluators, the pool of applicants for the Faculty's combined professional graduate programs have almost tripled over the past 10 years, from a time when our graduate programs were relatively new. Growth during the period since the last external review in 2008 has been particularly strong, with applications between 2008 and now doubling, with only moderate growth in the size of the student cohort. Note that combined applications to our professional graduate programs for 2014-2015 have increased 27% in just the past year (this information was attained just after the external review). With regard to yields, our largest program, the Master of Architecture, consistently draws 60-75% yield from our accepted pool with more than half of the top 20% ranked-candidates.

The external report may have been using more common pools for undergraduate-to-grad 4+2 professional programs (i.e. as at U. Waterloo) as a point of reference, wherein there are always larger numbers of applicants from high schools. Even in our non-professional, newly re-established Bachelor of Arts, Architectural Studies program there are larger numbers of applicants than for our graduate programs, with roughly 1500 applications for 175 potential spots this year. Alternatively, pool/enrollment comparisons may be to application numbers at long-standing elite, private programs in the US. Each year, Harvard, Princeton, Yale, Columbia, MIT, U-Penn and U-Michigan (plus a few others) compete for roughly the same 5-800 candidates applying to Masters Programs in Architecture. Given the competition, a majority of these programs will have yields on offers that do not exceed 50%.

Our estimates are that we are coming close to maximizing our position in the Canadian field for potential 1st degree professional degrees. Last year there were 396 applicants to our Master in Architecture Program, and we met our intended yield of approximately 80 students. This year we have 466 applicants and the intended yield will remain the same. These numbers compare well to all the premier programs in the United States, and exceed our closest Canadian competition (UBC's SALA.).

By all accounts, we have a very strong arc of admissions performance. Our plan is to hold the numbers of 1st degree professional graduate students constant over the next 3-5 years, and continue to increase, where possible, the pool of Canadian applicants, but to concentrate on leveraging our international reputation to draw more students from abroad. Any further growth to our numbers will occur only in the anticipated expansion of the post-professional degree offerings, which will capitalize upon the expertise of our faculty, enhance their research agendas, and potentially feed into our anticipated PhD program. The addition of these post-professional offerings will attract high quality candidates interested in expanding their vitae with additional coursework in advanced visualization, computation and fabrication, urban sustainability, and design and health. In addition to contributing to the professions the addition of these areas of study will allow for the possibility of specialization within the first professional degree programs, which we anticipate will attract a higher quality pool of applicants overall.

Despite the fact that our applicant pool has been steadily increasing, we concur that the growth of our Faculty in the past several years warrants a new recruitment strategy. Plans for the rollout of this strategy are underway and include increased international recruitment, an anticipated new website, enhanced alumni engagement, a more robust presence at university

fairs and other opportunities for engaging prospective students, and ongoing reforms to how we attract top candidates.

Urban Design Program

The external report states that the Faculty has not addressed some of the concerns raised by the 2008 external review about the size and strength of the Urban Design Program.

The challenges faced by our Urban Design program reflect a generally shrinking applicant pool to similar programs throughout North America. We are addressing these issues in an ongoing manner that includes the potential redefinition of the Urban Design program relative to other anticipated post-professional programs and the PhD.

Our Urban Design program presents a distinct set of challenges that must be understood in the context of other programs of its kind. The Urban Design program offers an advanced post-professional Masters degree, meaning it requires applicants to possess a prior professional degree in Architecture or Landscape Architecture. This makes the potential pool of applicants limited from the outset.

Nevertheless, there have been substantial changes to DFALD's Urban Design program since issues were identified in the 2008 external review. As outlined in the Self-Study, an ad hoc committee report made recommendations in 2011 (many of which were implemented by 2013), including a reevaluation of DFALD's Urban Design Program relationships to the Planning Department, Urban Design Program, and a renewed commitment to the study of Toronto from a morphological standpoint as a way of regaining the distinct identity of the program. The Urban Design program has also undertaken substantial curricular reforms including the introduction of the Superstudio in the first term of the curriculum, a new, focused core urban design studio in the second term, and more discipline-specific instruction in all of the required technical courses.

Challenges remain for the Urban Design Program. In its initial years, in the early 2000's, the Urban Design program drew students locally and Canada-wide based on a backlog of demand from young professionals (it is still the only UD program in a design school in Canada.) Several changes in the field since that time have affected both demand and enrollment. Urban design degrees were once commonly sought by individuals with professional Bachelor of Architecture degrees as a way to study at an advanced level and achieve a master's degree. Over the past decade Professional bachelor degrees in Architecture and Landscape Architecture have been phased out, (a few remain in the US, none in Canada), and with these a substantial pool of North American students for UD programs has disappeared. Students with Professional Master's degrees may now pursue Doctoral studies within many existing, and newly established programs.

The combined effect of exhausting local demand and the changing degree stream into UD programs contributed to the application pool at DFALD's UD program to dropping to 18 in 2008 (the year of the last external review). Interest in DFALD's UD program and demand for enrollment, almost all international, has been increasing almost every year since. This

year and last year the pool was 57 students (3 times the number in 2008). The UD Program Director and Faculty Registrar are now also recruiting internationally for this program.

More substantial and structural changes to the Urban Design program are being actively considered, including options outlined in a 2011 ad hoc report. One option is to merge the program with other small post-professional degree programs in Architecture and Landscape Architecture, and shortening its length in line with these other programs (1.5 years, as opposed to 2 years). Another option being considered is removing the prerequisite for a professional degree to enter the Urban Design program, allowing individuals with a range of planning and design and other appropriate backgrounds to pursue a Master of Urban Design. An additional option, discussed soon after the 2008 external review is to allow Graduate Students in Architecture and Landscape Architecture to gain an advanced degree in Urban Design while at the school. This is how most Urban Design programs maintain a critical mass of enrollment at peer Faculties, including the University of Pennsylvania and UC Berkeley. Any of these options would require various levels of review and approval through governance. Further reform, and action on our Urban Design program will be undertaken as part of a planning other post-professional programs (for example, in Architecture, Design, and Health), and in relation to the roll-out of the anticipated doctoral program. .

Professional Graduate Curricula

The external report identified a lack of “rigor” in some aspects of the professional curricula, and questioned areas of performance (including the first-year core in Architecture, the timing and placement of Superstudio, and reforms to the thesis process) that were found to be exemplary in recent external professional accreditation reviews.

We believe that the findings of the external review committee regarding the professional degree programs sometimes misunderstood the overall structure and organization of our professional curricula and their pedagogical aims

Many of the issues raised by the external review committee, including the proper timing and exposure of students to allied disciplines (architecture to landscape, landscape to urban design, etc.), are the subject of lively debate among design pedagogues across North America and internationally. We have reviewed and are focusing on these issues, and the approach we are taking is deliberate, and follows from a great deal of study and consultation among Daniels faculty and students.

As described in both the self-study and during the external review visit, our 1st degree professional curricula in both Architecture and Landscape Architecture are built on the concept of a 2 year core, involving two, one-year foundation cycles with the final 3 (or 2 in landscape) semesters devoted to more specialized study. This structure will allow further planned specialization in the upper years as the curriculum evolves. This structure is also relatively common among the 3 year graduate curricula at peer Canadian and international programs.

A concern was raised both about the apparent disconnect between the first and second-

semester studios in the M.Arch program and representational skills in the MLA program. The MLA program, first-year studios are closely paired with visual communications and move through a series of iterative exercises from two-dimensional to three-dimensional representation and design. In the M.Arch program, the first-year studio is perceived as foundational, introducing the methods and sensibilities of the disciplines through a series of exercises with an emphasis upon the fundamental relationships between structure and geometry at a basic, conceptual level. This deliberately narrow focus is then expanded in the second semester with site-driven and environment-based criteria that are paired with non-studio courses to introduce a synthetic way of thinking about design that is then repeated in the fourth-semester Comprehensive Studio.

The report's specific recommendation that the Superstudio, which shares a platform across all three professional masters programs, should be moved from the 3rd to the 5th semester, is counter to the structural idea of a two-year core, with a 1 or 1.5 years period of specialization that is the key pedagogical organization of our professional programs. Such a change would also either eliminate our advanced, Faculty-wide option studios in the 5th semester, or displace them to the 3rd semester, when students would be ill-prepared to study with the roster of visitors that offer these studio courses.

Following a sequence of foundational studios within their own disciplines, Superstudio engages students in a complex set of urban projects in Toronto through an interdisciplinary dialogue that captures their shared knowledge rather than leading them further into a more parochial definition of their respective practices. The success of this model is evident in third-year option studios, which consistently feature a mix of students from all three programs. The switch proposed by the external review committee also takes an ideological stance on the timing and placement of interdisciplinary engagement that our Faculty does not agree with. We are very careful to distinguish between logistical problems of delivery, and pedagogical philosophy / goals.

Concerns were raised in the external review committee report about the integration of the relatively large influx of advanced placement students in both the Architecture and Landscape Architecture programs. It is true that our yield in both programs has been very high. This is a testament to the strength of this application pool in Canada and growing desirability of our programs in Architecture and Landscape Architecture. We are closely monitoring this situation as we evaluate our current applicant pool for 2014-2015.

The first-year core in our professional masters prepares our students well for the integration of students with advanced standing and the standardization of deliverables across Superstudio ensures a leveled playing field within and between the degree programs. We also see the influx of new students as an advantage in the second-year. In architecture, we have made the first year class smaller to make room for an influx of AP students in the 2nd year. This improves the quality of the pool in the first year, and our ability to focus on fundamentals with the 1st year cohort. The quality of instruction remains high across the entire core, as the size of the individual sections (i.e. student-teacher ratio) of second year studios is identical to the first-year. Moreover, while we concur with the external committees recommendation to find ways to further strengthen core teaching to address issues of sociological context, urban geography, and urban economics, the introduction of the

Superstudio has been key to integrating these issues across all three professional programs. Most importantly, Superstudio's large-format platform conducted across all three professional disciplines instills a sense of competitiveness both between the three design programs and between the AP and existing students that elevates the work and learning outcomes overall. We are aware they may be some student discomfort with being immersed in a more plural, competitive environment, and are working to address this, but we have also seen successful learning outcomes from introducing this change in the past two years. We have been having ongoing discussions with GALDSU (Graduate Architecture Landscape and Design Student Union) about how the spirit of the cohort can be maintained even with a significant influx of students in the second year.

The report also argues for more integration of technological course content into the early years of the professional architecture curriculum. We agree with this in general, and are currently refining the curriculum in this direction with revisions to the structure and pedagogical aims of the Visual Communications courses in the first two semesters and an earlier introduction of structures in the core curriculum. Nevertheless, technologies are introduced in our first year core, and in architecture these are reiterated in the second year in our comprehensive studio, wherein a great deal of technological integration has consistently been achieved.

The report also raises questions about reforms to our M.Arch. thesis, including concerns about a limited advising model, based on the perception that there are not enough faculty members involved in thesis. We think there has been a misunderstanding around the reform of the architecture thesis. First, there are nine core faculty teaching in the thesis sequence, more than two-thirds of our core architecture faculty. Second, through the thesis preparation class, regularly scheduled formal juries, and the final thesis review, students get advice, and have their work evaluated by several other faculty members (typically more than 8) and outside experts during the course of the thesis process.

The reform of the thesis process is in response to both an extended faculty deliberation on the M.Arch thesis, and the explicit recommendations of the 2008 external review report, which included the following:

"We would suggest that the faculty consider alternatives to individual theses, which may not be the best educational experience for all students, and the best use of faculty resources. These might include, as examples, a second or terminal comprehensive studio, or joint research projects or research studios where groups of students collaborate with faculty in directed research projects. Another virtue of such moves would be supporting faculty research interests, which now seem to fall by the wayside in the crush of responding to student needs."

We have followed these recommendations, and, now in the third year of staging these reforms, the learning outcomes, and high quality of work are seen positively by a majority of students and faculty, and were positively reviewed during our professional accreditation reviews.

Recent Professional Accreditation Outcomes for the Graduate Curricula

Aspects of the External Report must be compared to the findings from recent professional accreditation reviews at DFALD, which allowed for a more comprehensive of the professional curricula.

DFALD was fortunate in receiving the full six-year term of accreditation in both our professional Master's of Architecture and Landscape Architecture programs in 2013. Our programs were found to meet an overwhelming majority of the performance criteria established by these (coordinated North American) accrediting bodies.

In 2012-13, just before the self-study and external review process, the Professional Master Programs in Architecture and Landscape Architecture were reviewed for accreditation by the Canadian Architectural Certification Board (CACB), and the Canadian Society of Landscape Architects in (CSLA). These accreditations involved preparing detailed reports and hosting multi-day team visits, in which student and faculty work was evaluated in detail, according to more than 35 industry mandated compliance standards and performance criteria. These accrediting reports and visits are the primary way that curricula and learning outcomes in our professional programs are documented and evaluated.

These accreditation processes are very rigorous; for example, the team visit for the professional Master of Architecture program involves having seven different professionals and faculty from other accredited programs review written, graphic and 3-D material representing strong and weak work from every required course in our professional programs.

We understand the self-study and external review process to be different in purpose and nature to professional accreditation process, in that the external reviews organized for the purpose of University of Toronto's Quality Assurance Process (UTQAP) have a broad mandate to look at all aspects of the faculty's performance and plans.

The external report raised a question about the rigor of the programs with regard to grading criteria, and systems of evaluation. These were reviewed as part of our professional accreditations in 2013. Both our M.Arch and MLA programs met the majority of the learning outcomes mandated by the accreditation process. More generally, the combination of the jury process in studio (in which core faculty members and external visitors regularly evaluate student work throughout the term) and joint grading sessions ensures the overall quality of the work. While we do, as required, distribute and collect course evaluations for every course conducted within the Faculty, we are determined to improve systems of evaluation, and student feedback. Our recently established Student Services team is working to determine which metrics can help us best evaluate the success of our ongoing curricular reforms and the realization of our learning outcomes.

We want to stress that the detailed accreditation review found that the faculty had met key performance criteria in the few areas identified as potential problems in the external report. For example, few shortcomings with regard to integration of technology and design were

cited in the MLA accreditation. The M.Arch accreditation identified one deficiency in our capacity to integrate sustainable technologies.

For context, it should be noted that our 4th semester Comprehensive Studio in architecture is one of the only architecture programs (out of eight) in Canada to have passed the CACB comprehensive design criteria in recent accreditation reviews, and has been lauded by our peers as a model of integration. The CACB's accreditation criteria requires unequivocal evidence that students in our M.Arch Comprehensive Studio "produce well-developed architecture projects that include sophisticated structural or envelope systems" and we fully met this standard.

Research and Faculty Development

The external report found that:

"...a critical component of the new vision for DFALD, that requires further conceptualization and strategic development, is the development of a Faculty research strategy. This will support the Faculty's research ambitions, enabling research, advancing it, increasing its profile, supporting research-oriented graduate degrees and ultimately a PhD program, and nurturing the excellent faculty already recruited."

The Daniels Faculty's combination of research and creative practice accomplishments has few rivals among design schools in Canada and is competitive with top-ranked peers in North America. Our recent hires are a testament to our commitment to continuing to renew and expand this aspect of our Faculty's strength.

We agree with the external report's finding that a stronger, shared research strategy at DFALD is needed, and that while our record in research with a humanities orientation is strong, more must be done to ensure that more technologically oriented research at the Faculty can keep pace with global comparators. To this end we have hired five new tenure stream faculty with PhD's in the past 3 years (adding to four existing) to build strength in research and prepare for the PhD program. With, for example, new appointments such as Stephen Verderber, an expert in health, design and cities, we are exploring new areas of research and teaching, and forging relationships with industry and cognate faculties at UofT, including the Dalla Lana School of Public Health. Other new hires, such as Brady Peters and Benjamin Dillenburger, are building research strength in digital, fabrication-based technologies.

We agree that we need to find more ways to support new hires in developing their research agendas. In July 2014, we will be appointing a new Associate Dean, Research. We are also currently searching for a research officer, a staff position the Faculty has never had the benefit of before. Yet, we want to reiterate the report's broader findings on the faculty's extensive and internationally recognized research and creative practice accomplishments. Among the tenure stream landscape faculty: Professors Danahy, Wolff, North, Margolis, and Farhat (that is, 5 out of 6 full-time faculty) have well-established research agendas that have received peer reviewed awards, grant support and have been published, in some cases

extensively. Among the tenure stream Architecture faculty the number and range is also strong: Professors el-Khoury, Kesik, Levit, White, Chaouni, and the recently hired Professor Verderber all have established research agendas that have similarly received extensive peer-reviewed accolades and support and are widely published. Professors Shim, Williamson, and other long-serving adjuncts such as Sampson, have substantial, peer-reviewed records in creative practice. In this combination of research and practice-based design faculty, we have few rivals in Canada, and can compete with top ranked peers in North America.

Our commitment to maintaining and renewing our engagement of high standing practitioners was documented in the Self-Study. There have been six recent hires within the past 2 years of non-tenure stream, but ongoing lecturer or CLTA appointments at DFALD. These new faculty members are very active in practice: Michael Piper (Arch/UD), Adrian Phiffer (Arch/UD), Jonathan Enns (Arch), Matthew Allen, Rodney Hoinkes (LA/UD), and Francesco Martire (LA and Arch).

In addition, we have a whole new generation of sessional teachers, and a vital schedule of visiting design studio instructors drawn from practice teaching in the studios (15 visitors in 2013-14), including the Frank Gehry International Chair, Josemaría de Churtichaga, who will be in residence for all of 2014. In our balance between engaging exemplary practitioner/teachers and nurturing full time scholars, or between having a strong core faculty, and a robust program of visitors, we have few peers in Canada, and place very well among schools of our kind at public universities in North America.

Proposed PhD in Architecture, Landscape and Design Studies

The external report raised concerns about the interdisciplinary approach of the anticipated PhD program (in development, titled PhD in Architecture, Landscape and Design Studies), noting that there was some disagreement among the standing faculty on the direction of the PhD, and suggesting that a more traditional approach aligned with faculty specializations would be more appropriate. The latter is in fact the direction of the PhD program envisioned by a broad-based Faculty committee beginning in 2011.

With a group of potential faculty advisors with expertise in a broad range of subject matter including but not limited to the history of technology, building systems, computation-driven fabrication, and urban sustainability, we anticipate producing PhD research within and between these subject areas. We will mount a unique program that addresses the requirements of a more traditional humanities-based PhD while also fostering research that is more closely aligned with the applied science model. All but one of our faculty with PhD's are trained as architects, and a majority have a scholarly, yet applied orientation to research, and support our proposed approach to the PhD.

Conclusion

The Daniels Faculty has embarked upon a period of transformation that includes:

- A reconceptualization and incorporation of undergraduate programs in Architectural and Visual Studies;*
- Continued innovation in the development and delivery of our graduate professional degree programs;*
- A renewal of our faculty compliment and administrative staff;*
- A planned PhD in Architecture, Landscape and Design Studies;*
- Fostering partnerships through outreach in cognate faculties, partner institutions, the professions, government, industry, and beyond;*
- The development of a new platform to serve our future at One Spadina Crescent.*

This unprecedented transformation at the Faculty is not without its challenges, and we are mindful of how to best manage change as we move forward. We appreciate the opportunity to respond to the observations of the external committee's report and will give priority to improving in the following areas in the next phases of the Faculty's evolution:

1 Year: We will finalize DFALD's Academic Plan to chart future direction and outline our common goals through consultations with faculty, students, and our broader community.

We will institute a Strategic Research Plan that will continue to foster the high caliber of research and creative practice of the Faculty by better supporting new (and existing) initiatives and establish a more robust mentoring system for new faculty members and their work.

We will continue to review our staff and administrative structure to ensure that the needs of our expanding Faculty are well met while cultivating a new generation of leadership within our faculty and staff who will implement the vision outlined by our Academic Plan.

2-3 Years: We will continue to implement and monitor the series of curricular reforms in our professional masters programs first recommended through a faculty wide ad hoc process in 2011, especially those that speak to the integration of technology to the core curriculum, balancing disciplinary and intra-disciplinary design instruction, and making the masters thesis more research intensive.

We will develop, monitor, and implement renewed Bachelor of Arts programs in Architectural Studies and Visual Studies, and take the PhD in Architecture, Landscape and Design Studies, under development, through to approval.

We will continue to develop and implement a broader Undergrad and Grad recruitment strategy to maintain our high quality of applicants, expand our pool of international applicants, and strengthen our ability to attract the top candidates in all of our undergrad and graduate programs.

We will establish a more formalized system of evaluation to monitor our ongoing curricular reforms and the quality and consistency of our learning outcomes and program delivery.

3-5 Years: We will leverage our new home at One Spadina Crescent to increase the visibility of the Faculty, celebrate the work of our faculty and students, and realize our vital role in the city of Toronto and beyond.

Review Summary

Program(s):	Bachelor of Pharmacy, B.Sc.Pharm. Doctor of Pharmacy, Pharm.D. Post-Baccalaureate PharmD Combined B.Sc.Pharm./ Post-Baccalaureate Pharm.D. Pharmaceutical Sciences, M.Sc., Ph.D.
Division/Unit:	Leslie Dan Faculty of Pharmacy (LDFFP)
Commissioning Officer:	Provost, University of Toronto
Reviewers (Name, Affiliation):	1. Dr. Bob Blouin, Vaughn and Nancy Bryson, Distinguished Professor and Dean of Pharmacy, UNC Eshelman School of Pharmacy, University of North Carolina at Chapel Hill 2. Dr. James P. Kehrer, Dean, Faculty of Pharmacy and Pharmaceutical Sciences, University of Alberta 3. Dr. David H. Sherman, Hans W. Vahlteich Professor of Medicinal Chemistry and Associate Dean for Research and Graduate Education, College of Pharmacy, University of Michigan
Date of review visit:	November 13 – 15, 2013

Previous Review

Date: May 5 and 6, 2008

Summary of Findings and Recommendations:

1. Undergraduate Programs (Bachelor of Pharmacy, B.Sc.Pharm.; Pharmaceutical Chemistry Specialist, B.Sc., Doctor of Pharmacy, Pharm.D.)

The reviewers observed the following strengths:

- Well-planned and executed expansion of the full-time, second-entry B.Sc.Pharm. from 670 students to 904 students
- Proposal for new entry-level is Pharm.D. logical, well-designed and innovative

The reviewers identified the following areas of concern:

- Challenge of reorganizing the curriculum
- Uncertainty of transition to new degree
- Need to not underestimate resources required for new curriculum

The reviewers made the following recommendations:

- Be proactive in preparing to propose the Pharm.D. program
- Consider ways to expand opportunities for undergraduate professional students to engage in research

2. Graduate Programs (Pharmaceutical Sciences, M.Sc., Ph.D.)

The reviewers observed the following strengths:

- Improvements in graduate studies and doubled enrolment in PhD program

3. Faculty/Research

The reviewers observed the following strengths:

- Strong growth in research activities
- Strong recent hires

The reviewers identified the following areas of concern:

- Majority of faculty members seem to embrace an individual PI culture and are focused strongly on federal sources of funding

The reviewers made the following recommendations:

- Pharmacy Practice Division must grow and embrace both the scholarship and teaching missions
- Adopt greater multidisciplinary philosophy to take full advantage for further expansion of research
- Must invest in practice faculty as the curriculum evolves and the Pharm.D. program is implemented; resolve best way to hire Pharm.D. faculty

4. Administration

The reviewers observed the following strengths:

- Excellent senior administrative leadership
- Forwarding-thinking addition of Continuous Professional Development
- Commendable service and dedication from staff
- Very strong morale

The reviewers identified the following areas of concern:

- Need to consolidate organizational structure, communicate bi-directionally, and engage in planning at all levels

The reviewers made the following recommendations:

- Explore new revenue generating opportunities that are consistent with the Faculty mission
- Engage in faculty development to enhance faculty's teaching and learning facilitation skills

Last OCGS Review(s) 2009

Date(s):

Current Review: Documentation & Consultation

Documentation Provided to Reviewers:

- Terms of Reference
- Self-Study
- Towards 2030 Framework
- View from 2012
- Leslie Dan Faculty of Pharmacy Strategic Plan
- Report of the Previous External Review, 2008
- Leslie Dan Faculty of Pharmacy Faculty CVs

Consultation Process:

The reviewers met with the Vice-President and Provost Cheryl Regehr; Vice-Provost Academic Programs, Sioban Nelson; LDFP Interim Dean, Heather Boon, Deans of cognate university faculties; junior and senior faculty members; administrative staff; LDFP undergraduate and graduate students; alumni; LDFP Senior Academic Leadership Team; LDFP Decanal Search Committee; and members of the external community (hospital pharmacy Directors, hospital and community preceptors).

Current Review: Findings & Recommendations

The Faculty has excellent faculty members, students, facilities, and programs. The Faculty provides rigorous professional and graduate training programs, and is critically acknowledged as having the leading research program in pharmaceutical sciences in the country.

1 Undergraduate Program

Bachelor of Pharmacy, B.Sc.Pharm.

Doctor of Pharmacy, Pharm.D.

Combined B.Sc.Pharm./ Post-Baccalaureate Pharm.D.

The reviewers observed the following strengths:

- Objectives
 - Pharm.D. curriculum reflects the state of the discipline, and adheres to Canadian accreditation standards and the 2010 AFPC Outcomes
 - Planned Pharm.D./M.B.A. program will provide students with opportunities to expand expertise in business and management
- Admissions requirements
 - Appropriate to program outcomes and match pharmacy accreditation standards

- Adoption of new curriculum has led faculty to strengthen admissions process, including using the MMI technique to assess students' non-cognitive skills
- Curriculum and program delivery
 - Standard and appropriate structure and length for all programs
 - Commendable structure of new Pharm.D. program, incorporating biomedical and pharmaceutical sciences, excellent elective requirements, and broad and strong options for selectives and electives
 - Students happy with exposure to patient-centred problems and pharmacotherapy content matter early in the curriculum
- Assessment of learning
 - Assessment is appropriate to the learning outcomes
 - Pharm.D. completion rates are excellent (93-97%) and comparable to other pharmacy programs in Canada
- Quality indicators
 - Students happy with curricular changes and faculty responsiveness, including focus on small-group discussions in Pharm.D. program
 - Excellent quality of students admitted to the Pharm.D. program
- Support
 - Positive addition of Faculty Advisor position, mentorship and House programs over the past two years

The reviewers identified the following areas of concern:

- Admissions requirements
 - Admissions decisions favour GPA and PCAT scores
 - Some students have light course loads in their first terms because they have already met prerequisites
- Curriculum and program delivery
 - GPA required for progression is low
 - Maximum time to completion for Pharm.D. is long
 - Challenging rollout of Pharm.D. curriculum with respect to implementation time and funding
 - Certain aspects of the curriculum remain underdeveloped, particularly the experiential portion
 - Challenge of implementing the Discovery stream
- Quality indicators
 - PEBC pass rates are lower than some other Canadian schools
 - Some students expressed concern about internal competition for placements post-graduation
 - Significant decline in the Pharm.D. applicant pool over the past three years, while GPA has remained constant
- Students
 - Students expressed concern about the lack of technology used in instruction
- Faculty resources

- 50% of classes taught by sessional and clinical faculty

The reviewers made the following recommendations:

- Admissions requirements
 - Consider whether emphasis on GPA and PCAT scores are sufficient admissions criteria to ensure ongoing student quality
 - Assess appropriateness of anatomy and physiology as prerequisites
- Curriculum and program delivery
 - Continue to address challenges associated with implementation of Pharm.D. curriculum
 - Consider raising the minimum GPA progression requirement
 - Develop IT infrastructure to support the student learning experience
 - Shorten allowable time to completion for Pharm.D. program
- Program development
 - Continue to pursue combined program options
- Quality indicators
 - In working to improve PEBC scores, avoid “teaching to the test” if introducing capstone exams
- Enrolment
 - Increase recruitment efforts for the Pharm.D. program
- Student funding
 - Explore the need for student financial aid in the Pharm.D. program
- Faculty resources
 - Provide additional leadership for experiential education
 - Continue to increase the number of full-time faculty delivering the curriculum

2 Graduate Program

Pharmaceutical Sciences, M.Sc., Ph.D.

The reviewers observed the following strengths:

- Overall quality
 - Many areas of strength, including opportunities for funding and the quality of mentorship
- Curriculum and program delivery
 - Strong recent additions to the curriculum including increased emphasis on verbal presentation skills and internship placements
 - Robust service learning, experimental learning, and professional student research programs
 - Ample international opportunities for students
- Assessment of learning
 - Methods are comprehensive and appropriate
- Quality indicators
 - Average incoming GPA indicates high quality

- Students
 - Extremely impressive, articulate, and motivated students
 - Excellent diversity of student professional and personal development opportunities
 - Student surveys are very positive

The reviewers identified the following areas of concern:

- Admissions requirements
 - 50% of qualified applicants enrol
 - Students must secure a supervisor prior to enrolment
- Curriculum and program delivery
 - Students take no or few courses within the pharmaceutical sciences department
 - Very few students engaging in service learning, experimental learning, and professional student research opportunities
 - Extent of faculty and student involvement in international opportunities is unclear
- Assessment of learning
 - Lack of systematic program evaluation process; unclear how assessment data are being used to improve curriculum and student performance
- Quality indicators
 - Decreasing number of traditional jobs available to graduates; concern about career support reflected in student survey
 - Concerns about mean of time-to-completion and its variability
- Students
 - Tend to identify with a laboratory mentors or other researchers in lieu of the Faculty of Pharmacy or a particular graduate program
- Student funding
 - Concern that modest base-level graduate support may result in increased time-to-degree

The reviewers made the following recommendations:

- Admissions requirements
 - Consider moving to a model of first year rotations, to give both students and faculty members a chance to determine mutual fit and to allow junior faculty to better recruit students to their labs
- Curriculum and program delivery
 - Develop an effective plan to incorporate technology-assisted learning initiatives
 - Consider adopting a more focused approach to international partnerships
 - Expand professional development opportunities
- Assessment of learning
 - Continue to support the efforts of the Program Evaluation and Accreditation committee in developing systematic assessment methods
- Quality indicators
 - Encourage entrepreneurship as students plan future careers
 - Make efforts to decrease the mean time-to-completion

- Students
 - Create a stronger affiliation with the Faculty leading to enhanced alumni relationships and advancement

3 Faculty/Research

The reviewers observed the following strengths:

- Overall quality
 - Leading research program in pharmaceutical sciences in Canada
 - Considerable research success; faculty should continue to make such achievements into the future
- Research
 - Diverse areas of research, with many opportunities available to undergraduate and graduate students
 - Positive academic research partnerships, particularly in the areas of drug and marker discovery, nanomedicine and drug delivery, and drug metabolism and disposition
 - Integrally involved in three cross-disciplinary research centres:
 - Center for Pharmaceutical Oncology is in advanced planning stages and has the potential to foster significant innovation and intellectual property for the Faculty
 - Well-funded, multi-disciplinary Centre for Evaluation of Health Technologies
 - Appropriate new focus to create Centre for Pharmacy Management and Innovation, rather than fill an endowed chair in this area
- Faculty
 - Outstanding complement with many noteworthy achievements
 - Faculty development efforts are laudable, well-led, and solid
 - Successful recent efforts in recruiting more pharmacists to conduct research
 - Recent expansion of the faculty complement
 - Positive addition of clinical scientists, who have done well in peer reviewed research and are making great progress as scholars, educators, and clinicians

The reviewers identified the following areas of concern:

- Faculty
 - Raised questions regarding the Pharmacy Practice Division, including its complement and its involvement in graduate education
 - Lack of recent retirements has resulted in limited number of faculty at the rank of assistant professor
 - Pharmacy Management Chair position has been vacant since its creation in 2006
 - Concern about the number of faculty on sabbatical and the impact on the new curriculum

The reviewers made the following recommendations:

- Research

- Associate Dean for Research needs to manage research pilot projects, provide grant bridge funding, and have an annual budget to encourage new research initiatives
- Associate Dean for Research needs full authority for management of research space, in collaboration with division chairs, with sign-off from Dean
- Faculty
 - Evaluate the Division of Pharmacy Practice
 - Explore retirement incentive plans through the University
 - Hire more tenure-stream faculty through converting funds currently used for part-time faculty
 - Fill the Pharmacy Management Chair position or use the funds for another tenure-track position
 - Re-examine the mechanism by which sabbatical requests are evaluated and approved
 - Create a critical mass in research areas, adopting a more strategic approach to hiring and developing collaborative research centres
 - Provide enhanced recognition of the success of clinical scientists, and fill approved clinical scientist positions in a timely manner

4 Administration

The reviewers observed the following strengths:

- Relationships
 - Fortunate position as a part of a strong and vibrant university with rich healthcare and pharmaceutical industry connections
 - Effective communication of the Faculty's quality of education, research, and engagement
 - Broad, strong relationships to other Faculties including many positive research partnerships
 - Commendable progress in relationships with HUPEC partners
 - Very good relationships with professional pharmacy organizations and the regulatory body in Ontario
 - Strong advisory board for advancement with an exceptional list of prospects
 - Solid international initiatives and partnerships with over 20 countries
 - Positive continuing professional development activities providing revenue for the Faculty
 - Office of Advancement is well-positioned to expand its operations
- Organizational and financial structure (including governance)
 - Beautiful multipurpose facility with excellent space and research equipment
- Planning / Vision
 - Well-thought out strategic plan with appropriate priorities and goals; consistent with the University's mission
 - Excellent leadership of interim dean through period of significant transition

The reviewers identified the following areas of concern:

- Relationships
 - Relationships with University affiliated teaching hospitals being tested by new experiential education portion of Pharm.D. curriculum
 - Research funding from the government is expected to become increasingly more competitive
- Organizational and financial structure
 - Issues with administrative structure have not been addressed since previous review
 - Concern about ratio of support to academic staff
 - High number of interim leadership appointments contributing to lowered morale
 - Budget challenges related to experiential education and the building
 - Large number of standing committees pose an administrative burden
 - Faculty and collaborative partners expressed concern about adequacy of facilities moving forward
- Planning / Vision
 - Challenges ahead relating to the economics of pharmacy, specifically generic drug pricing
 - Context of rapid change within pharmacy profession and academic discipline
 - Lack of common purpose and cohesion with the Faculty
- Department/unit/programs relative to the best in Canada/North America and internationally
 - Few international comparators provided by Faculty, and QS rankings are not ideal indicators

The reviewers made the following recommendations:

- Relationships (collaboration)
 - Encourage Dean to establish external advisory board, separate from advancement activities, to raise the profile of the Faculty locally and nationally
 - Be more proactive in public-private partnerships
 - Continue to develop relationships and improve communication with HUPEC partners to support the new experiential education curriculum
- Organizational and financial structure
 - Evaluate and modify current personnel, leadership, and infrastructure systems:
 - Resolve situation with interim dean and numerous interim leadership appointments, and engage senior faculty in determining the best leadership structure, including the position of Vice Dean and combining the roles of Associate Dean for Academic and Associate Dean for Professional Practice
 - Create discrete job responsibilities for members of the senior leadership team and communicate those widely
 - Analyze the needs of administrative and support staff and conduct an overall staff assessment
 - Take steps to provide the Faculty with more sophisticated information technology resources, including smart classrooms and personnel
 - Conduct a space audit and consider a new approach to space management

- Implement a more transparent business model
- Make further efforts to give the Divisions more autonomy and authority
- Re-evaluate the current committee structure
- Planning / Vision
 - Engage all faculty in the implementation of the strategic plan
 - Link the strategic plan to the budget and the development plan
 - Prioritize and document progress in all areas of the strategic plan
 - Address future budget concerns, including resources to support the experiential education and funds to support the building and its mortgage

ADMINISTRATIVE RESPONSE – Appended



UNIVERSITY OF TORONTO
LESLIE DAN FACULTY OF PHARMACY

OFFICE OF THE DEAN

March 10, 2014

Professor Sioban Nelson
Vice-Provost, Academic Programs
University of Toronto
Simcoe Hall
Toronto, ON M5S 1A1

Dear Professor Nelson,

Re: Administrative response to the external review report for the Leslie Dan Faculty of Pharmacy.

Thank you for providing us with a summary of the external review report and for allowing us to respond to its findings. We appreciate this opportunity to reflect on our accomplishments, opportunities and future direction at the Faculty.

We are delighted that the report was positive and that the reviewers commended us on the quality of our faculty and students and on having a well thought out Academic Plan which they described as a “fine roadmap for excellence”. We take pride in the quality of our people and in their contributions to our accomplishments in teaching and research at the Faculty.

Our Academic Plan, articulated through the Faculty's **Strategy 2016 – Tomorrow · Today** document, has been instrumental in shaping our direction and achievements over the past three years and it remains the framework for our continued work over the next two years. It is reassuring to see that some of the areas noted by the reviewers are in fact goals that we ourselves have identified in our Academic Plan; particularly in the areas of communications, organization and management. We look forward to incorporating the review recommendations into our ongoing academic planning at the Faculty.

Below is our administrative response to the recommendations and comments raised by the reviewers as outlined in your letter of January 28, 2014.

1. Academic Plan and Progress toward Academic Priorities

- *The reviewers discussed the importance of developing a sense of cohesion and commonality, engaging all faculty in the execution of the Faculty's plan, purpose and evaluating progress.*

Fully engaged faculty and staff are paramount in our endeavors to create an inclusive culture at the Faculty. We specifically made a commitment in our strategic plan to “build the collaborative relationships needed to move the plan forward”.

Short-term action

Over the next six months, we will re-establish our strategic planning working groups and revive our progress tracking document. Our senior leadership group will initiate mechanisms to engage faculty and staff within their units to be more actively involved in executing the Faculty's plan and making recommendations on changes in direction. Starting this spring, and running through to early fall, we will schedule small-group mini retreats with faculty and staff that are focused on specific issues (e.g., graduate education; divisional goals; experiential education). All members of the senior leadership group will attend each other's mini retreats so that they become more informed of the initiatives underway in other areas of the Faculty. Our senior leadership group will be instrumental in promoting the positive tone needed to create a more cohesive and collaborative culture at the Faculty.

Medium-term action

In late fall 2014, we will hold a Faculty-wide retreat to showcase the outcomes of the mini retreats and to re-examine the course for the future. We expect a new Dean will be in place at that time and that this will be an ideal springboard for moving forward at the Faculty. The retreat will serve as a first step in developing a transition from our existing strategic plan into the new planning cycle which coincides with the appointment of a new Dean. Further, we will hold faculty and staff meetings more frequently and continue to engage and encourage people beyond the senior leadership group to present at these gatherings. We will review the effectiveness of our strategic planning monitoring document and make recommendations on how to best evaluate progress and engagement of all faculty and staff.

Long-term action

The Faculty will engage in a new strategic planning cycle that coincides with the appointment of a new Dean. With that, we expect to develop a more robust planning and evaluation mechanism to measure progress on our strategic initiatives and ensure we are able to seize new opportunities as they arise.

- *They recommended sustained attention to the structure and function of the Practice Division, including the management of relationships with clinical sites and engagement in Experiential Education.*

Short and medium-term actions

The structure and function of the Pharmacy Practice Division is a priority at the Faculty and we will be establishing a series of stakeholder meetings in the next 6-8 months for the purpose of conducting a Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis. Our intention is to review all the divisions at the Faculty in order to determine their purpose as well as to explore how they may bring greater visibility to their respective constituents. We expect that the SWOT analysis will be instrumental in helping us shape the ideal structure and function not only of the Pharmacy Practice Division but also our other divisions. We expect to have any revisions to our divisional structure in place within the next 18 months.

Managing the relationships with our clinical sites and engagement in Experiential Education remains a critical component to the success of our new curriculum. We have put in place a number of the initiatives identified in our strategic plan, the most notable of which is the establishment of the Hospital University Pharmacy Education Committee (HUPEC) in 2012. The HUPEC serves an advisory board to enhance the experiential component of the curriculum and foster communication and collaboration with our Toronto Academic Health Sciences Network

(TAHSN) institutions. We will continue to use the expertise and input of this committee to guide our PharmD program and maximize our relationships with clinical sites.

We will also assemble an advisory committee similar to HUPEC that will represent community practitioners. This advisory group will guide us in enhancing our experiential endeavors in community practice sites.

Long-term action

Through our ongoing collaboration with HUPEC and the new community site advisory group, we will transition from a just-in-time model of managing our clinical experiential rotations to one that runs in tandem with the needs of our clinical sites. We will have a mechanism in place that will benchmark the contributions our students make to the institution in which they are placed.

2. Curriculum and Program Delivery – Undergraduate programs

- *The reviewers encouraged re-examination of the PharmD admissions requirements, progression and curriculum in the interest of increased rigour and improved PEBC performance.*

The Pharmacy Examining Board of Canada (PEBC) is the national certification body for the pharmacy profession in Canada and is required for a practice license in Ontario. The PEBC examination focuses specifically on assessing students' readiness to practice and thus does not evaluate all components of our curriculum. Of the seven Canadian schools rated, the ranking for U of T has been decreasing relative to the other schools in terms of performance on this exam over the last four years. While differences in pass rates amongst the schools is minimal and the overall pass rate for our students remains very high, we would like our students to perform better in these exams.

Short-term action

Within the next six months, the Faculty will hold a retreat of the Admission Subcommittee of the Committee for Entry-to-Practice Professional Degree Programs (CEPPDP) to review and evaluate the admissions criteria, program pre-requisites, and the maximum time allowed to graduate. This committee will also conduct an environmental scan of the criteria of other faculties at U of T and of other Canadian pharmacy schools to help inform our process.

Medium-term action

At the time of this Administrative Response, we have not had any students graduating from our new PharmD curriculum. We will monitor our PEBC rankings that reflect the results of our first cohort graduating from the new curriculum to determine if there is any change. Our new curriculum is designed to provide enhanced clinical education and skills which should improve performance on the PEBC.

With respect to the admissions process, within the next 1-2 years the CEPPDP Committee will make recommendations to further align admissions, progression, and other relevant policies with the new curriculum.

Long-term action

The recommended changes, once approved by Faculty Council will be implemented in the next 3-5 years.

- *They recommended attention to the experiential component of the programs.*

Short-term action

In addition to the initiatives noted in section number 1 of this document, we are conducting a review of the current E*Value software system that is used for the matching and administration of rotations. A request for proposals is currently in progress to explore other software options that may deliver a more robust selection of user-friendly supports. In the meantime, we will maximize the capability of our current system so as not compromise the learning experience of our students.

In our efforts to build capacity and quality of our preceptor pool, we have developed a Preceptor Training Program; this is a collaboration between our Office of Experiential Education and our Continuous Professional Development Office. Training commenced in Summer 2013 in preparation for the first group of students going on rotation in May 2014. We will continue to provide regular training workshops in the short- and medium-term timeframe and will be providing additional training at a more advanced level.

We will also be working closely with our OEE administrative staff to provide them with professional development opportunities available through the Organizational Development office at U of T. The OEE staff is our frontline of communication with our students and preceptors and we value the benefits of making accessible to them any supports that assist them in this highly focused customer service role.

Section number 6 of this document outlines our initiatives with respect to conducting an organizational review. In this review, we expect to identify a structure that will maximize the efforts of the OEE. We also intend to review where the academic oversight of the OEE will reside.

Medium and long-term actions

We intend to implement strategies that foster a culture of customer service. Procurement of a new software program will make it easier for faculty and staff to manage the smooth and efficient operation of the OEE. We will put in place the training support necessary to take full advantage of the capabilities of the new software. Further, after our administrative and academic leadership review recommendations are implemented (see section 6), we will be able to put in place mechanisms to evaluate the effectiveness of the Office.

3. Curriculum and Program Delivery – Graduate programs

- *The reviewers suggested the development of a strategy to deepen the graduate recruitment pool, and to address the issue of integration of advanced standing students into the graduate program cohort.*

Goals in the Faculty strategic plan include the development of a marketing and communications plan, as well as a recruitment plan. Also, a Faculty-wide Recruitment and Admissions Committee was established within our new governance structure and will serve to support recruitment initiatives. We expect these endeavors, which will also include graduate student targeted strategies, will inform the internal and external community of the work being done at the Faculty.

Short-term action

The interim Associate Dean for Graduate Education met with a subgroup of the Faculty-wide Recruitment and Admissions Committee to discuss our current recruitment efforts and admissions data. This committee is working on strategies to enhance recruitment in all programs.

The interim Associate Dean for Graduate Education, along with the Assistant Dean Strategic Initiatives and the Manager of Marketing, will develop a short-term strategy to identify departmental offerings and promote our programs to potential graduate students.

In our efforts to promote graduate studies to our current students, we are identifying a portfolio of graduate courses that we intend to make available as electives to our PharmD students. We will also continue to run our summer research program as a means of attracting students to pursue graduate studies at the Faculty.

Medium-term action

We will establish a working group and commence development of a recruitment plan for the graduate department. It will include identification of three top target groups and our approach for recruiting students domestically and internationally. We will also engage an external advisor to assist us in the development of an identity package that will be used in our promotional endeavors.

We will also be implementing the first joint degree program (PharmD-MBA) in the planned Discovery Stream component of our PharmD curriculum which will provide interested students with opportunities for advanced standing in the MBA program. In the medium-term we will be exploring options for additional joint degree options.

Long-term action

We will develop an annual publication designed to promote current graduate students and alumni. It will become our key communications vehicle to showcase the graduate department and will also serve as a marketing vehicle for our philanthropic efforts through our Office of Advancement.

We expect to introduce additional joint degree program options for our PharmD students within the next five years. This may include advanced standing in the advanced clinical training programs we are planning (see section 4).

- *They recommended enhancing the sense of community for graduate students.*

Short-term action

After having received the external review report, the interim Dean and interim Associate Dean for Graduate Education organized a town hall meeting (February 14, 2014) to speak with graduate students and graduate faculty regarding the findings outlined in the report. In this meeting, students brought forward several ideas to enhance the sense of community within the department. It is our intent to continue having regular town hall meetings with our graduate students and faculty. We will also be holding a Graduate Department faculty retreat in fall 2014 which will focus on strategies to create a sense of community. This retreat will take place in advance of the Faculty-wide retreat.

Medium-term action

We will integrate the findings and results from the fall 2014 graduate retreat and develop an implementation plan. At the February 14th town hall, the students suggested the development of additional graduate courses, workshops and/or short certificate-based programs focused on topics such as business development and entrepreneurship that would potentially enhance their opportunity to secure employment in areas outside of academia. We expect to have specific topics identified for the first wave of new offerings within the next 18 months. The students also suggested creating at least one mandatory course that all graduate students (within all divisions of the department) are required to take. We anticipate being able to integrate this suggestion by September 2015.

Long-term action

We will incorporate new graduate courses, workshops and/or certificate short programs based on the outcome of our medium-term action planning.

- *They suggested the Faculty monitor time to completion and develop strategies to improve the competitiveness and success of students.*

The mean time to completion for students in the master's program is 2 years and 5.7 years for students in the doctoral program. The minimum time to completion for doctoral students is 3.7 years and the maximum time for a few doctoral students is 9 years.

Short-term action

The interim Associate Dean for Graduate Education has begun to identify and contact all students that are in years 6-9 of their doctoral studies so that we may better understand the issues that prevent them from progressing more quickly through the program. We are looking into the software that is being developed by the School of Graduate Studies and how it may assist in tracking students and their progress in their graduate programs. Once available, we intend to integrate this software into our program.

Medium and long-term actions

During the town hall meeting the graduate students were receptive to the idea of a series of workshops and seminars on topics such as business development, entrepreneurship, and drug development to enhance their competitiveness beyond the completion of their degrees. We will further discuss these ideas and outline a plan to move forward during the next town hall meeting and graduate retreat. These workshops will then be formalized and integrated into a menu of specialty topics that we intend will serve a multi-purpose; for example as an element of our recruitment strategy.

4. Program development

- *The reviewers recommended the Faculty work with hospital partners to develop advanced clinical training programs.*

A number of opportunities exist for developing advanced clinical training programs. One, which is already in development, is a program that will bridge the gap between the phased out Bachelor of Science in Pharmacy (BScPhm) degree and the new entry-to-practice Doctor of Pharmacy (PharmD) degree. An expanded scope of practice in the profession of Pharmacy along with the PharmD degree as an entry-to-practice degree in the Province has created significant demand for a bridging program. Another emerging opportunity to advance clinical

training is the creation of a Clinical Master's program. Finally, significant prospects exist for the expansion of our residency and fellowship programs as well as the opportunity for pharmacy specialty certification similar to the U.S. model.

Short-term action

We will complete the "major modifications" documentation and approval process for the transitioning of our Post-Baccalaureate PharmD program to a bridging program for those who wish to advance their BScPhm degree to a PharmD degree. We intend for this program to commence taking students in January 2015.

Medium-term action

In fall 2014, we will commence working with our partners to identify opportunities for advanced clinical training programs and the form that they may take (for example Clinical Master's, residencies, fellowships, continuing education, etc.). We will take the lead by hosting a meeting of key national stakeholders. Input and buy-in from organizations such as the Canadian Society of Hospital Pharmacists (CSHP), the Canadian Hospital Pharmacy Residency Board (CHPRB), the Canadian College of Clinical Pharmacy (CCCP) and others will be invaluable in pursuing this initiative.

In January 2015, we will enroll our first cohort into the PharmD bridging program. We will also commence working on a draft proposal and work through the approval process for the creation of an advanced clinical training program (currently expected to be a Clinical Master's) based on the input of the stakeholder meeting.

Long-term action

We will monitor and assess the demand of our PharmD bridging program. As the pool of BScPhm graduates wishing to upgrade diminishes, we will plan for the phase out the bridging program. Upon acceptance of our advanced clinical training program proposal, we expect to be in a position to roll out this new program in 2017 or 2018. Also, we expect to have a number of initiatives underway as a result of our consultations with our hospital partners.

5. Research

- *Reviewers recommended that faculty resources and energy be focused on consolidating strengths, ensuring a critical mass of faculty in core areas, and aligning graduate teaching with these research strengths.*

We recognize that to obtain substantial and continued financial support for research and to establish strong research capabilities to address the major challenges in the health sciences will require that we create critical masses of faculty in key areas. This is the driving force for the establishment of several research centres at the Faculty over the next five years that include: i) the Centre for Pharmacy Management, Research and Innovation (CPMRI), ii) the Centre for Pharmaceutical Oncology (CPO), iii) the Centre for Collaborative Drug Research (CCDR), iv) the Centre for Evaluation of Technological Innovation (CETI), and v) the Centre for Integrative Medicine (CIM). Through these research centres, we expect to form clusters of faculty who will have different expertise and resources but share a common interest in solving a broad challenge in the health sciences. These centres will create opportunities for cross-training of undergraduate and graduate students and postdoctoral fellows between the various disciplines represented in the centres. We further envision the creation of new graduate courses by faculty within the centres that would support a program of focused graduate studies aligned with the

mission of the centres. The Faculty is committed to establishing these centres and has commenced major fundraising in the Boundless Campaign. In addition, the Faculty is building capacity in the clinical research area by recruiting clinician-scientists in collaboration with the TAHSN hospitals.

Short-term action

The CCDR and CETI have already been established. Planning and fundraising for the CPMRI and the CPO are underway and will continue in 2014. Interviews are taking place to recruit directors for the CPMRI and the CIM. Fundraising is taking place to create an endowed Chair to lead the CPO. A CFI/ORF application is being submitted to acquire infrastructure for the CPO.

Medium-term action

By 2015, we expect to have established the CPO and the CPMRI. An endowed Chair will be recruited to lead the CPO. Faculty members will be invited to join these two centres. We expect to have obtained CFI/ORF funding for infrastructure for the CPO.

Long-term action

By 2016, graduate courses will be developed that are aligned with the centres. Fundraising will continue within the Boundless Campaign to meet the targets for the centres and other initiatives.

- *They advised that the Associate Dean Research be given delegated authority to make decisions concerning research space and responsibility for the allocation of seeding grants.*

The Faculty is currently conducting a space audit to confirm the allocation of space within the building. Once the space audit is completed, the Associate Dean, Research will be delegated the authority to establish a process to allocate research space going forward in accordance with faculty needs and in consultation with the Dean. This process may include the establishment of a "space committee" to review requests for research space. Annual audits of space utilization at the Faculty will be conducted to assure continued efficient space utilization.

The Faculty is conducting a review of the overall budget including indirect costs to determine the availability of funds to support "seeding grants". In addition, one of the initiatives in the Faculty's Boundless Campaign is the establishment of a Dean's Fund to seed innovative research projects to allow them to be competitive for more substantial external grant funding. A process will be established to receive applications for these grants once or twice per year and to prioritize projects given the limited funds available. In addition, the two research Centres that are planned and for which funds are being raised in the Boundless Campaign [the CPO and CPMRI] include seeding funding for pilot research projects.

Short-term action

A review of the overall budget at the Faculty to determine the feasibility of seeding funding will be completed in 2014. The audit of space utilization will be completed in late fall 2014.

Medium-term action

By 2015, we plan to establish a seeding funding budget for research. A process to assign research space will be established by the Associate Dean, Research in consultation with the Dean.

Long-term action

Additional funds for seeding grants will be raised as part of the Boundless Campaign to establish a Dean's Fund as well as the research centres (CPO and CPMRI).

6. Resources and Planning

- *The reviewers recommended that attention be given to developing effective organizational and management structures. Specifically they recommended an administrative review of staffing and the academic leadership team's structure and roles, clarifying the role of the Divisions, and a space audit.*

One of the goals in our strategic plan is to “develop an organizational structure that aligns with our strategic plan and enables us to achieve our goals”. The plan states that we will be conducting an organizational review and a space audit.

Short-term action

Both audits are currently underway and we expect an audit on the organizational review within the next three months and the space audit within the next six months. We will also be starting work on an academic leadership review in late fall 2014.

Medium-term action

Our organizational structure is the underpinning of our ability to meet strategic goals at the Faculty. We expect to implement the recommendations of the organizational and space audit reviews over the next 18 months. We will also review the outcome of the leadership review which we expect will be complete by late spring 2015.

Long-term action

We expect to implement the recommendations of the leadership review. We will also commence working on succession planning at the Faculty. This will include annual audits and forecasting for both administrative and academic units.

- *They recommended the Faculty focus on the development of IT infrastructure in support of technology supported learning – both in the building and at clinical sites.*

Aligning information technology to support the operational, marketing, research, teaching and learning needs at the Faculty was identified as a major goal in our strategic plan and is in sync with the recommendations of the reviewers. We have made significant strides with implementing learning technologies into our part-time PharmD program and in our CPD programs however we have been slow to incorporate new technology into our other program areas.

Short-term action

We will consult colleagues at similar sized faculties at U of T regarding their infrastructure and staffing. This will assist us in framing our administrative leadership needs. We anticipate hiring an individual to lead our IT initiatives in the next year.

Medium-term action

We will conduct an audit of our current IT systems and services and identify if they are appropriately supported and managed. We will develop a multi-year IT plan. an IT multi-year plan.

Long-term action

We will implement our multi-year IT plan and monitor opportunities for continuous improvements that contribute to an enhanced teaching and learning environment.

- *They recommended a review of the complement plan with respect to tenure stream recruitment priorities, as well as part-time faculty for the Practice Division.*

As our external reviewers identified, our faculty members are one of the Faculty's greatest strengths. The multiple changes in academic programs (ongoing and planned) as well as our ongoing plans to identify and support areas of research strength provide an opportunity to review and reflect on our current complement plan, particularly in the Pharmacy Practice Division.

Short-term action

The ongoing financial review and planning will include a focus on academic planning. By identifying upcoming retirements, unfilled salary lines and needs of new and proposed academic programs we will develop a comprehensive plan to supplement our current academic complement with strategic hires in key areas. Decisions about tenure stream and lecturer hires in the Pharmacy Practice Division will be informed by a retreat planned within the next six months. We expect to begin recruiting for several high priority positions before the end of 2014.

The appointment of six clinician scientist and two clinician educators over the last three years has been very favourably received by the reviewers and by the pharmacy profession. We plan to evaluate how this initiative may inform next steps in enhancing our faculty complement.

Medium and long-term actions

The academic complement plan will be reviewed annually to ensure it continues to meet the ongoing needs of the Faculty and to take into account new retirements. Additional academic hires will be made, based on our needs. Our planning will also be influenced by the outcome of the SWOT analysis to determine the structure and function of our divisions.

Thank you for the opportunity to provide a response to the external review report. We look forward to all our faculty and staff being involved in shaping our future direction at the Faculty.

Sincerely,



Heather Boon
Professor and Interim Dean

cc.

Jane E. Harrison, Director, Academic Programs and Policy
Justine Garrett, Coordinator, Academic Programs and Planning
Maria Bystrin, Assistant Dean, Strategic Initiatives and Continuous Professional Development,
Leslie Dan Faculty of Pharmacy

Review Summary

Program(s):	Mechanical Engineering, B.A.Sc. Industrial Engineering, B.A.Sc. Mechanical and Industrial Engineering, M.A.Sc., M.Eng., Ph.D. Joint M.Eng. in Design and Manufacturing, M.Eng.D.M.
Division/Unit:	Department of Mechanical and Industrial Engineering
Commissioning Officer:	Dean, Faculty of Applied Science & Engineering
Reviewers (Name, Affiliation):	1. Dr. Nadine Aubry, Dean, College of Engineering, Northeastern University 2. Dr. Mark Daskin, Chair and Clyde W. Johnson Professor, Department of Industrial and Operations Engineering, College of Engineering, University of Michigan 3. Dr. Jerzy Maciej Floryan, Professor and Chair, Department of Mechanical and Materials Engineering, Faculty of Engineering, University of Western Ontario 4. Dr. Glenn Heppler, Professor and former Chair, Department of Systems Design Engineering, Faculty of Engineering, University of Waterloo 5. Dr. Kon-Well Wang, Stephen P. Timoshenko Collegiate Professor of Mechanical Engineering, Tim Manganello/BorgWarner Department Chair, Mechanical Engineering, Department of Mechanical Engineering, College of Engineering, University of Michigan
Date of review visit:	November 4-5, 2013

Previous Review

Date: 2004-05

Summary of Findings and Recommendations:

1. Undergraduate Programs

Mechanical Engineering, B.A.Sc., Industrial Engineering, B.A.Sc.

The reviewers observed the following strengths:

- MIE program provides a competitive, rigorous undergraduate experience

The reviewers identified the following areas of concern:

- Instructional support given by teaching assistants appears to be inadequate
- Technical electives should be increased, and only those actually taught should be listed in the calendar
- Student expressed a strong desire for more availability of “hands-on” courses
- Students expressed a strong need for more study space in or near the department

The reviewers made the following recommendations:

- Address TA issue within the overall scope of resource allocation, proliferation of low enrolment courses, and general curricular planning and support. Processes for TA selection, training, and “certification” should be strengthened.
- Create stronger and more extensive research opportunities for undergraduates
- Create a common curriculum through year two

2. Graduate Programs: Doctor of Philosophy (PhD), Master of Applied Science (MASc), Master of Engineering (MEng), ADMI MEng—partner in Industrial Masters in Advanced Manufacturing and Design Institute (ADMI)

The reviewers observed the following strengths:

- Excellent graduate program that produces outstanding researchers and engineers that are highly regarded throughout North America and the world

The reviewers identified the following areas of concern:

- Average time to degree from bachelor’s degree to Ph.D. is very long in comparison with leading research universities in the United States
- Graduate support minimum seems low

The reviewers made the following recommendations:

- Evaluate ways to shorting the times to completion

3. Faculty/Research

(Not discussed in review report)

4. Administration

The reviewers observed the following strengths:

- Considerable thought has been given to the strategic plan
- New External Advisory Board (EAB) is positive

The reviewers identified the following areas of concern:

- Strategic plan has too many research initiatives

The reviewers made the following recommendations:

- Within the strategic plan, articulate specific goals and methods for achieving those goals
- Increase EAB to 12 members, seek non-alumni participation, elect board chair, and involve EAB in departmental activities

Last OCGS Review(s) 2007-08

Date(s):

Current Review: Documentation & Consultation

Documentation Provided to Reviewers:

Self-study; Terms of Reference; UTQAP; CVs of core department faculty; FASE Academic Plan, 2011-2016; FASE Annual Report, 2013: Performance Indicators; FASE Year in Review 2012-2013: Where Innovation Thrives; 2013-2014 undergraduate and graduate calendars

Consultation Process:

The reviewers met with Dean Cristina Amon; Vice-Dean, Graduate Studies Markus Bussmann; MIE Chair Jean Zu; Associate Chairs of Undergraduate Studies, Graduate Studies, and Research; Chair of MIE Curriculum Committee; NSERC Design Chair and Director of University of Toronto Institute for Multi-Disciplinary Design & Innovation (UT-IMDI); Director of Institute for Sustainable Energy (ISE); members of MIE Research Committee; graduate and undergraduate student representatives; junior and senior faculty; chairs of cognate departments internal and external to FASE; administrative and technical staff representatives; and members of the Advisory Committee on the Appointment of MIE Chair.

Current Review: Findings & Recommendations

- In publications and citation records, programs rank among the top 15-20 IE and ME programs worldwide and near the top of comparable Canadian programs.

1 Undergraduate Program

Mechanical Engineering, B.A.Sc.

Industrial Engineering, B.A.Sc.

The reviewers observed the following strengths:

- Overall quality
 - High quality undergraduate students
- Quality indicators
 - Many students plan to attend graduate school
- Support
 - Departmental leadership meets with student leaders every other week and follows up with actions from these meetings
 - Excellent collaboration with George Brown College to provide machining training to MIE students

The reviewers identified the following areas of concern:

- Curriculum and program delivery
 - Students expressed concern about the quality of teaching and advising from the Communications Instructors
 - Some students would like more hands-on learning opportunities
- Support
 - Levels of TA support (10,000 hours per year) seem low
- Physical resources
 - Department needs more space for student teams and projects, as well as informal gathering space

The reviewers made the following recommendations:

- Curriculum and program delivery
 - Include hands-on team projects in core courses in addition to those offered through the senior capstone design course
 - Provide additional course requirements and advising to third and fourth year IE students in each of the three areas of IE: operations research, information systems, and human factors
- Support
 - Monitor whether TA staffing levels are adequate

2 Graduate Program

Mechanical and Industrial Engineering, M.A.Sc., M.Eng., Ph.D.

Joint M.Eng. in Design and Manufacturing, M.Eng.D.M.

The reviewers observed the following strengths:

- Quality indicators
 - Graduate recruitment efforts are commendable and are ahead of those of Canadian peers

The reviewers identified the following areas of concern:

- Quality indicators
 - In the graduate survey, 20-40 percent of students expressed some dissatisfaction or significant dissatisfaction with various aspects of the program, such as the quality and quantity of graduate courses, though no students expressed concern in person
 - Times to completion for the M.A.Sc. (over two years) and Ph.D. (five years) are too long
- Students
 - Faculty expressed concern about the varying levels of quality among the M.Eng. students

- Support
 - M.Eng. students require better advising, though the department recognizes this problem and has identified two advisors for the program: one for ME students and one for IE students

The reviewers made the following recommendations:

- Curriculum and program delivery
 - Better distinguish between research courses and M.Eng. courses
- Quality indicators
 - Examine the disparity between survey results and students' current perceptions of the program
 - Seek ways of reducing the time to completion for M.A.Sc. and Ph.D. students
- Students
 - Take steps to improve the quality of M.Eng. students, including being more selective in admissions decisions
 - Engage experienced M.Eng. students in educating other students and faculty about key issues in professional engineering environments

3 Faculty/Research

The reviewers observed the following strengths:

- Research
 - Faculty (and students) have a very strong publication and citation record
 - Unique, expansive research infrastructure that is well-supported by the department
 - Impressive 100% success rate in NSERC Discovery Grant proposal submission, due in part to a commendable departmental review process for such applications
- Faculty
 - Outstanding, well-structured new faculty mentoring program that is focused on teaching in both undergraduate and graduate programs
 - Faculty complement and recent hires are very strong, which bodes well for the future of the department

The reviewers identified the following areas of concern:

- Overall quality
 - In teaching, research, and faculty hiring, department needs to maintain a balance between core methodologies and applications to ensure the long-term health of the department

The reviewers made the following recommendations:

(None indicated)

4 Administration

The reviewers observed the following strengths:

- Relationships
 - Morale is excellent among faculty, staff, and students
 - Staff is collegial, dedicated to providing service to students, and well respected by faculty
 - Very good communication channels between administration, faculty, staff, and students
 - External relations staff are very good, and provide communications, recruitment, development, and events services for the department
- Organizational and financial structure
 - High level of staff support and very good staff-to-faculty ratio
 - New budget model is well-appreciated by faculty and staff
 - Special funds are allocated to establishing collegiality at all levels of the department
- Planning / Vision
 - Long-term goal of slightly reducing the number of undergraduate students and increasing the M.Eng. students
- Department/unit/programs relative to the best in Canada/North America and internationally
 - Among the top 15-20 IE and ME programs worldwide and near the top of comparable Canadian programs

The reviewers identified the following areas of concern:

- Relationships
 - Continue to expand both the Industry and Alumni Advisory Boards from 6 to 12-15 members, with special effort made to include more women
- Organizational and financial structure
 - Department has critical needs for more short-term space before the new Centre for Engineering Innovation & Entrepreneurship (CEIE) building comes online in 2016, preventing the department from taking on any space-intensive new opportunities
- Planning / Vision
 - As the M.Eng. program expands, continue to find ways to ensure high quality students and engage them in the department
 - Take care not to focus too much on short-term financial incentives set by the Provincial government in planning for the future

The reviewers made the following recommendations:

- Department/unit/programs relative to the best in Canada/North America and internationally
 - To improve departmental ranking and reputation, track and promote student success
 - Encourage undergraduates to pursue graduate students outside of Toronto and Canada to continue to increase the department's profile

ADMINISTRATIVE RESPONSE – Appended



UNIVERSITY OF TORONTO
FACULTY OF APPLIED SCIENCE & ENGINEERING

Cristina Amon, Dean

February 13, 2014

Professor Sioban Nelson
Vice-Provost, Academic Programs
University of Toronto
27 King's College Circle

Dear Professor Nelson

I write in response to your letter of January 17, 2014 regarding the Fall 2013 external review of the Department of Mechanical and Industrial Engineering and its undergraduate and graduate programs: Mechanical Engineering, BAsC; Industrial Engineering, BAsC; Mechanical and Industrial Engineering, MASc, MEng, PhD; and Joint MEng in Design and Manufacturing, MEngDM.

The external review process is an important exercise that affords us the opportunity to take stock of the state of our academic units and of the Faculty as a whole. We were pleased with the positive nature of the reviewers' report, particularly with regard to the high national and international standing of MIE's faculty and programs, the very strong publication and citation record of faculty and students, and the excellent climate and morale within the Department, as was noted.

The following is in response to the issues raised by the reviewers in their report. For ease of reading, a summary of each area identified in the review (in bold) is followed by the administrative response.

Curriculum and Program Delivery

The reviewers praised many positive features of the undergraduate programs. They did, however, highlight several areas for curricular improvement. These include the provision of additional academic advising to third and fourth year IE students and expanding hands-on learning opportunities in addition to the senior capstone design course.

Administrative Response

It has been a tradition for decades that MIE provides academic information sessions to undergraduate students entering their third and fourth years. In these sessions, faculty members from eight disciplinary areas (five in Mechanical Engineering and three in Industrial Engineering) introduce courses and career options in their respective areas. To enhance academic advising and supplement the information sessions, MIE has recently introduced Courses and Option Selection Handbooks. Current students have

been heavily involved in the development of the handbooks, which are available electronically and in a print form in the academic year 2014-15. The handbooks will be updated annually.

Regarding hands-on learning opportunities, in 2010 the Department introduced the senior capstone design course into the fourth year curricula, resulting in a significant expansion of hands-on learning. Since then, the Department has continued to enrich the capstone design projects by adding cross-cultural joint capstone projects and multi-disciplinary capstone projects.

MIE has also introduced “learning-by-doing” courses in recent years. Specifically, the Department offers many such courses in the third and the fourth year IE program such as MIE345 (Case Studies in Ergonomics), MIE350 (Design and Analysis of Information Systems), MIE360 (System Modelling and Simulation) and MIE367 (Cases in Operations Research).

The IE program is in high demand and enrollment has been increasing steadily. To keep up with the demand, MIE has hired an outstanding Assistant Professor, who will join the Department in January 2015.

To further improve its curriculum, the Department will:

Immediate Action (6 months)

- Enhance academic advising by increasing the number of academic information sessions, so that the eight disciplinary areas can be addressed in more depth

Short-term Action (1-2 years)

- Focus mainly on maturing the capstone courses
- Conduct a review of the existing third and fourth year courses, via the Department’s curriculum committee, to further enhance hands-on learning

Long-term Action (3-5 years)

- Make every effort to increase the number of faculty members in the IE program through fundraising for endowed chairs and NSERC Industrial Research Chairs
- Through the curriculum committee, work with new faculty members to create courses with hands-on learning experience

The reviewers raised a few issues with the MEng program, such as variability in student quality, the need for enhanced student advising, and the need to distinguish between graduate courses that target MEng students and those that target research students.

Administrative Response

MIE has seen a significant increase in MEng student enrolment over the past few years, due to major efforts in recruitment and admission: while there were few international MEng students in the past, 32 international students are currently enrolled, about 16% of the total MEng student population. While a good deal of progress has been made to broaden and improve the quality of the MEng program to meet the demands of increased enrollment, we acknowledge the reviewers' suggestion that more can be done.

The Department has recently established an annual graduate exit survey and interview process, which includes MEng students. The first exit survey and interviews were conducted in November and December of 2013, and MEng students provided useful feedback.

In January 2014, MIE formed a task force to recommend improvements that can be made to the MEng program and related services. Membership in the task force includes five faculty members, one administrative staff member, and two MEng students. The task force will review the first exit survey results and consult with peers and other units within UofT to determine best practices.

To distinguish between graduate courses that target MEng students and those that target research students, the Department has introduced several courses of an applied nature in subjects that would appeal to MEng students. Most of these courses are taught by experienced engineers with many years of practical experience. These courses have provided many more options for MEng students in course selection and have been well received. The Department has also introduced more evening courses to accommodate MEng students who work full- or part-time.

In another effort to strengthen the MEng program, the Department has, over the past few years, introduced five MEng emphases in emerging and practical areas, with broad appeal. In the summer of 2013, MIE hired an administrative staff member to focus on recruitment and support graduate students.

To continue to strengthen the MEng program, the Department will:

Immediate Action (6 months)

- Hold annual town hall meetings for MEng students
- Receive the report of the task force, and consult widely within MIE on the recommendations contained therein
- Increase access to space for MEng students, including the three computer labs and design shop

Short-term Action (1-2 years)

- Begin implementing the task force's recommendations
- Implement the MEng advising program
- Introduce the MEng internship program
- Increase partnerships with industry by introducing an internship program for MEng students
- Continue to improve courses that will appeal to MEng students, and introduce more MEng emphases
- Implement international "3+2" and "3+1+1" program to increase the enrollment and quality of the MEng students. In these program modalities, international students complete three years of the BAsC degree in their home institution and come to UofT MIE for the fourth year, and then remain for the MEng degree

Long-term Action (3-5 years)

- Build a strong physical infrastructure for MEng students and a robust MEng program
- Consider the establishment of an integrated BAsC/MEng program

The reviewers also raised the issue of time-to-completion for PhD students.**Administrative Response**

MIE acknowledges that time-to-completion for PhD students has been an issue. While most students graduate within four years, which is the period for which students are provided guaranteed funding by the University, it is the few special cases with a 7-8 year completion time that raises the average. These longer completion times are caused by absences due to personal reasons, such as maternity leaves and illnesses, and because some students find jobs before graduation.

Ways to reduce PhD time-to-completion to four years have been discussed at several academic staff retreats. Two years ago, the Department implemented mandatory annual PhD Progress Reports to ensure that students make good progress through their program. The Department also proposes the following actions:

Immediate Action (6 months)

- Implement a system to remind students on a regular basis of their time to completion goals

Short-term Action (1-2 years)

- Be stricter in the qualifying exams to ensure that non-qualified candidates are identified at this early stage
- Discuss this further with academic staff in order to raise awareness, and to seek their input on possible solutions
- Continue to encourage the fast-track program from MASc to PhD

Long-term Action (3-5 years)

- Continue to address any issues discovered that influence negatively (extends) time-to-completion.

Relationships

The reviewers recommended the further expansion of the Industry and Alumni Advisory Boards, and further recommended increasing the numbers of women on both.

Administrative Response

MIE started the fundraising-based Advisory Board and industrial partnership-based Industry Board in 2009-2010. The Department has been working toward expanding the boards; the process has been slow due to the time it takes to find quality individuals who not only have the capacity and connections required in these roles, but are passionate about MIE. Very recently, MIE recruited one new member for each of the two boards.

An additional challenge in recruiting women to these roles is that potential board members who are well established tend to be more senior, and would have graduated from a time when the classes had very few female students. To continue to make progress in this area, the Department will:

Immediate Action (6 months)

- Cultivate potential board members who are currently on the radar
- Communicate with both boards the external reviewers' recommendations on expanding the boards and recruiting more female members, and encourage both boards to actively identify candidates
- Anne Sado, President of George Brown College, has been an active alumna supporting MIE. She will be approached for possible recruitment to the Advisory Board

Short-term Action (1-2 years)

- Recruit 2-3 additional members for each board
- Continue to look for potential board members through alumni and industry relationship building
- Identify female candidates among industry, as well as from alumni
- Consider recruiting more junior females to both boards

Long-term Action (3-5 years)

- Expand both boards to 10-15 members, with an increased number of women on each

Research

The reviewers raised questions about the appropriate balance between core methodologies and applied research in the department. Please comment on this.

Administrative Response

Since July 2009, MIE has hired seven academic staff in the research areas of energy, design, mechatronics, bioengineering, nanotechnologies, and operations research, all strong in the core fundamentals of their disciplines and specific novel application areas. As discussed at the academic staff retreat in December 2013, MIE faculty members widely agree that the Department is well balanced between core methodologies and applied research. The reviewers' comments are a useful reminder that the Department should continue in this direction.

Resources and Planning

Despite the anticipated new building scheduled for 2016, the reviewers expressed concern over the current need for student space.

Administrative Response

In 2011, the MIE space committee conducted a thorough audit on research space. The audit has resulted in more streamlined use of the research space and the reallocation of approximately 500 NASMs to the Department. This space has been used by new hires and has provided additional space for expanded research activities. In addition, the undergraduate teaching labs and machine shop usage was streamlined to create a state-of-the-art computer teaching lab and design fabrication studio for undergraduate students. The Department currently has approximately 100 NASMs in reserve, which is tight. While the Department does not foresee new hires in the next two years, with the exception of the aforementioned Assistant Professor to join IE, the pressure for space will mainly come from the expansion of existing research labs and the space needs of undergraduate and MEng students. To ameliorate this, the Department will:

Immediate Action (6 months)

- Make some of the space for undergraduate students available also to MEng students, such as the three computer labs and design studio
- Apply for funding from the Student Levy Fund and Dean's Strategic Fund to relocate and renovate the design studio to meet students' needs
- Add eight stand-alone computer stations in one of the existing computer labs for printing purpose only. This will alleviate some of the demand for computer labs because much of the use is for printing

Short-term Action (1-2 years)

- Relocate and renovate the design studio to make it partitionable for more effective use by different student groups
- Continue to promote shared research lab space

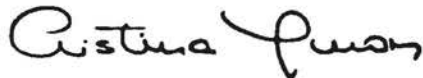
- Utilize other available space in the Faculty for student group activities, such as the new atrium in the Lassonde Mining Building and the soon-to-be enhanced student spaces in Bahen

Long-term Action (3-5 years)

- Move some of the Department's Institutes into the new Centre for Engineering Innovation & Entrepreneurship (CEIE), which will free up space in MIE buildings for future needs and growth

Thank you very much for the opportunity to respond to the report of the external review team. Their comments and concerns have helped sharpen the vision and future priorities for the Department of Mechanical and Industrial Engineering.

Sincerely



Cristina Amon

cc Professor Jean Zu, Chair, Department of Mechanical and Industrial Engineering
Jane E. Harrison, Director, Academic Programs and Policy
Justine Garrett, Coordinator, Academic Programs and Planning
Caroline Ziegler, FASE Governance and Programs Officer

Review Summary

Program(s):	Computer Engineering, B.A.Sc. Electrical Engineering, B.A.Sc. Electrical and Computer Engineering, M.Eng., M.A.Sc., Ph.D.
Division/Unit:	Edward S. Rogers Sr. Department of Electrical and Computer Engineering
Commissioning Officer:	Dean, Faculty of Applied Science and Engineering
Reviewers (Name, Affiliation):	<ol style="list-style-type: none"> 1. Dr. Andreas C. Cangellaris, M.E. Van Valkenburg Professor and Head of Department of Electrical and Computer Engineering, University of Illinois at Urbana-Champaign 2. Dr. John P. Hayes, Claude E. Shannon Professor of Engineering Science, Department of Electrical Engineering and Computer Science, University of Michigan 3. Dr. André Ivanov, Professor and Head of Department of Electrical and Computer Engineering, University of British Columbia 4. Dr. Ruby B. Lee, Forrest G. Hamrick Professor in Engineering, Professor of Electrical Engineering, Department of Electrical Engineering, Princeton University
Date of review visit:	May 22-23, 2013

Previous Review

Date: November 17-18, 2005

Summary of Findings and Recommendations:

1. Undergraduate Programs: B.A.Sc. in Electrical Engineering; B.A.Sc. in Computer Engineering

The reviewers observed the following strengths:

- Students enthusiastic about mentoring and research

The reviewers identified the following areas of concern:

- TA monitoring is inadequate; issues with cheating

The reviewers made the following recommendations:

- Try to replicate the success of the Engineering Science program in recruiting top students

- Increase flexibility via a common first year program

2. Graduate Programs: Electrical and Computer Engineering, M.Eng., M.A.Sc., Ph.D.

The reviewers identified the following areas of concern:

- Very short time allowed for graduate students and professors to determine whether they have made a good match; this results in a conservative recruitment strategy

The reviewers made the following recommendations:

- Consider other models of mentorship and recruitment

3. Faculty/Research

The reviewers observed the following strengths:

- Teaching and research activities are of the highest level
- Impressive new faculty hires
- Chair and vice chair's mentoring of junior faculty is valuable

The reviewers identified the following areas of concern:

- Little improvements made to labs since the previous review; labs overcrowded and out of date
- Second level mentoring by senior colleagues is inconsistent
- Percentage of female professors is low

The reviewers made the following recommendations:

- Institute a more intensive mentoring program for junior faculty by senior faculty
- Increase percentage of female professors

4. Administration

The reviewers observed the following strengths:

- Morale is high

The reviewers made the following recommendations:

- Department could be more flexible in its responses to challenges, especially limited funding and professorial resources, and increased undergraduate enrolment

Last OCGS Review(s) 2005

Date(s):

Current Review: Documentation & Consultation

Documentation Provided to Reviewers:

Self-Study; Terms of Reference; 2005 External Review Report; FASE Annual Report 2012: Performance Indicators; FASE Academic Plan, 2011 to 2016; UTQAP; CVs of core ECE Faculty; graduate and undergraduate calendars

Consultation Process:

The Reviewers met with Dean Cristina Amon; Vice-Dean, Undergraduate Studies Susan McCahan; Vice-Dean, Graduate Studies Chris Damaren; ECE Chair Farid Najm; ECE Associate Chairs, Undergraduate Studies, Graduate Studies, and Research; junior and senior faculty members; undergraduate and graduate student representatives; administrative and technical

staff representatives; chairs of cognate departments within and external to FASE; and members of the Advisory Committee on the Appointment of ECE Chair.

Current Review: Findings & Recommendations

1 Undergraduate Program

Computer Engineering, B.A.Sc.

Electrical Engineering, B.A.Sc.

[N.B.: Reviewers did not distinguish between the two undergraduate programs.]

The reviewers observed the following strengths:

- Overall quality
 - High quality teaching
 - Students appreciate that faculty are recognized experts in their fields
 - Program objectives, admissions process, and degree-level expectations were favorably evaluated by Canadian Engineering Accreditation Board (CEAB) in October 2012
- Enrolment
 - Enrolment numbers “healthy and growing”
 - Domestic/international balance of 75/25—close to Department’s goal
- Support
 - Students pleased with online course selection and advising centre
- Physical resources
 - Exemplary practice of giving students access to funds for laboratory equipment and refurbishment; students and Lab Manager highly satisfied with system
 - Labs are well-equipped and maintained

The reviewers identified the following areas of concern:

- Curriculum and program delivery
 - Some students find that there are too many required second-year courses
 - Students perceive “a big jump” between the first and second year and feel inadequately prepared
 - Some had minor reservations about the quality of teaching assistants
 - Students would like clearer responses to their suggestions for course improvements
- Enrolment
 - Faculty have mixed perspectives about the best way to handle large-enrolment courses:
 - Some faculty expressed desire to have fewer sections to reduce workload
 - Others felt that enrolments should be reduced to improve faculty-student ratio and quality of teaching

The reviewers made the following recommendations:

- Curriculum and program delivery

- Explore students concerns about the second year, reviewing course pre-requisites and scheduling
- Enrolment
 - To reduce teaching load, raise enrolment limits to offer fewer sections; augment larger sections with newer or more creative engagement methodologies

2 Graduate Program

Electrical and Computer Engineering, M.Eng., M.A.Sc., Ph.D.

The reviewers observed the following strengths:

- Overall quality
 - Students satisfied with overall quality of instruction
 - Students satisfied with their courses, assignments, and workload as teaching assistants
 - Students praised high level of faculty expertise

The reviewers identified the following areas of concern:

- Curriculum and program delivery
 - Students concerned about time to degree and meeting requirements for graduation
 - Review meetings with supervisory committees are not being enforced, leading to students' "uncertainty and anxiety"
- Student funding
 - Students concerned about financial support
 - Significant variation in how students are supported and advised after their four-year period of guaranteed support ends
 - Students expressed financial concerns about the high cost of living in Toronto
- Faculty resources
 - Some graduate students have mixed feelings about the early pairing of students and faculty research advisors
 - Some junior faculty feel that it's hard to compete with senior faculty for top students

The reviewers made the following recommendations:

- Curriculum and program delivery
 - Strengthen the mechanisms for tracking Ph.D. student progress; work toward reducing overall time to completion for graduate degrees
 - Provide more mentorship to students about measures of scholarship, impact, etc., and the different standards among the subspecialties
 - Provide better visibility for Ph.D. students' research progress through a research committee/annual review of graduate students, so that students can affirm their research plans and receive equitable supervision
- Student funding
 - Revisit the level of student funding to ensure equity

- Faculty resources
 - Conduct a review of the way in which graduate students are paired with faculty research advisors

3 Faculty/Research

The reviewers observed the following strengths:

- Overall quality
 - High-quality research
- Research
 - Department is a leader in achieving the Faculty's goal of high-impact research, as evidenced by percent of Faculty research expenditures attributed to ECE faculty
 - Substantial research funding from industry
 - Dean's strategic interdisciplinary research initiatives have made a positive impact on Department
- Appropriateness of activities for the undergraduate and graduate students in the programs
 - Undergraduates are very appreciative of their summer research opportunities
 - Some graduate students very happy with research supervision and opportunities for interdisciplinary research
- Faculty
 - Excellent faculty in terms of individual and collective technical expertise, both in ECE and in interdisciplinary areas—notably the biomedical area

The reviewers identified the following areas of concern:

- Research
 - Short-term horizon of current research discourages longer-term, high-risk endeavours
 - Faculty expressed concerns regarding barriers to interdisciplinary research
 - Faculty would like stronger U of T involvement in national research policy and decision-making groups
- Appropriateness of activities for the undergraduate and graduate students in the programs
 - Graduate students may be forced to shift to research projects with faculty funding, even though projects are not always in line with the students' theses
- Faculty
 - Faculty expressed differing views about the balance of teaching, research, and service, especially with respect to future hires
- Complement
 - Faculty concerned that workload impedes the growth of research; differences of opinion between faculty and departmental leadership regarding teaching relief and buyouts

The reviewers made the following recommendations:

- Research
 - Consider directing a portion of Departmental funds to support strategic, higher-risk, longer-term research initiatives
 - Assume a stronger leadership role in growing and diversifying interdisciplinary research across the University
- Complement
 - Raise faculty's awareness of the workload policy
 - Explore ways to increase capacity (or reduce overall workload) by strategically using available funds, such as the overhead from industry-sponsored research returned to the Department

4 Administration

The reviewers observed the following strengths:

- Morale of faculty, students and staff
 - High engagement and morale of staff and leadership
- Scope and nature of relationships with cognate Faculties, academic departments and units
 - Department proactively fosters and establishes cross-departmental research initiatives
- Staff
 - High quality, competent, and committed staff
- Management and leadership
 - Outstanding, with "strong leadership, clear strategic vision, and dedication to service"
- Department/unit/programs relative to the best in Canada/North America and internationally
 - "Outstanding" quality; "truly world-class"
 - "First-class" students
 - "In an excellent position to continue as a world leader in its field"
 - Academic programs are recognized internationally

The reviewers identified the following areas of concern:

(None)

The reviewers made the following recommendations:

- Development/fundraising initiatives
 - Increase engagement with alumni to benefit current programs
 - Expand the Department's industrial relationships to benefit current programs

ADMINISTRATIVE RESPONSE – Appended



UNIVERSITY OF TORONTO
FACULTY OF APPLIED SCIENCE & ENGINEERING

Cristina Amon, Dean

February 4, 2014

Professor Sioban Nelson
Vice-Provost, Academic Programs
University of Toronto
27 King's College Circle

Dear Professor Nelson

I write in response to your letter of January 20, 2014 regarding the Spring 2013 external review of The Edward S. Rogers Sr. Department of Electrical and Computer Engineering (ECE) and its undergraduate (Electrical Engineering and Computer Engineering B.A.Sc.) and graduate (Electrical and Computer Engineering M.A.Sc., M.Eng., and Ph.D.) programs. The external review process is a valuable exercise that affords us the opportunity to take stock of the state of our academic units and of the Faculty as a whole.

We were pleased with the positive nature of the reviewers' report, particularly with regard to the scope and impact of the faculty's research, and the excellence of our technical expertise. We were also pleased to note that the reviewers remarked on the high quality of the students in ECE and that the Department is in an excellent position to continue as a world leader in its field.

The following is in response to the issues raised by the reviewers in their report. For ease of reading, a summary of each area identified in the review (in bold) is followed by the administrative response.

RESEARCH

The reviewers report diverse opinions concerning the appropriate balance between teaching and research workload and varying practices with respect to teaching relief.

The balance between teaching and research, and the concern that teaching workload is so high that it impedes growth of research, are issues that have come up in previous departmental internal meetings, in the course of developing previous strategic plans. Tenure-stream faculty are expected to teach three half-courses per year, which is on par with many of our peer institutions. The first thing to point out is that ECE continues to support faculty members by providing teaching assistants (TAs) for any undergraduate courses that require them.

Secondly, in the ECE Workload Policy developed in 2011-12, there are clear provisions for how classroom teaching workload may be reduced in cases of high research intensity. All ECE faculty members are reminded of this policy in January of every year, and requests for variance from the nominal workload arrangement are invited for submission to the Chair's office. In comparison with our US peer institutions, it is perhaps more difficult to obtain teaching reduction due to increased research intensity – the bar in ECE is higher at this time. This is intentional and for good reason, because we need to gradually transition from a pre-2011 system where such reduction was available only in very limited cases, to a future system in which such reduction is commonplace and subscribed to by most ECE faculty. In the years since the Workload Policy was put in place, a small fraction of ECE faculty members have availed themselves of this option (4 out of 73 in 2012-13, and 5 out of 78 in 2013-14). To be able to lower the bar for access to this option of teaching reduction, the department needs to either increase the faculty complement, which is not reasonable given the already large size of ECE, or reduce the number of course sections offered annually, a more practical goal that will take a few years to achieve.

Short-term goals (within six months):

- The Department's internal Advisory Committee will consider the overall goal of reducing the number of course sections offered annually, and will develop detailed implementation plans for achieving the desired goals in the medium to long term, described below.

Medium-term goals (1-2 years):

- The Department will reduce the number of graduate courses offered annually. To achieve this, the Department's Graduate Matters Committee (GMC) will review the ECE graduate curriculum to identify courses that may be eliminated because they have low student interest. The GMC will also consider whether certain specialized or low-enrolment courses should only be offered every other year. The impact on accreditation will be examined to ensure our program remains viable.
- The Department will reduce the number of undergraduate courses offered annually. To achieve this, the Department's Curriculum Matters Committee (CMC) will review the ECE undergraduate curriculum to identify courses that may be eliminated because of low student enrolment.

Long-term goals (3-5 years):

- To reduce the number of course sections, the Department will work towards reducing undergraduate enrolment. To achieve this, the Department will continue its efforts to improve its financial position through a ramp-up of the Masters of Engineering program (a professional master's degree), increased research funding opportunities, and most importantly, outreach to alumni in collaboration with our Advancement office.

The reviewers raise the issue of barriers to interdisciplinary research and longer-term, high-risk research endeavours.

There are many issues wrapped up in this comment. For one thing, there has been an intensified tendency in the recent past for funding agencies to emphasize research that is more applied or closer to commercialization, and this has made it harder for faculty members to fund their longer-term, high-risk basic research. The Department has been advocating NSERC to try to influence the research policy, with limited success.

Secondly, the Department welcomes and encourages interdisciplinary research. Indeed, one of the first initiatives of the ECE Chair in 2009 was to reach out to the Mechanical and Industrial Engineering (MIE) Department to jointly seek the Dean's support for the creation of a new EDU:C, the now established Faculty-wide Institute of Robotics and Mechatronics (IRM). The Department also participates in and supports another Faculty-wide EDU:C, the Identity, Privacy and Security Institute (IPSI). The success of such efforts depends on the initiative and capacity of our faculty members to take leadership roles in these initiatives, which is impacted by their workload. Thus, workload-related obstacles to research in general, addressed above, can also be important obstacles to interdisciplinary research.

Finally, a natural barrier to interdisciplinary collaboration is the reality that academics tend to work with a small peer group of researchers on very specialized topics. Over the years, they become increasingly more connected with their disciplinary colleagues across the world than with their interdisciplinary colleagues on campus. The ECE Department will take a multi-faceted approach to address this issue:

Short-term goals (within six months):

- The Department will, through the office of the Associate Chair for Research, reach out to other departments and Faculties to develop interdisciplinary workshops on topics of mutual interest, where high-impact interdisciplinary research can be pursued.

Medium-term goals (1-2 years):

- The Department will renew its advocacy efforts with NSERC and other funding agencies to urge them to maintain a stronger focus on basic research and especially on interdisciplinary research.
- The Department will review its policies, like workload or PTR, to consider how to better empower faculty members who are interested in leading large interdisciplinary initiatives.

Long-term goals (3-5 years):

- The Department will work with the Faculty Advancement team develop the capacity to directly support high-impact interdisciplinary research from the Department's own budget.
- The Department will work to create an environment that fosters the emergence of interdisciplinary research collaborations by looking for ways to "throw people together" in common activities, such as increasing inter-departmental or inter-divisional teaching and by having faculty members serve on Ph.D. committees in other departments or Faculties.

GRADUATE STUDENTS

The reviewers note that graduate students are concerned that thesis deadlines and timelines for review committee meetings are not being enforced, impacting rates of progress towards the Ph.D.

While graduate students and their supervisors must take some responsibility for submitting the expected reports and materials by the stated deadlines, the Department has been working since February 2012 on a more proactive approach for monitoring compliance with deadlines to ensure adequate progress of graduate students towards their Ph.D. degree goals. By January 2013, we achieved consensus around a plan for the ECE graduate office to track such progress, including:

1. The development of a Ph.D. Progress Tracking System as an online resource for students to submit annual progress reports, and to help the graduate office identify any problems relating to supervision. The system will allow students to submit their reports without requiring action, or consent, of their research supervisors.
2. Students who do not submit their reports on time will be given a two-month grace period to submit after the original deadline, otherwise they will lose their academic standing and their graduate stipend will be stopped.
3. If a student's supervisory committee finds the report satisfactory, the graduate office will grant approval without the committee meeting in person. If the research supervisor requests a physical meeting, one will be scheduled. The implementation of this system has been further defined throughout 2013, and the software has been under development with the target of having a prototype for testing in the graduate office in January 2014.

Short-term goals (within six months):

- The Department will test and finalize the Ph.D. Progress Tracking System, with a view to deploying and testing it in the spring and summer of 2014.

The reviewers reflected students' concerns about their financial burdens and variations in funding levels.

The students' comments regarding variations in the funding levels relate to what happens after the University's guaranteed funding commitment has expired. The expectation in ECE is that faculty members will take on the full cost of supporting their students after the expiry of the University's funding commitment. The Department offers all incoming graduate students a stipend that is at least \$15,000, plus tuition and fees for a limited number of years consistent with the University's funding commitment. Faculty members have the option of supporting their students at a higher level, and many do.

More generally, we acknowledge that the cost of living in Toronto has been increasing over the years, and that this is reflected in the students' financial burden. It is true that the minimum stipend level is barely enough to live on in Toronto, and that students receiving only the minimum, with no teaching assistantship (TA) stipend, may have to depend on funds from alternate sources to make ends meet. The ECE Department has been discussing this issue over the last few months. While we recognize our responsibility to support our graduate students, there is also the counter-position that graduate education is not a source of employment but an opportunity for training with academic scholars. Furthermore, in many cases, the research funding for the discipline has not been expanding; indeed it has been shrinking in some cases. While our efforts for improving the Department's financial position (via initiatives like the Masters of Engineering and our outreach to alumni) will ultimately help us provide more central resources to address the above issues, we will:

Short-term goals (within six months):

- The Department will continue to study the issue of the financial burden on students by collecting data and discussing the issue with other departments in the Faculty.
- The Department will review the funding situation after the expiry of the University funding commitment, and will collect data and explore ways of ensuring financial assistance until completion of the degrees.

Medium-term goals (1-2 years):

- The Department will work to find a balance among our faculty members between the two opposing views expressed above, of responsibility for our students' well-being and the recognition that graduate study is a training program rather than a source of employment.

- The Department will discuss and develop guidelines relating to how students are to be financially supported after the expiry of the University's funding commitment. These guidelines will be announced and explained to all new faculty members and graduate students.

The reviewers raise a number of issues with respect to student advising in the graduate program.

This comment also relates to student advising after the expiry of the University's funding commitment. The expectation in the ECE Department is that faculty members continue to fully advise their students after the expiry of this commitment. The Department takes this seriously and is in fact not aware of any lack of proper advising of graduate students. Nevertheless, the Department commits to the following plan:

Short-term goals (within six months):

- The Department will review this situation by surveying graduate students and discussing it with faculty members. Corrective action will be taken, if required, via the ECE graduate studies office.

CURRICULUM AND PROGRAM DELIVERY

The reviewers report the perception of undergraduate students that there is a "big jump" between the first and second year and that there are too many required second-year courses.

The ECE curriculum is not easy. There is so much to cover in four years, and this was further exacerbated by the elimination of Grade 13 in the Ontario high school system a few years ago. The transition from high school to university itself is challenging and the design of university curricula must therefore strike a balance between the need to cover enough technical material with the need to maintain a healthy life-study balance for our students. Yet students must, at some point, deal with the transition to university, and this must be done either in first or second year. For various reasons, not least of which is to avoid giving students too fast a ramp-up upon first entry to university, our first-year curriculum has been softened somewhat by the inclusion of introductory courses that allow students to get a glimpse of the various engineering disciplines and to acclimatize them to university life. The net result is that, unfortunately, second year is when students start to take more intense engineering courses, and that is where they experience the sharp ramp-up to university life. Nevertheless, the Department commits to the following:

Short-term goals (within six months):

- The Department will develop strategies for better communications to students about the upcoming challenges in their second year. Counseling and support resources will also be made available to students as they embark on their second year to help reduce the sharp transition from the more general first year to their first disciplinary year of studies.

Medium-term goals (1-2 years):

- The Department will review the second-year curriculum to identify areas where student workload may be reduced. Specifically, the software course in second year has often been the subject of student concerns, and while previous reviews have failed to discover ways around the high workload in this course, the Department will take a fresh look at this course and its impact on students' workload, with the hope that new solutions will be unearthed.

As requested, attached is the CEAB report from October 2012, as the external reviewers reference the accrediting agency's assessment of key programmatic areas.

Thank you very much for the opportunity to respond to the report of the external review team. Their comments and concerns have helped sharpen the vision and future priorities for The Edward S. Rogers Sr. Department of Electrical & Computer Engineering.

Sincerely

A handwritten signature in blue ink that reads "Cristina". The signature is written in a cursive style with a large, looped initial "C".

Cristina Amon
Dean

cc: J.E. Harrison, Director, Academic Programs and Policy
J. Garrett, Coordinator, Academic Programs and Planning
F. Najm, Chair, The Edward S. Rogers Sr. Dept. of Electrical & Computer Engineering
C. Ziegler, Governance & Programs Officer, Faculty of Applied Science & Engineering

Review Summary

Program(s):	Geology, B.Sc., Hons.: Specialist Geophysics, B.Sc., Hons.: Specialist Geoscience, B.Sc., Hons.: Major, Minor Environmental Geosciences, B.Sc., Hons.: Specialist, Major Geology, M.Sc., Ph.D.
Division/Unit:	Department of Earth Sciences (Undergraduate and Tri-campus Graduate Program)
Commissioning Officer:	Dean, Faculty of Arts & Science
Reviewers (Name, Affiliation):	1. Dr. David Eaton, Professor of Geophysics, Department of Geoscience, University of Calgary 2. Dr. Lee Kump, Professor of Geosciences, Department of Geosciences, Pennsylvania State University 3. Dr. Roberta Rudnick, Distinguished Professor and Chair, Department of Geology, University of Maryland
Date of review visit:	February 7-8, 2013

Previous Review

Date: 2005 (as the Department of Geology)

Summary of Findings and Recommendations:

1. Undergraduate Programs: B.Sc., Geology – Specialist, Major, Minor; Geology and Chemistry – Specialist; Geology and Physics – Specialist; Environmental Geosciences – Specialist, Major

The reviewers identified the following areas of concern:

- Declining undergraduate enrolments
- The traditional, conservative nature of courses

The reviewers made the following recommendations:

- Conduct a curricular review

2. Graduate Programs: Geology M.A., M.A.Sc., PhD; collaborative programs in Environmental Studies and in Geology and Physics

The reviewers observed the following strengths:

- Graduate students generally supportive of their educational experience

The reviewers identified the following areas of concern:

- Graduate students are concerned with lack of cohesion and communication in

department

The reviewers made the following recommendations:

- Re-evaluate the formal graduate teaching program to offer fewer courses with broader appeal

3. Faculty/Research

The reviewers observed the following strengths:

- Active faculty with strong research programs
- High quality new appointments

The reviewers identified the following areas of concern:

- Modest number of collaborative research projects
- Lack of a regular faculty member committed to the Geochronology Lab

The reviewers made the following recommendations:

- Form an external committee to provide advice on the future of Geochronology at UofT

4. Administration

The reviewers observed the following strengths:

- Positive relationships with Geography, Civil and Chemical Engineering, UTM and UTSC
- Exceptional array of analytical facilities and strong, well-funded technical staff

The reviewers identified the following areas of concern:

- Fragmentation of the earth sciences in different departments

The reviewers made the following recommendations:

- Reorganize the components/units of the earth sciences into a new department

Last OCGS Review(s) 2004/05

Date(s):

Current Review: Documentation & Consultation

Documentation Provided to Reviewers:

Terms of Reference; Self-Study; Faculty CVs; Site Visit Itinerary; Faculty of Arts and Science External Review Report (2013); University of Toronto Academic Appointments – Overview; and Faculty of Arts and Science Organizational Chart

Consultation Process:

The reviewers met with the Dean; the Vice Dean, Graduate Education & Program Reviews; the Department Chair, the Chairs/Directors of cognate university departments; junior and senior faculty members; administrative staff; and undergraduate and graduate students.

Current Review: Findings & Recommendations

1 Undergraduate Program

Geology, B.Sc., Hons.: Specialist

Geophysics, B.Sc., Hons.: Specialist

Geoscience, B.Sc., Hons.: Major, Minor

Environmental Geosciences, B.Sc., Hons.: Specialist, Major

The reviewers observed the following strengths:

- Objectives
 - High academic standards
 - Specific, meaningful learning outcomes
- Curriculum and program delivery
 - Programs provide a well-rounded education in Earth Sciences, building upon well-established, traditional areas of Geoscience
 - Strong emphasis on experiential learning and evidence of innovative pedagogies
 - Students gain sound preparation for professional registration in Geoscience
 - Strong support for writing in the curriculum
 - Variety of capstone experiences is a positive feature
- Assessment of learning
 - Assessment methods are appropriate
 - Faculty of Arts & Science competencies are mapped to Department's curricula
- Quality indicators
 - High student satisfaction with the program, the accessibility of faculty, advising, opportunities for undertaking research, the ability to connect with alumni and industry, and post-graduation employment opportunities
- Enrolment
 - Increasing number of students in the past five years
- Student funding
 - Awards and scholarships established through endowment funds are signs of "vibrant programs" and are comparable to other top Earth Science departments in Canada
- Support
 - The recently established undergraduate student help center

The reviewers identified the following areas of concern:

- Curriculum and program delivery
 - The "relatively light" (two courses per year) departmental teaching load (compared to the norm of three courses per year at other Canadian Earth Science programs) may be contributing to the limited number of upper-level course offerings

The reviewers made the following recommendations:

- Curriculum and program delivery
 - Reinstate the senior thesis for the Geology Specialist
 - Revise specialist programs to accommodate new faculty who have joined the Department
 - Seize opportunities provided by new Environmental Science program
 - Offer a larger number of upper level Geology courses

2 Graduate Program

Geology, M.Sc., Ph.D.

The reviewers observed the following strengths:

- Objectives
 - Programs provide a high level of professional training and career preparation
 - Program objectives are aligned with the curriculum
- Curriculum and program delivery
 - Research progress is monitored and measured through regular supervisory committee meetings as well as through thesis defenses
- Quality indicators
 - Offer and acceptance rates are in line with Physical Sciences and the University as a whole
 - An impressive number of former students have continued on to careers in academia, industry or more advanced studies (Ph.D. or postdoctoral research) elsewhere
 - Graduates are frequent winners of important Geology awards
- Students
 - Graduate students are engaged and satisfied with their education, research and interaction with their advisors
 - Effective teaching and career preparation support for graduate students
- Student funding
 - Uniform funding packages for graduate students
 - High rate of scholarships received by graduate students

The reviewers identified the following areas of concern:

- Quality indicators
 - Upward creep in time-to-completion for Ph.D. students (6.6 years)
- Enrolment
 - Declining acceptance rates to master's programs, which could be attributed to increasing competition with industry for B.Sc. graduates in Canada
 - Declining Ph.D. enrollment since 2003
 - Lack of transparency about the functioning of graduate admissions
- Students
 - Student satisfaction statistics from a 2010 Canadian Graduate Professional Student Survey are mixed
 - Students' concerns regarding their funding has negatively influenced enthusiasm and morale
 - Concerns regarding limited international enrolment

The reviewers made the following recommendations:

- Enrolment

- Be proactive in increasing the size of the graduate-student cohort
- Allocate new resources toward recruitment and support for international students

3 Faculty/Research

The reviewers observed the following strengths:

- Research
 - Broad range of research programs, with “top-flight” programs in Environmental Geochemistry, Geobiology and Petrology & Geochemistry, with strengths and potential in a range of other areas
- Appropriateness of activities for the undergraduate and graduate students in the programs
 - Both undergraduate and graduate students have opportunities to undertake research
 - Ph.D. students publish throughout their programs
- Faculty
 - Morale is positive

The reviewers identified the following areas of concern:

- Level of activity relative to national and international comparators (productivity, research funding)
 - Faculty research productivity and impact is uneven, with some academic staff falling below expected norms for published papers and citations
- Faculty
 - Concerns regarding teaching loads, distribution of administrative support, and the transparency of decision-making processes
- Complement
 - Concerns regarding the equity of funding for and support of junior faculty members’ research
 - Decreased number of tenure-track faculty while undergraduate student numbers have increased, resulting in resource issues and the elimination of the senior thesis for Geology Specialists

The reviewers made the following recommendations:

- Research
 - Bolster the research programs of junior faculty to strengthen their scientific contributions
 - Consider the future of the Satterly Geochronology Lab, and determine whether to bolster current resources or phase it out
- Appropriateness of activities for the undergraduate and graduate students in the programs
 - Consider requiring a senior thesis in programs with lower enrolment (e.g., Environmental Geology and Geophysics Specialists)
 - Create more opportunities for field work and to discuss research with undergraduates
- Complement

- Develop more equitable and transparent methods to assign teaching to ensure that the load (including course development as well as delivery) is well balanced
- Consider targeted searches in strategic areas to bolster research profile and to provide additional opportunities for undergraduates to pursue research

4 Administration

The reviewers observed the following strengths:

- Relationships
 - Positive relationship with the Department of Physics and the smooth transition of geophysics to Earth Sciences without significant concerns
 - “Excellent” outreach to the public and mining industry
 - The opportunities to collaborate with the School of the Environment
- Morale of faculty, students and staff
 - Healthy, recently-improved morale due to the new department chair
- Staff
 - Staff members have a good rapport with the faculty and students and are supportive of departmental activities
 - Low ratio of faculty to support staff
- Opportunities for new revenue generation
 - Substantial, continued success in fundraising
- Planning / Vision
 - The amalgamation of faculty members from Geography, Physics and Geology into the Department of Earth Sciences is a source of strength
- Management and leadership
 - Organization of leadership is appropriate and effective, with “excellent” leadership on the part of the chair

The reviewers identified the following areas of concern:

- Relationships (collaboration)
 - Cognate units perceive opportunities for increased collaboration
- Resource allocation, including space and infrastructure support (facilities, location)
 - The business model for the Geochronology Lab is unsustainable
 - Technical staff are concerned about the replacement of departmental and research equipment
- Management and leadership
 - The perceived lack of transparency in departmental decision-making processes

The reviewers made the following recommendations:

- Relationships (collaboration)
 - Build and improve upon collaborations with other physical sciences and life sciences departments at the UofT

- Organizational and financial structure (including governance)
 - Optimize the allocation of internal departmental space and assess future space needs
 - Assess current technical staffing to ensure appropriateness
- Resource allocation, including space and infrastructure support (facilities, location)
 - Make decision concerning Geochronology Lab
 - Deepen the Department's involvement with the School of the Environment
- Staff
 - Improve communication among the technical staff and between technical staff and the academic staff and the chair
 - Seek out additional ways to represent technical staff in departmental decision making
- Management and leadership
 - Improve communication and administrative processes among the administrative staff to optimize the assignment of graduate students
- Opportunities for new revenue generation & planning
 - Enhance support and engagement with the School of the Environment

ADMINISTRATIVE RESPONSE – Appended



10 March 2014

Professor Sioban Nelson
Vice-Provost Academic Programs
University of Toronto

Re: Review of the Department of Earth Sciences and its undergraduate and graduate programs

Dear Sioban,

Along with the faculty, staff and students of the Department of Earth Sciences, I am very pleased with the external reviewers' positive assessment of the Department and the undergraduate and graduate programs: (Geology, B.Sc., Hons.: Specialist; Geophysics, B.Sc., Hons.: Specialist; Geoscience, B.Sc., Hons.: Major, Minor; Environmental Geosciences, B.Sc., Hons.: Specialist, Major) and tri-campus graduate programs (Geology, M.Sc., Ph.D.). The reviewers concluded that the Department offers strong undergraduate and graduate programs. The undergraduate program encompasses the fundamental disciplines in geoscience and importantly meets requirements for professional Geoscience registration in Ontario. Even with recent major increases in enrolments, the reviewers laud the abundant student opportunities for experiential learning in the field and in the lab. They note that the graduate program is clearly producing high quality researchers, for example, as evidenced by (award-winning) graduates moving on to high-profile careers in academia and industry. The reviewers noted the established research strength of the Department and comment positively on the transition of Geophysics to Earth Sciences. The Department's wide-ranging efforts in geoscience outreach and activity in alumni relations and fund-raising are also commended. The reviewers also note the high level of student satisfaction and positive faculty morale.

As per your letter of 12 September 2013, I am writing to address the areas of the review report that you identify as key. The response to these items is separated into short-(current-3 months)/intermediate- (3-12 months)/long-(12+months) term action items for the Department. The Department has seriously considered the reviewers' comments and a number of changes have been instituted over the past few months to respond to their suggestions.

Curriculum & Program Delivery

• *The reviewers noted challenges relative to the undergraduate curriculum and program delivery, including limited upper level course offerings.*

A streamlining of Earth Sciences (ES) upper year course offerings was recently completed after a review and revision of the undergraduate program. Previously, there were a large number of (very specialized) advanced courses in the Calendar, but their delivery was not consistent. This inconsistency had resulted from a lack of personnel to cover the large number of courses and the specialized nature of the courses where a specific faculty member was required to teach the course (and hence if unavailable due to other teaching commitments or leave, etc., the course would not be able to be offered). These initiatives described below were just being put into place

during the time of the external review, and thus the reviewers did not get a chance to evaluate the success of the revised program delivery.

Short-term response:

- As a new model, ES streamlined their 3rd/4th year courses to a number of core courses (e.g., satisfying Association of Professional Geoscientists of Ontario registration) along with several “topics” courses in Earth Sciences: ESS381-*Special Topics in Earth Sciences* and ESS481—*Advanced Topics in Earth Sciences*. Specialized courses will be delivered through these topics courses so that courses can be offered consistently while at the same time offering varying topics and lecturers through the course. The Department now has the resources to consistently offer the core program plus topics courses, several faculty members rotate the teaching of upper year courses, offering a range of topics. The Department consults with students to ensure that the course topics are relevant to their academic interests. ES students can also take courses in the Faculty of Applied Science & Engineering, and fourth year geophysics courses (listed with the Department of Physics).
- This past year, the Department instituted a new “capstone” field course in fourth year. This course brings together a range of concepts in geoscience in a field environment. As with the topics courses, this capstone course is designed to rotate around field areas and among instructors.

Intermediate-term response:

- The Department is revisiting the senior thesis requirement for the specialist programs. With an increasing faculty complement, there is greater supervisory capacity in the Department and a willingness to reinstate the requirement for a senior thesis. However, a balance must be maintained so that certain faculty members do not take on a disproportionate number of thesis students (e.g. in the past, there has been a heavy demand from students wanting to conduct theses in economic geology related projects).

The reviewers noted the lack of preferred access to 3rd and 4th year Earth Sciences courses for UTM students. Each arts and science division offers independent undergraduate programs and accommodates their own students in the first instance.

• The reviewers praised the quality of the graduate program. At the same time, however, they note an upward trend in time-to-completion for Ph.D. students and declining Ph.D. enrolment.

We share the reviewers concern over the upward trend in PhD time-to-completion (TTC). This is an opportune time for the graduate program to review their PhD practices. The tri-campus graduate program has experienced a recent influx of new faculty due to transfers into the St. George Department related its change from a Department of Geology to a Department of Earth Sciences as well as new hires at UTM and UTSC. This increased supervisory capacity resulted in a significant boost to the Department’s graduate student enrollments over the past two years. In addition, owing to experimental/field research done in the Department, there have been circumstances where graduate student research has taken longer than anticipated because of unforeseen and uncontrollable factors of field work or experimentation. The longer completion times for these students have affected the program’s average TTC.

Improving TTC is also a top priority for the A&S Vice-Dean, Graduate Education & Program Reviews. The Vice-Dean has already identified this as a priority issue to address with common and concerted strategies. Currently the Vice-Dean is compiling a best practices document based on existing research and current practices in top-TTC-performing tri-campus/A&S graduate programs.

To address the TTC issue in the Department, a range of responses are necessary, as outlined

below.

Short-term response:

- The Earth Sciences Graduate Affairs Committee is reviewing the current PhD requirements, including discussing the requirement of two supervisory committee meetings per year in the doctoral program (the current requirement is one meeting per year). The Department considers that closer supervision will ensure that students are more closely on-track in their graduate programs—carrying out productive research while meeting timeline targets.

Intermediate/Long-term response:

- A new Associate Chair for Graduate Studies has begun in January 1, 2014. An important mandate will be to explore best practices in graduate supervision to decrease TTC. The A&S Vice-Dean, Graduate Education & Program Reviews will provide support and advice to the new Associate Chair on this matter.
 - The Department has begun encouraging faculty members to get students involved in certain field/experimental work to consider starting graduate students in the four summer months prior to their nominal enrollment date of September. (Several faculty already follow this practice.) This would allow students to get an extra season of field work or an early start on laboratory experimental work.
- *The reviewers expressed concern regarding barriers to enrolling more international graduate students.*

Finding expanded funding for international graduate students is a challenge shared across the Faculty of Arts & Science. Strengthening support for international students is an identified priority in the Faculty's academic plan and its importance reiterated in the 2013 Faculty external review. The Faculty's financial challenges constrain our graduate programs in limiting our ability to recruit the best students, in limiting admissions of international students, and in supporting our students. We have worked with our units to devise funding packages for recruitment purposes. A&S Advancement has had success in raising funds for graduate fellowships, and the Graduate Admissions Committee has usefully offered strategic direction for units' admissions.

Earth Sciences has a strong track record for funding international graduate students. The Department has the endowed Keevil-Finlay scholarship program that provides full graduate support (~\$35k/year) for 3-4 graduate students per year. As per the award record, these scholarships are directed to students from "developing nations" and have proven to be beneficial for recruiting students from a host of countries to a work on a variety of graduate research projects.

Short-term response:

- The Department is actively seeking opportunities to fund international Students. For example, the Department recently established the Emeritus Professor Steve Scott and Joan Scott Graduate Scholarship and the Emeritus Professor Tony Naldrett Graduate Scholarship as part of the last round of the Provost's PhD Enhancement Fund (PPEF) to support international graduate students.

Intermediate-term response:

- The Department continues to put a high priority on graduate scholarships in its advancement activities as a way to facilitate the support of international graduate students. This includes current efforts to fund-raise for graduate scholarships in geophysics.

Communications

• *The reviewers emphasized the need for an improved “culture of transparency” in Departmental decision-making processes, including in the communication of financial information to graduate students.*

The specific issue raised regarding the communication of financial information to graduate students referred to special circumstances in 2011-12 related to student funding. In the previous academic year (2010-11), there had been a surplus of graduate funding owing to healthy balances in endowed graduate scholarships. A decision was made to pass this surplus along to graduate students that year, yielding an increase in the base funding level from the nominal level of \$17k to \$18.5k. The following year, this surplus did not exist, so graduate student funding returned to \$17k. After consulting with graduate students, the Department now realizes the circumstances around the increased funding were not clear to all graduate students.

Short-term response:

- A concerted effort has been made by the Chair and Associate Chair, Graduate Studies to better communicate the (inherently complicated) funding packages to new and returning students. For example, at the annual new graduate student orientation day in September, a session is held to specifically explain the graduate student funding form to new students. In addition, the Graduate Affairs Officer is continuing to meet individually with students to explain their funding packages.

Intermediate-term response:

- A responsibility for the new Graduate Associate Chair and the Graduate Affairs Committee will be to review funding policies for graduate students, including the best ways to communicate this information.
- More generally, the Department has a retreat planned in April 2014 (expected to be the first of regular such meetings) to discuss broad issues of communication and governance in the Department. This will help continue the smooth transition among Departmental members from Physics, Geography, and Geology to a new department.

• *The reviewers noted opportunities to improve relationships with colleagues in cognate units, especially the School of the Environment.*

Individual faculty members in Earth Sciences interact with many UofT units in diverse and numerous ways. Approximately half of the faculty have cross-appointments to other units, supervise, and in other units (e.g. Physics, Chemistry, Geography, Civil & Chemical Engineering), and are principal investigators on grants/proposals with faculty from other units (Civil Engineering, Chemical Engineering, Lassonde Institute, Forestry, Materials Science & Engineering, Geography). Faculty from other units (e.g. Anthropology, Physics, Royal Ontario Museum) supervise students in Earth Sciences and a number of the ES St. George faculty are involved with the new Centre for Planetary Sciences based at UTSC. The Department will continue to foster these interactions and look to develop productive new linkages.

Short-term response:

- A particularly important collaborative opportunity, as the reviewers suggests, is to expand ties with the new School of the Environment. A number of Earth Sciences faculty members are involved with planning the curriculum for the new Environmental Sciences major program within the School. This program will have significant cross-over into the Earth Sciences with shared courses and course options. For example, the Department has converted its GLG202 *Geochemistry* to ENV233-*Earth Systems Chemistry*. This course is now a core part of the Environmental Sciences program as well as the Geology and

Environmental Geoscience programs. It will be co-taught by an Earth Sciences faculty member and instructor from Chemistry (with TA resources coming from Earth Sciences).

Intermediate-term response:

- The Department is also exploring the possibility of an applied geophysics position between Earth Sciences and the School of the Environment (see below). If this moves forward, the request would be submitted to the A&S Faculty Appointments Committee in February 2014 for a search to be initiated in 2014-15.

Resources:

- *The reviewers recommended considering the future of the Jack Satterly Geochronology Laboratory.*

The Jack Satterly Geochronology Laboratory (JSGL) relocated to the Department of Earth Sciences from the Royal Ontario Museum (ROM) in 2003 and is supported by a 0.25 FTE faculty position and technical staff support from the Department. The lab is the birthplace of precise U-Pb geochronology and conducts research in calibrating the timing of diverse events in Earth history such as meteorite impacts, the genesis of ore deposits, and the motion of tectonic plates, as well as resolving the stages of the formation of the solar system.

Short-term response:

- In November 2013 the Department transferred a thermal ionisation multi-collector mass spectrometer (TIMCMS) and supporting equipment to the JSGL. This major piece of research equipment (purchased in 2007) is the core analytical tool for the Lab and represents a significant upgrade on the mass spectrometer currently being used. It provides a significant boost in analytical research capacity, for example with improved precision and potential for sample automation. The equipment is undergoing testing and commissioning by the Lab and should be functioning in the first quarter of 2014.

Intermediate-term response:

- As recommended by the external reviewers, the JSGL and Department are organizing a symposium in spring 2014 around Geochronology at UofT. This will include inviting high-profile scientists in the field to give seminars, along with scientific presentations by JSGL members. The symposium coincides with the 10-year anniversary of the migration of the JSGL from the ROM to UofT. The event will give the Lab an opportunity to profile their work as well as highlight the significance of this field of research for the geosciences to the Earth Sciences faculty. As the external review suggests, this will help the Department make an informed decision on the future of the JSGL in Earth Sciences.

Long-term response:

- With the formation of a new Department of Earth Sciences, there will be renewed discussion whether the JSGL fits within the academic vision for the Department. With a broadening of scope of Earth Sciences, there may be an enhanced case for support for the JSGL as their geochronology work is vital for unraveling time in the full range of geological and environmental Earth processes. Such discussions will take place as part of Departmental retreats to discuss the long-term vision and goals of the Department. This will affirm whether the Department places a priority on establishing the Lab financially with a full-salary position attached to the directorship of the JSGL.

- *The reviewers pointed out areas of scholarship and research that could be further developed, most notably Geophysics.*

The Department's strategic plan (2009-2015) includes Applied Geophysics as a priority hire area. The recent transfer from Physics of a senior faculty member specializing in applied

seismology provides additional strength in this area. With the impending retirements of two faculty in this area across both Earth Sciences and Physics, the Department has indicated the need to renew the teaching and research expertise in applied geophysics. The Department sees opportunity in linking such a position with the Arts & Science School of the Environment and the Archeology Centre.

The Faculty of Arts & Science Appointment Committee meets annually to review requests for teaching staff from Arts & Science units. Requests are reviewed on the basis of criteria that are announced in advance through an annual memorandum to unit heads, including: the unit's Academic Plan and the Faculty's response; any subsequent external review reports; any subsequent discussion and developments that have led to changes in direction; new information and changes to circumstances facing the unit, as well as new academic priorities, challenges, and/or opportunities that have arisen; enrolment pressures at the undergraduate and graduate levels; and the integrity of the unit's programs of teaching and research, given the projected impact of any retirements or resignations. Given the uncertain state of the Faculty's financial position, including the serious impact of recent Provincial changes to the Faculty's program fee funding, budget planning has proceeded cautiously with respect to the number of appointments available across the entire Faculty, although endowments and external sources funded a number of additional positions.

Short-term response:

- A request for a position in Applied Geophysics is being prepared by the Department for submission to the A&S Appointment Committee to be considered for the spring of 2014.

Faculty:

- *The reviewers identified concerns regarding faculty teaching loads that could be addressed through review of the Departmental workload policy.*

The Department's new workload policy is explicit about equalizing teaching loads, and importantly defines a reduced teaching load for pre-tenure faculty members. Some of the comments to the reviewers may stem from individuals feeling like they were moved around between courses too frequently in the pre-tenure period (and it was noted that this practice was considerably worse for more senior faculty members). The Chair also notes that the efforts to rationalize upper year course offerings (as described above) will further help stabilize teaching assignments since the undergraduate programs no longer require the assignment of faculty to several specialized, low enrolment fourth year courses.

Short- and Intermediate-term response:

- The Department will monitor the effect of the revised curriculum on faculty workloads. The Department will also maintain consistent course assignments for faculty as much as possible, especially for junior faculty members.
- The Earth Sciences Undergraduate Affairs Committee reviewed the assignment of TA hours in 2013, redistributing the support among our courses to reflect changing enrolments. The Committee also considered the particular course workload (seminar vs. lecture vs. lab courses) in this redistribution. The Committee will review and adjust where warranted the number of TA hours assigned to courses on an ongoing basis.

- *The reviewers identified unevenness in faculty member research productivity and impact.*

Short-term response:

- A key factor in faculty productivity is research funding, particularly through the NSERC

Discovery Grant (DG) system. With recent changes to the NSERC DG system, some faculty have been unsuccessful in grant applications, severely constraining their ability to recruit graduate students and conduct research. In fall of 2013, the Department instituted an internal peer-review system for new NSERC DG grant applications in an effort to improve their funding results.

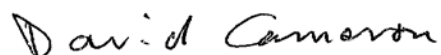
- Some faculty conducting experimental/analytical research have identified a lack of technical staff support as a factor in low productivity. A review of the Departmental technical staff allocations will be conducted in winter 2014. Particular attention will be paid to supporting pre-tenure faculty as this was recognized as a priority.
- Some of the low productivity may be related to low numbers of graduate students recruited by certain faculty members. Encouraging early career researchers in particular to take on more graduate students will help boost productivity. This will be facilitated by improved grant funding and enhanced Departmental financial support for graduate students.

Long-term response:

- Careful hiring practices, mentoring for new faculty members, and consistent course assignments for pre-tenure faculty will receive special attention by the Department.

The review report provides a thoughtful analysis of the Department and undergraduate and graduate programs. We appreciate that the reviewers identified the Department's strengths and noted areas for development. The Department has already implemented and/or has begun to move forward with plans to address the key recommendations highlighted by the reviewers.

Sincerely,



David Cameron,
Dean and Professor of Political Science

cc. Russell N. Pysklywec, Chair and Graduate Chair, Department of Earth Sciences
Amrita Daniere, Vice-Dean Graduate, UTM
William Gough, Vice-Dean Graduate Education and Program Development, UTSC

Review Summary

Program(s):	Linguistics, B.A. (Hons.): Spec, Maj, Min Linguistics, M.A., Ph.D.
Division/Unit:	Department of Linguistics
Commissioning Officer:	Dean, Faculty of Arts & Science
Reviewers (Name, Affiliation):	1. Dr. Robert Bayley, Professor, Department of Linguistics, University of California, Davis 2. Dr. Marie-Hélène Côté, Professor, Département de langues, linguistique et traduction, Université Laval 3. Dr. Colin Phillips, Professor & Distinguished Scholar- Teacher, Department of Linguistics, University of Maryland, College Park
Date of review visit:	November 14 – 15, 2013

Previous Review

Date: January 11, 2007

Summary of Findings and Recommendations:

1. Undergraduate Programs (Linguistics, B.A. (Hons.): Spec, Maj, Min; Linguistics and Languages, B.A. (Hons.): Spec; Linguistics and Philosophy, B.A. (Hons.): Spec.; Linguistics and Computing, B.Sc. (Hons.): Spec)

The reviewers observed the following strengths:

- Program is very well-crafted and successful
- Students receive a high level of focused instruction

2. Graduate Programs (Linguistics, M.A., Ph.D.)

The reviewers observed the following strengths:

- High quality training provided to students
- Planned expansion of the graduate program
- Successful integration of approaches to language variation

The reviewers identified the following areas of concern:

- Possibility that the department is losing excellent B.A. students to Ph.D. programs with direct entry
- M.A. program is demanding and intensive

The reviewers made the following recommendations:

- Reconsider M.A. program structure

3. Faculty/Research

The reviewers observed the following strengths:

- Very high quality, with strong research productivity and international recognition
- Exemplary dedication to teaching and service
- Students involved in faculty research

The reviewers identified the following areas of concern:

- Comparatively small size of the complement

The reviewers made the following recommendations:

- Make new hires to alleviate any strain on the complement

4. Administration

The reviewers observed the following strengths:

- Successful integration of joint/cross appointments with linguists at UTM and UTSC
- Respectful, collegial culture

The reviewers identified the following areas of concern:

- Support staff are stretched

The reviewers made the following recommendations:

- Add staff support to graduate student administration
- Add space in order to foster the collegial environment of the department

Last OCGS Review(s) 2004-05

Date(s):

Current Review: Documentation & Consultation

Documentation Provided to Reviewers:

Terms of Reference; Self-Study; Faculty CVs; Site Visit Itinerary; Faculty of Arts and Science External Review Report (2013); University of Toronto Academic Appointments – Overview; and Faculty of Arts and Science Organizational Chart

Consultation Process:

The reviewers met with the Dean; the Vice Dean, Graduate Education & Program Reviews; the Department Chair, the Chairs/Directors of cognate university departments; junior and senior faculty members; administrative staff; and undergraduate and graduate students.

Current Review: Findings & Recommendations

1 Undergraduate Program

Linguistics, B.A. (Hons.): Spec, Maj, Min

The reviewers observed the following strengths:

- Overall quality
 - Excellent program, among the very best in North America
 - A justifiable source of pride for the Department
 - Impressive, high quality program delivered to a large number of students
- Objectives
 - Program is consistent with Department's academic plan
- Admissions requirements
 - Appropriate in maintaining program quality
- Curriculum and program delivery
 - Rigorous education in formal linguistics and modern linguistics for both the Specialist and Major
 - Breadth and depth of training is unusual in North America
 - Numerous opportunities to learn beyond the classroom, including through Individual Project courses
 - Many undergraduate opportunities for participating in research and fieldwork, often as early as their first year
- Assessment of learning
 - Assessment methods are on par with those of other linguistics programs
- Quality indicators
 - Students are well-prepared to study at the graduate-level
 - Strong record of student achievement in graduate programs in North America
 - Department successful in receiving valuable Curriculum Renewal Initiatives Fund (CRIF) grants, which have enhanced students' empirical methods training
- Program Development
 - Proposed joint major in Linguistics and Speech, focused on Speech Language Pathology, anticipated to be popular
- Students
 - Very high quality students
- Support
 - Innovative participation in the WIT and "Reading to Write" programs
 - Faculty open and engaged with students

The reviewers identified the following areas of concern:

- Curriculum and program delivery
 - Emphasis in the Specialist curriculum on phonology and syntax rather than sociolinguistics and psycholinguistics
 - Use of mandatory core requirements to sequence courses tends to favour certain subdisciplines
 - Unusual practices of approving exams well before the end of the term and having the chair approve grades poses problems for newer faculty
- Quality indicators
 - Lack of data available on career placements
- Support

- Need for additional capacity in academic advising and career advising, beyond relying on the Undergraduate Coordinator to support all students

The reviewers made the following recommendations:

- Curriculum and program delivery
 - Offer more curricular flexibility for students outside of the “core” areas, especially those wishing to focus on sociolinguistics or psycholinguistics
- Program development
 - Ensure that a faculty member with expertise in speech pathology serves as a mentor to the Linguistics and Speech students
- Support
 - Increase advising capacity by hiring graduate students or lecturers to work with students

2 Graduate Program

Linguistics, M.A., Ph.D.

The reviewers observed the following strengths:

- Overall quality
 - High quality graduate training
 - Department’s setting in Toronto lends strength to the graduate programs
- Objectives
 - Programs are consistent with the Department’s academic plan
 - Appropriate degree-level expectations
- Admissions requirements
 - Flexible, appropriate admissions requirements for M.A. program
 - Competitive admissions, with M.A. applications increasing sharply over the past six years
- Curriculum and program delivery
 - *Both programs*
 - Consistently good quality teaching and supervision of individual research projects
 - Strong offerings in Language Variation and Change (LVC)
 - Programs based on a classic model with phonology and syntax at the core, with focus on recent developments in linguistics and areas of faculty expertise
 - Graduate students involved in a wide variety of research projects
 - *M.A. Program*
 - Provides an intensive introduction for research and good coverage of important linguistics areas
 - Clear structure and timetable
 - Forum courses create lasting connections between students
 - Forum papers are a highlight of the student experience
 - Effective matching of students to forum paper supervisors
 - *Ph.D. Program*

- Curriculum reflects training that is appropriate to current research in linguistics
 - High quality teaching and supervision
 - Program length is appropriate to program expectations
- Assessment of learning
 - Appropriate methods of evaluation
- Quality indicators
 - Strong quality of the graduate educational experience
 - Excellent career outcomes for M.A. students
 - Consistently high levels of on-time graduation for M.A. students
 - M.A. program is one of the strongest in Canada and a leader worldwide
 - Ph.D. program is among the top three in Canada and among the top 20 in the world
 - Graduate students interested in pursuing academic research careers
 - Strong placement record for Ph.D. graduates
 - Average time to degree is consistent with UofT norms
- Enrolment
 - Strong cohort of students enrol in M.A. program, a number of whom are drawn from the excellent UofT undergraduate population
- Students
 - High levels of student satisfaction
- Student funding
 - Laudable efforts in providing Ph.D. students with funding beyond the fourth year
- Support
 - Open, welcoming environment; students happy with the opportunities for student-faculty interaction
 - Ph.D. students provided with good guidance in developing their research
 - Friday research groups are good venues for helping students develop presentation skills

The reviewers identified the following areas of concern:

- Overall quality
 - Programs more distinguished by their high quality and depth rather than by their innovative elements
- Admissions requirements
 - Admissions expectations reflect department's emphasis on syntax and phonology versus curricular areas that are less well-developed
 - Limited number of faculty making graduate admissions decisions
 - International students overrepresented among department's most successful graduates
- Curriculum and program delivery
 - *Both programs*
 - Underdeveloped supervision of students' overall development as scholars
 - Challenges related to the tri-campus organization of the graduate programs
 - Not every professor teaches a graduate course every year; issue will continue to grow as complement expands at UTM and UTSC

- Difficulties in UTM and UTSC professors recruiting graduate students
- *M.A. Program*
 - Less flexible program structure limits opportunities outside of the traditional core curriculum, reflecting the prioritization of certain fields
- *Ph.D. Program*
 - Limited involvement in courses and seminars beyond the first year an issue for some students
- Assessment of learning
 - Less attention given to Ph.D. student progress and outcomes
- Quality indicators
 - Limited number of tenure-track appointments available for graduates post-graduation
- Enrolment
 - Ph.D. students primarily drawn from M.A. program
- Student funding
 - Difficulty attracting more international students to the programs due to limits on provincial funding, limiting the department's overall competitiveness
 - Justifiable student concerns regarding levels of funding
- Support
 - Overreliance on graduate coordinator to provide mentoring to students
 - Gap in mentoring between M.A. and Ph.D. programs
 - Need for additional mentoring of students' overall development
 - Students would like more guidance on preparing research for peer-reviewed publication
- Outreach / Promotion
 - Website and publicity materials do not do justice to the department's strengths

The reviewers made the following recommendations:

- Admissions requirements
 - Reconsider the way in which graduate admissions decisions are made
- Curriculum and program delivery
 - *Both programs*
 - Take innovative measures to ensure equitable access to graduate teaching and research assistant opportunities given the tri-campus nature of the graduate program
- Quality indicators
 - Examine why students decline M.A. offers; assess whether the department should allow direct entry into the Ph.D. program
 - Assess prospects for students' future employability given the tight job academic market; provide students with more information about alternative careers
 - Re-examine how mentoring and student funding might be impacting Ph.D. time-to-degree
 - Apply best practices from M.A. program in encouraging Ph.D. students to graduate on time

- Student funding
 - Investigate the number of students who complete the Ph.D. program within the initial four-year funding period
 - Improve the basic graduate student package and funding in the fifth year
- Support
 - Strike a balance between allowing students to chart their own paths and providing consistent mentoring to students
 - Revisit scope of graduate coordinator role; consider assigning faculty mentors to incoming graduate students
- Outreach / Promotion
 - Examine online presence and determine ways to better promote the programs

3 Faculty/Research

The reviewers observed the following strengths:

- Overall quality
 - High quality, active research program
 - Research leader in Canada
 - Department enjoys wide recognition internationally for its overall excellence
- Research
 - Faculty well integrated in international research networks
 - Faculty pursue relevant contemporary research questions
 - Established reputation as a centre for research on aboriginal and understudied languages
 - Research strength in language documentation and revitalization
 - Large number of publications in high-quality outlets
 - Substantial external research funding
 - Numerous invitations to speak at national and international conferences
 - Several major national and international research awards
 - Substantial engagement in the discipline, with many faculty on the editorial boards of journals, participating in professional societies, and organizing major conferences
 - Toronto metropolitan area provides many opportunities for research on many different languages, and for investigating heritage languages and language contact
- Faculty
 - New appointments have expanded coverage and are consistent with current developments in the field, especially in quantitative approaches in sociolinguistics and psycholinguistics
 - Very collegial atmosphere
 - Some faculty at the very top of their field
 - Reasonable balance between lecturer, assistant, associate, and full professor positions

The reviewers identified the following areas of concern:

- Faculty
 - Faculty complement renewal is the most pressing issue facing the Department; a number of upcoming retirements (several in syntax)
 - Faculty have varying perspectives on the best academic direction for the department, chiefly what constitutes core or non-core subject matter
 - In most areas, expertise is concentrated at St. George, with the exception of psycholinguistics, which is more distributed across the three campuses
 - Instances of misalignment between the curriculum the current composition of faculty

The reviewers made the following recommendations:

- Research
 - Continue to explore and leverage the research and relationship-building possibilities afforded by the department's location in Toronto
- Faculty
 - Explore innovative ways to provide similar opportunities for teaching and research for faculty across the three campuses
 - Engage in faculty complement planning, considering the best way forward for the unit; determine whether to build on current strengths or pursue new directions in research and teaching
 - Better align the curriculum and the complement

4 Administration

The reviewers observed the following strengths:

- Relationships
 - Exceptionally strong morale, with a genuine sense of community in the department
 - Very high level of satisfaction among all stakeholders
 - Strength and breadth of programs provide many opportunities for connections with linguists at other institutions and experts in related fields
 - Promising connections with other academic units at UofT, including Spanish, Speech-Language Pathology in the Faculty of Medicine, and Aboriginal Studies
 - Department faculty are strongly connected to international academic networks
 - Faculty genuinely engaged on the world stage, at a level that is consistent with their international standing
 - Positive engagement with alumni and friends in the Toronto community
 - Many faculty engaged in work that has a broader societal impact
 - Involvement in the innovative Cognitive Science major
- Organizational and financial structure (including governance)
 - Appropriate, effective organizational structure
 - Universal support for current academic leadership
 - Effective staff complement
 - Efficient use of existing space
- Planning / Vision

- Department's academic plan is consistent those found at other leading comprehensive universities
- Department/unit/programs relative to the best in Canada/North America and internationally
 - Enviably national and international reputation

The reviewers identified the following areas of concern:

- Relationships
 - Collegial atmosphere could impede challenging discussions of the department's future
 - Department's closeness could create "us/them" situation with cognate departments, potentially impacting the strength of connections to other units
 - Department falling short of its stated goal to be the hub of language and linguistics studies at the University
 - Unclear scope of student connections to Aboriginal Studies
- Organizational and financial structure
 - Not all faculty involved in hiring decisions
- Department/unit/programs relative to the best in Canada/North America and internationally
 - Limited number of reliable indicators (e.g. QS rankings) to assess relative position of programs

The reviewers made the following recommendations:

- Relationships
 - Preserve the strong sense of community within the department
 - Strengthen university-internal connections with linguists in other programs and experts in related fields
- Organizational and financial structure (including governance)
 - Find ways for all faculty to have a voice in new hires
 - Provide additional space to the Department, especially for a departmental seminar room and additional lab space

ADMINISTRATIVE RESPONSE – Appended



13 March 2014

Professor Sioban Nelson
Vice-Provost Academic Programs
University of Toronto

Re: Review of the Department of Linguistics and its undergraduate and graduate programs

Dear Sioban,

Along with the faculty, staff and students of the Department of Linguistics, I am very pleased with the external reviewers' positive assessment of the Department and the undergraduate and graduate programs programs: Linguistics, B.A. (Hons.): Spec, Maj, Min; Linguistics, M.A., Ph.D. The reviewers praised the Department's stellar national and international reputation, noting that the undergraduate program is among the very best in North America and the M.A. and Ph.D. programs are leaders in Canada. The Department's strong morale and well-developed sense of community provide the setting for high-quality, world-class research and excellent teaching and supervision. Students are successful in graduate programs and in career placement, and the department takes full advantage of opportunities to improve the student experience, especially through providing research opportunities to undergraduates.

As per your letter of 6 February 2014, I am writing to address the areas of the review report that you identify as key. The response to these items is separated into short-(current-3 months)/intermediate- (3-12 months)/long-(12+months) term action items for the Department. The Department has seriously considered the reviewers' comments and a number of changes have been instituted over the past few months to respond to their suggestions. The Department has planned a retreat for April 2014 to continue the discussion on the external review report and plan going forward.

Curriculum & Program Delivery

• *The reviewers encouraged the Department to rethink its distinction between “core” and “non-core” curricular areas and the impact that this distinction has on the student learning experience and faculty complement planning.*

The reviewers were impressed by the high quality program that the Department delivers to a large student population.

The Chair already has begun a process to discuss the “core” and “non-core” issues identified by the reviewers within the Department. Based on this discussion, there is a sense among some faculty and students that theory in a narrow sense occupies a privileged place in the Department, and that people who do not work in the area of theory are treated by some faculty and students as not counting quite so much, or as doing research that is not quite so valuable. These perceptions are what the Department would like to address, not the use of the terminology “core” and “non-core.”

Short-term response:

- In February 2014, the Department conducted a survey, inviting all members of the tri-campus unit to identify the areas that a linguistics department must cover. While people used different terminology, there was strong agreement that there are certain areas that are central or fundamental to linguistics, the building blocks that are necessary for everything else. The internal survey results are in full accord with a survey done independently of strong undergraduate programs at ten universities in Canada and the United States. Strong agreement as to the important methodologies in Linguistics was also found across faculty. In fact, in terms of coverage, the department includes all areas that were identified as central, and people work in a variety of methodologies. .
- The Department will continue to discuss and consult on ways to stress respect the wide range of areas that are covered under linguistics. The Department will brainstorm for ideas about how this might be done at its spring retreat.

Intermediate-term response:

- Following the retreat (noted in the point above), the Department had begun a review of requirements, particularly at the graduate level, in 2012-13, and will continue that review in 2014-15, with the goal of program modification, if necessary, to be submitted for approval in fall 2015. This work will be undertaken by the Department's Curriculum Committee.

Students

- *The reviewers noted the need for additional capacity in academic and career advising for both graduates and undergraduates.*

The reviewers noted that the student-faculty interaction is strong and that a community environment exists where students feel valued and have a part in their learning. As members in the department, graduate and undergraduate students benefit from participating in discussions related to academic and career issues. At the same time, the Department has identified areas where more formal career advising would be useful.

Graduate students

Graduate students have identified the major issue involving career advising as involving PhD students in their first year of the program.

Short-term response.

- In consultation with the graduate student executive, the Department has undertaken career advising for first year PhD students, beginning in January 2014, through the establishment of a 'junior forum', a biweekly meeting for first-year PhD students focused on finding their way through the PhD program. Students brainstormed on topics of interest to them, and a recent PhD has been hired to organize the forum. Topics addressed so far include general papers and publications. The short-term goal is to complete and evaluate this advising in order to plan for such advising in the future.
- Workshops for all graduate students are planned later in the term on job applications and family responsibilities. All first year PhD students were given a copy of a book called *Surviving Linguistics: A Guide for Graduate Students* by Monica Macaulay. At the end of the term, the group will compile a list of topics that would be of interest in the future, and the department plans for a full-year junior forum next year, with a facilitator.
- The topics of discussion at the workshops this year come largely from the graduate students, in discussion with faculty, and they are oriented for the most part towards academic jobs. Many people with PhDs in linguistics are in non-academic jobs as well.

Intermediate-term response.

- The Department will seek ways of maintaining career advising on a continuing basis. This activity is currently funded from the Chair's teaching award, and permanent funds will be sought. In addition, it will be helpful to enhance the forum with workshops on non-academic jobs, through inviting recent graduates in non-academic jobs and working with MITACS.

Undergraduates

The reviewers suggest that the undergraduates need more individual counseling. Undergraduate students have various opportunities for academic counseling and advice through the Colleges. Complementary to that, the Department is exploring ways to enhance the program-level and career advising provided to Linguistics students.

Short-term response.

- When the 2014-15 undergraduate calendar is published, the Department will put together more detailed information for undergraduates about making their way through the program. The information will be provided to all majors and specialists by email and through the undergraduate student union social media.
- The Department will re-introduce an undergraduate handbook for 2014-15.

Intermediate-term response.

- The Department will work with undergraduates to organize more in-department events (several already exist). The Department will participate in the Arts & Science "Backpack 2 Briefcase" (b2B) program that connects our students with alumni from their programs and allowing for career mentoring opportunities.

• *The reviewers commented on the doctoral completion times and recommended a re-examination of mentorship practices in the department.*

Time to completion is a priority area identified by the Vice-Dean, Graduate Education & Program Reviews. The Department's consultation with graduate students suggests that they feel a need for earlier mentoring (first year of the PhD), and students feel that they are not always given consistent advice about coursework and generals papers.

Short-term response:

- Beginning in 2014, all first year PhD students will be assigned a faculty advisor. The Graduate Coordinator will plan a workshop in May 2014 (when PhD students begin their generals papers) for faculty advisors to discuss generals paper advising. The Graduate Coordinator will consult with the graduate students about particular concerns that have arisen so that these can be addressed at that workshop.
- Graduate students have identified certain areas where there is not consistency in the answers to questions about aspects of the program. The Graduate Coordinator will work with the graduate students to flesh out these areas, and the process will be spelled out clearly on the website and in the graduate student handbook.

Intermediate-term response:

- The Department will examine individual time-to-degree, with an aim to understanding what factors are involved in taking more than five years for the PhD. As part of the larger Faculty initiative in this area, the Vice-Dean is developing best practices guidelines. She will also work with the Department to understand the factors affecting PhD time-to-completion.

- *The reviewers encouraged the Department to revisit the funding offered to graduate students.*

The reviewers recommended the Department consider ways to improve the funding commitment for students and funding in the 5th year of the program. At the same time, they also commented that the Department does a “laudable job” of securing funding for students beyond the 4th year of the PhD program. The Department has already set up two Provost’s PhD Enhancement Funds (PPEF) in recent years, and uses these funds to support graduate student research and conference travel; a campaign to set up a third fund is now underway. This academic term, the Vice-Dean, Graduate Education & Program Reviews provided a detailed breakdown of the funds available for graduate student recruitment to each Arts & Science unit offering graduate programs, including the Doctoral Completion Award and endowed funds, and mounted workshops on graduate student recruitment funding to ensure programs utilized their existing funds effectively.

Short-term response.

- The Dean’s office will continue to work with the Department to ensure funding sources available for graduate student funding are used effectively. The Department will also review funding available in the 5th year, such as the Doctoral Completion award and TA positions, to determine what is feasible to tell students concerning funding in the 5th year, assuming normal progress in the program. Assuming that this is feasible, the website will be updated. If it does not appear to be feasible, the Department and the Dean’s office will discuss how this might be addressed.

Longer-term response.

- Continue campaign to raise funds for third PPEF to support graduate student funding and research.

Faculty complement

- *The reviewers stated that the most pressing issue facing the Department is faculty complement planning. They encouraged consideration of whether to build on current strengths or pursue new directions in research and teaching as the department plans for its future.*

The reviewers noted that the morale in the Department is exceptionally strong, with a strong sense of community. Decisions about the faculty complement, seen by the reviewers as the major challenge, is also viewed as the major challenge by the faculty. The Department had recently had two retirements and had not had the opportunity to discuss in depth future scholarly directions before the reviewers’ site visit. Post external review, the faculty has already had several discussions about complement planning. There is overall agreement on future directions, and conversations will continue at its spring retreat.

Short-term response.

- The Department will submit a proposal to the Faculty for permission to search, based on maintaining the strength of the Department at a time of unexpected retirements.

The Faculty of Arts & Science Appointment Committee meets annually to review requests for teaching staff from Arts & Science units. Requests are reviewed on the basis of criteria that are announced in advance through an annual memorandum to unit heads, including: the unit’s Academic Plan and the Faculty’s response; any subsequent external review reports; any subsequent discussion and developments that have led to changes in direction; new information and changes to circumstances facing the unit, as well as new academic priorities, challenges, and/or opportunities that have arisen; enrolment pressures at the undergraduate and graduate levels; and the integrity of the unit’s programs of teaching and research, given the projected impact of any retirements or

resignations. Given the uncertain state of the Faculty's financial position, including the serious impact of recent Provincial changes to the Faculty's program fee funding, budget planning has proceeded cautiously with respect to the number of appointments available across the entire Faculty, although endowments and external sources funded a number of additional positions.

Intermediate-term response.

- Given that there will likely be more retirements in the next five years, the Department will engage in longer-term planning as to how the Department should look in terms of areas within Linguistics.

Relationships

• *The Department currently has a number of relationships with cognate departments and linguists throughout the University, and the reviewers noted that there are additional opportunities to strengthen these connections and build new ones.*

Several of the Department's faculty members have been very involved with other units. Junior faculty have been involved in research projects with faculty in Spanish & Portuguese, French, Speech Language Pathology, Computer Science, and Psychology. Faculty (junior and senior both) from Linguistics, Spanish & Portuguese, and Slavic Languages & Literatures have co-organized conferences and workshops. Faculty members from Linguistics, French, and Spanish & Portuguese applied for and received Arts & Science funding to enhance an online sound database and develop a course together. There is joint research with faculty at York University. Such strong interaction is quite impressive in the recently tenured and not yet tenured faculty. The pre-tenure time is one in which these faculty might have been inward focused, and yet many have engaged in research and coordination of conferences and workshops with people from other units. Such interactions are likely to grow now that many of these people have received tenure. Faculty in Linguistics are involved in graduate student supervision in other units (e.g. Speech Language Pathology, French, Spanish & Portuguese, Computer Science), and faculty from several units serve on graduate faculty in linguistics and are involved in graduate supervision of students in linguistics.

Intermediate-term response:

- The Department will continue to encourage faculty to interact with other units as appropriate.
- *The reviewers encouraged the department to explore and leverage the research and relationship-building possibilities afforded by the department's location in the GTA.*

Department members make good use of the possibilities afforded by the location of the University in the greater Toronto area, as appropriate to their research and teaching. The GTA offers rich opportunities for linguistics research, and the research and teaching that is well-suited to making use of these opportunities will continue to take place, as will the continued and expanded efforts at relationship building in the GTA.

Resources and planning

• *The reviewers saw opportunities to improve certain administrative practices, such as faculty participation in complement hiring and graduate admission decisions.*

The Department follows Arts & Science guidelines in searching, with a search committee approved by the Dean and a non-voting student representative selected by the students. The search committee identifies a short list of candidates who are invited for campus visits. All

faculty are invited to have a meeting with job candidates, and are also invited to have a meal with the candidates. The graduate students have a lunch with each candidate, and two graduate students are invited to each dinner. All department members are urged to attend job talks (and the talks are videotaped as well). Feedback from all faculty and students is sought before the search committee meets to make a recommendation. On some occasions a meeting of faculty has been held prior to the meeting of the search committee to solicit feedback, and on others written feedback has been sought. The feedback is very seriously considered in coming to a decision as to who receives the offer.

Short- / Intermediate-term response

- The Chair will continue to ensure faculty are aware of the policy related to hiring and will continue to engage and consult faculty during the hiring process where allowable by policy.

In terms of graduate student admissions, within the Department this is handled by a committee of four faculty, representing different ranks and different areas of interest, chaired by the Graduate Coordinator. The committee reviews all applications, identifying the students who are strong with interests that would be well served by the program. In trying to build new areas of research, the faculty in that area are consulted.

Intermediate-term response.

- Before the admissions process begins next year, the Graduate Coordinator will consult with the Vice-Dean, Graduate Education & Program Reviews and other departments to see the range of ways in which admissions is handled and report to the Department, with discussion about whether current practice could be improved.

The reviewers also discussed the Department's administrative practices in terms of the responsibilities of the undergraduate and graduate coordinators. The Department has attempted to redistribute some of the workload, with administrative staff taking on work that has been handled by the undergraduate and graduate coordinators in the past as well as by hiring work/study students. However, the workload is very heavy, especially for recently tenured faculty who need to pay considerable attention to their research programs, and the workload of the administrative staff is also significant.

Intermediate-term response.

- The Department will consult with the Dean's Office and with other departments about how this workload matters can best be considered.

• *The reviewers noted challenges and opportunities in the organization of the tri-campus graduate program.*

Graduate teaching.

The Department workload policy states that faculty in the graduate department can expect to teach at least one graduate half-course every two years as part of their normal teaching load. In fact, the Department has encouraged faculty at UTM and UTSC to teach a graduate course every year so that they can have a strong presence in the graduate program. As the reviewers note, this may not be sustainable as UTM and UTSC hire more faculty.

Intermediate-term response:

- In its review of the graduate program, to take place in 2014-15, the Department will consider ways of approaching graduate teaching that balance the needs of faculty of the different campuses.

Graduate student supervision.

The reviewers noted that UTM and UTSC faculty members might have more difficulty in recruiting graduate students, due to their more limited presence in the St. George department and the students' expressed preference to stay on the St. George campus. The UTSC faculty who have been at the University for several years are actively involved as PhD supervisors, and the more recently hired faculty are involved in graduate advising at the MA level and in PhD general papers.. (We note that, in general, it takes a few years before new faculty, regardless of campus, become PhD supervisors, although all have been involved on Ph.D. committees from soon after they are hired.)

Intermediate-term response.

- The Department will consult with the Dean's office and other graduate programs about how they handle tri-campus supervision, especially when lab work is involved.

Quality

• *The reviewers noted concerns over the Department's competitiveness and international standing arising from its limited ability to fund international graduate students.*

The Department attracts excellent students, with strong domestic and international applicants both. However, finding expanded funding for international graduate students is a challenge shared across the Faculty of Arts & Science. Strengthening support for international students is an identified priority in the Faculty's academic plan and its importance reiterated in the 2013 Faculty external review. The Faculty's financial challenges constrain our graduate programs in limiting our ability to recruit the best students, in limiting admissions of international students, and in supporting our students. We have worked with our units to devise funding packages for recruitment purposes. A&S Advancement has had success in raising funds for graduate fellowships, and the Graduate Admissions Committee has usefully offered strategic direction for units' admissions.

Short-term response:

- The Department will engage with Arts & Science Advancement to explore how funds could be raised to support international students.

Other issues

Space

The reviewers identified two major needs, a seminar room and additional lab space.

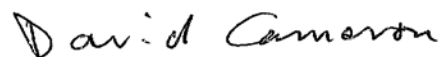
Short-term response:

- In 2014-15, the Department will work with the Dean's Office to explore space options considering the Department's overall space needs.

The review report provides a thoughtful analysis of the Department and undergraduate and graduate programs. We appreciate that the reviewers identified the Department's strengths and

noted areas for development. The Department has begun to move forward with plans to address the key recommendations highlighted by the reviewers.

Sincerely,

A handwritten signature in black ink that reads "David Cameron". The signature is written in a cursive style with a large initial 'D'.

David Cameron,
Dean and Professor of Political Science

cc. Keren Rice, Chair and Graduate Chair, Department of Linguistics
Amrita Danieri, Vice-Dean Graduate, UTM
William Gough, Vice-Dean Graduate Education and Program Development, UTSC

Review Summary

Program(s):	Mathematics, B.Sc. (Hons.): Specialist, Major and Minor Applied Mathematics, B.Sc. (Hons.): Specialist Mathematics and Its Applications, B.Sc. (Hons.): Specialist Mathematics and Philosophy, B.Sc. (Hons.): Specialist Mathematics and Physics, B.Sc. (Hons.): Specialist Mathematical Applications in Economics and Finance, B.Sc. (Hons.): Specialist Mathematics, M.Sc., Ph.D. Mathematical Finance, M.M.F.
Division/Unit:	Department of Mathematics, Faculty of Arts & Science
Commissioning Officer:	Dean, Faculty of Arts & Science
Reviewers (Name, Affiliation):	Dr. Niky Kamran, James McGill Professor, Department of Mathematics and Statistics, McGill University Dr. Sheldon Katz, Professor, Department of Mathematics, University of Illinois, Urbana-Champaign Dr. W. Hugh Woodin, Professor, Department of Mathematics, University of California, Berkeley
Date of review visit:	March 25 – 26, 2013

Previous Review

Date: December 2 and 3, 20004

Summary of Findings and Recommendations:

- Undergraduate Programs** (Mathematics, BSc: Spec, Maj; Applied Mathematics, BSc: Spec; Mathematics and Its Applications, BSc: Spec; Mathematics and Philosophy, BSc: Spec; Mathematics and Physics, BSc: Spec)

The reviewers observed the following strengths:

- Outstanding specialist graduates
- Quadrupled size of specialist program following the introduction of the mathematics and its application program

The reviewers made the following recommendations:

- Revive the interdisciplinary Mathematics-Physics-Chemistry Program
- Coordinate better with cognate departments in FAS, especially for teaching of undergraduate mathematics

2. Graduate Programs (Mathematics, MSc, PhD)

The reviewers observed the following strengths:

- Very successful, reflected in the high rate of success in the placement of recent graduates

The reviewers made the following recommendations:

- Make sure graduate students have an opportunity to teach before they graduate

3. Faculty/Research

The reviewers observed the following strengths:

- Leading mathematics department in Canada; within the top five or six departments at publicly funded institutions in North America
- Department is consistently hiring the very best faculty regardless of their fields of research
- Proximity to the Fields Institute is an asset
- CLTAs and post-doctoral fellows making important, positive contributions to the department

The reviewers identified the following areas of concern:

- Retention of faculty is a challenge, especially junior faculty

The reviewers made the following recommendations:

- Focus on the timely promotion of key faculty to retain them
- Build on areas of existing strength in the complement
- Expand complement as tri-campus enrolment grows to maintain student to faculty ratio
- Significantly increase the number of CTLAs
- Extend fellowships from two years to three years

4. Administration

The reviewers observed the following strengths:

- Successful tri-campus relationships
- Capable, high-functioning administrative staff

The reviewers identified the following areas of concern:

- Pressing space issues; offices scattered throughout the campus and inadequate lounges/spaces for interaction

The reviewers made the following recommendations:

- Promising plans to move the department to the Bahen Centre
- Maintain and restore departmental library

Last OCGS Review(s) 2008/09

Date(s):

Current Review: Documentation & Consultation

Documentation Provided to Reviewers:

Terms of Reference; Self-Study; Faculty CVs; Site Visit Itinerary; Faculty of Arts and Science External Review Report (2013); University of Toronto Academic Appointments – Overview; and Faculty of Arts and Science Organizational Chart

Consultation Process:

The reviewers met with the Dean; the Vice Dean, Graduate Education & Program Reviews; the Department Chair, the Chairs/Directors of cognate university departments; junior and senior faculty members; administrative staff; and undergraduate and graduate students.

Current Review: Findings & Recommendations

1 Undergraduate Program

Mathematics, B.Sc. (Hons.): Specialist, Major and Minor

Applied Mathematics, B.Sc. (Hons.): Specialist

Mathematics and Its Applications, B.Sc. (Hons.): Specialist

Mathematics and Philosophy, B.Sc. (Hons.): Specialist

Mathematics and Physics, B.Sc. (Hons.): Specialist

Mathematical Applications in Economics and Finance, B.Sc. (Hons.): Specialist

The reviewers observed the following strengths:

- Curriculum and program delivery
 - Positive outcomes of high school to college transitional courses, such as the PUMP non-credit course
 - Department regularly takes measures to improve content and delivery of courses
- Quality indicators
 - Comparable to undergraduate programs at the top research universities in Canada and the U.S.
 - Specialist programs effectively target students who would be suitable candidates for graduate school
- Enrolment
 - Overall growth indicates a very positive trend, reflecting the excellent reputation of the Department
 - Remarkable growth in enrolment in Specialist programs between 2002 (329) and 2011 (513), due in large part to the success of the Specialist in Mathematical Applications in Economics and Finance
- Students
 - Student consistently rate courses as excellent
 - Students interviewed are happy and engaged
- Support
 - Department actively engages students outside of the classroom, such as through the Mathematics Undergraduate Union Seminar series and the Fields Undergraduate Network

The reviewers identified the following areas of concern:

- Physical resources
 - Some undergraduate majors do not have access to common spaces after classes

The reviewers made the following recommendations:

- Physical resources
 - Allow major students to access common spaces

2 Graduate Program

Mathematics, M.Sc., Ph.D.

Mathematical Finance, M.M.F.

The reviewers observed the following strengths:

- Overall quality
 - Graduate programs are outstanding and consistent with the academic standing of the faculty
 - M.M.F. is a highly successful, self-supporting program
- Admissions requirements
 - M.Sc. admissions requirements are “flexible but appropriate”
 - Ph.D. admissions are selective—appropriate for a department with distinguished research faculty
 - M.M.F. admission is highly selective, below 20%
- Curriculum and program delivery
 - M.Sc. and Ph.D. program delivery is primarily traditional, which is both appropriate and effective
 - M.M.F. students develop an in-depth understanding of the current state of quantitative finance from both the academic and business perspectives
 - M.M.F. curriculum is flexible and adaptable
 - Tri-campus systems works well
- Quality indicators
 - M.Sc. time to completion is little more than one year—very good for mathematics and faster than averages for the Physical Sciences and all of U of T
 - Good average time-to-completion for Ph.D. students (5 years)
 - “Phenomenal success” of M.M.F. evidenced by the 100% placement rate for internships and 100% employment rate for graduates since the program began in 1998
 - Limited but positive data regarding post-graduate employment of students
- Students
 - Students have positive impressions of the programs
 - M.M.F. students are highly motivated to succeed
- Student funding
 - An impressive number of M.Sc. students (40%) hold external fellowships or scholarships—twice the Arts & Science and Physical Science averages
 - 25% of Ph.D. students have external fellowships or scholarships—high for mathematics students
- Support

- Ph.D. students receive “enriched training” and benefit from access to leading experts in the field
- Proposal to create a Center for Applied Mathematics and Statistics could provide preparation for students for non-academic employment, and this endeavour is worthy of support from the University

The reviewers identified the following areas of concern:

- Curriculum and program delivery
 - Increasing difficulty in offering courses in mathematics fields due to the erosion of the faculty complement
- Quality indicators
 - Opportunities for improvement in the post-graduation employment of students, though several faculty members are already working on such improvements
- Student funding
 - Serious concerns about the funding structure for international students; could have an impact on the competitiveness of the Department in attracting top international students
- Faculty resources
 - Graduate students are teaching large lecture courses, taking time away from their studies; however, the teaching experience will make them more competitive in the academic job market
- Physical resources
 - Office space for doctoral students is scattered, making it difficult for students to participate in group research and learning

The reviewers made the following recommendations:

- Quality indicators
 - Ph.D. times to completion could be improved by relaxing course requirements for first-year students
- Student funding
 - Reinstate fee waivers for international graduate students
- Support
 - Make adjustments to the relationship with the Field Institute so that doctoral students can derive greater benefit from its activities

3 Faculty/Research

The reviewers observed the following strengths:

- Overall quality
 - World-class department; elite academic unit
- Research
 - Excellent publication record

- RiskLab and GAINTA are very successful laboratories, providing mathematical expertise in mathematical finance and information security; both labs help graduates and post-doctoral fellows to gain employment in the financial and IT industries
- Scope, quality and relevance
 - Excellence in a broad range of sub-disciplines of pure and applied mathematics
 - Department has received a “healthy” number of NSERC undergraduate summer research awards
- Faculty
 - Excellent record of hiring junior faculty
 - Remarkable success record in the Sloan Fellowship Program, with 12 awards to junior faculty in the Department between 2002 and 2013
 - Commendable practice of hiring faculty at the highest international levels

The reviewers identified the following areas of concern:

- Faculty
 - High-achieving junior faculty recruited away from the Department
 - Proportional loss of tenure-stream faculty in favour of teaching stream positions
 - Need for a new tenure-stream appointment in Mathematical Logic and Set Theory

The reviewers made the following recommendations:

- Faculty
 - Continue to recruit and retain high-performing junior faculty
 - Allow Department to retain faculty lines and CRCs if faculty members depart within a defined period of time after an initial appointment
 - Ensure that tenure stream lines are retained when faculty depart from the University
 - Develop more efficient and effective modes of instructional delivery by tenure stream faculty

4 Administration

The reviewers observed the following strengths:

- Scope and nature of relationships with cognate Faculties, academic departments and units
 - Very successful relationship with cognate units in the Faculty—Statistics, Computer Sciences, and Physics—reflected in the number of joint appointments with these departments
- Relationships with external government, academic and professional organizations
 - Fields Institute for Research is a tremendous asset for the Department and University; many faculty are closely involved in organizing successful thematic programs at the Fields Institute
- Department/unit/programs relative to the best in Canada/North America and internationally

- “An elite academic unit, comparable in strength to the best mathematics departments in North America”

The reviewers identified the following areas of concern:

- Morale of faculty, students and staff
 - Low faculty morale, in spite of department’s elite status and achievements, mainly due to changes in faculty complement
- Resource allocation, including space and infrastructure support
 - Faculty and graduate student offices are spread across the campus in different locations, which is inefficient
- Planning / Vision
 - Major planning challenge in building tenure-stream complement of research faculty to historical levels

The reviewers made the following recommendations:

- Relationships with external government, academic and professional organizations
 - Continue to foster the close relationship to the Fields Institute
- Organizational and financial structure
 - Make committee assignments at the end of the academic year which precedes the year of service so that committees can be active right away
- Resource allocation, including space and infrastructure support
 - Relocate faculty, post-doc fellows, and graduate students within the Bahen Center to create greater cohesion within the Department
- Planning / Vision
 - At the University-level, engage in planning relative to online education

ADMINISTRATIVE RESPONSE – Appended



10 March 2014

Professor Sioban Nelson
Vice-Provost Academic Programs
University of Toronto

Re: Review of the Department of Mathematics and its undergraduate and graduate programs

Dear Sioban,

Along with the faculty, staff and students of the Department of Mathematics, I am very pleased with the external reviewers' positive assessment of the Department and the undergraduate and graduate programs: Mathematics, B.Sc. (Hons.): Specialist, Major and Minor; Applied Mathematics, B.Sc. (Hons.): Specialist; Mathematics and Its Applications, B.Sc. (Hons.): Specialist; Mathematics and Philosophy, B.Sc. (Hons.): Specialist; Mathematics and Physics, B.Sc. (Hons.): Specialist; Mathematical Applications in Economics and Finance, B.Sc. (Hons.): Specialist; Mathematics, M.Sc., Ph.D.; and Mathematical Finance, M.M.F. The reviewers lauded the Department's outstanding position as one of the best mathematics departments in North America. They specifically praised the high quality and success of the academic programs, the faculty's excellent publication record, and the department's broad research expertise within a range of sub-disciplines of pure and applied mathematics.

As per your letter of 12 January 2014, I am writing to address the areas of the review report that you identify as key. The response to these items is separated into short-(current-3 months)/intermediate- (3-12 months)/long-(12+months) term action items for the Department. The Department has seriously considered the reviewers' comments and a number of changes have been instituted over the past few months to respond to their suggestions.

Curriculum & Program Delivery

• *The reviewers saw opportunities for improvement in the preparation of graduate students for non-academic employment.*

The reviewers noted that they had received limited data on post-graduation employment of students, but were left with an overall positive impression. They noted that graduate students received enriched training and benefited from interactions with leading experts through lectures. Several faculty members are working on overall improvements, and suggested that a proposed Center for Applied Mathematics and Statistics would be an excellent initiative in this direction.

Short-term response:

- Department faculty members are exploring the development of a Master's program in an area such as the mathematics of data.
- Efforts are also being made to increase the number of MITACS Elevate and Accelerate Fellowships and NSERC Industrial R&D Fellowships, both of which will increase the exposure of students to mathematical problems that arise in industry.

Intermediate-term response:

- The Department plans to work with the leadership in cognate departments to develop a more detailed academic rationale and budget plan for the proposed Centre, which will then be considered by the Faculty.
- At a Faculty level, we are working to promote a broader, multi-faceted strategy to support the academic and non-academic professional development of our students outside of programs. In particular, students in our doctoral stream Master's and PhD programs have expressed greater interest in having more opportunities facilitated by their academic units to explore disciplinary, non-academic career opportunities. This term we have initiated a process to understand unit's current activities with the aim of sharing best practices. We will also explore the potential to partner with the School of Graduate Studies and Career Services.

• *The reviewers suggested that decreases in complement have affected the ability to offer graduate courses in important fields.*

The reviewers found the suite of graduate programs offered by the Department to be outstanding and met with graduate students who shared the same positive impression of the programs. However, decrease in complement has affected topics courses that introduce students to fields of current and active research. It also had an impact on the Department's undergraduate program.

Short-term response:

- The Department requested and received approval to search for three positions in 2013-14. All three are tenure-stream positions: one at the rank of Assistant Professor in the field of Applied Mathematics; the second in the field of Number Theory and Geometry at the rank of Assistant Professor; and the third at the rank of Associate Professor in the field of Mathematical Physics. The latter position is a joint hire with the Perimeter Institute for Theoretical Physics.
- A request for positions is being prepared by the Department for submission to the A&S Appointment Committee to be considered for the spring of 2014. These will be in the fields of Algebraic Combinatorics (Discrete Math), Mathematical Visualization (joint with the Department of Computer Science), and a joint position in Geometric Langlands/Probability with the Perimeter Institute for Theoretical Physics.

The Faculty of Arts & Science Appointment Committee meets annually to review requests for teaching staff from Arts & Science units. Requests are reviewed on the basis of criteria that are announced in advance through an annual memorandum to unit heads, including: the unit's Academic Plan and the Faculty's response; any subsequent external review reports; any subsequent discussion and developments that have led to changes in direction; new information and changes to circumstances facing the unit, as well as new academic priorities, challenges, and/or opportunities that have arisen; enrolment pressures at the undergraduate and graduate levels; and the integrity of the unit's programs of teaching and research, given the projected impact of any retirements or resignations. Given the uncertain state of the Faculty's financial position, including the serious impact of recent Provincial changes to the Faculty's program fee funding, budget planning has proceeded cautiously with respect to the number of appointments available across the entire Faculty, although endowments and external sources funded a number of additional positions.

Quality Indicators:

• *The reviewers noted the high quality indicators for the PhD program. With respect to improving the completion time, they suggested relaxing the course requirement for first-year doctoral students.*

The reviewers commented that the suite of graduate programs offered by the Department is ‘outstanding’. The reviewers noted that the mean time to completion for PhD students is 5 years, which is good.

Short-term response:

- The Department’s Graduate Committee is discussing the course requirements for first year doctoral students as well the Qualifying Exams. It is expected the Committee will bring forward a recommendation in 2014.

• *The reviewers expressed concern that limited funding available for international graduate students disadvantaged the program in competing for the best students internationally.*

Finding expanded funding for international graduate students is a challenge shared across the Faculty of Arts & Science. Strengthening support for international students is an identified priority in the Faculty’s academic plan and its importance reiterated in the 2013 Faculty external review. The Faculty’s financial challenges constrain our graduate programs in limiting our ability to recruit the best students, in limiting admissions of international students, and in supporting our students. We have worked with our units to devise funding packages for recruitment purposes. A&S Advancement has had success in raising funds for graduate fellowships, and the Graduate Admissions Committee has usefully offered strategic direction for units’ admissions.

Short-term response:

- The Department took advantage of the Provost’s PhD Enhancement Fund (PPEF) by raising \$200,000 in the first round to support international graduate students, and will participate in future rounds.

Faculty

• *The reviewers noted a decrease in the tenure stream complement and recommended the Department consider the optimal balance between teaching stream and tenure stream faculty as well as the use of online and other innovative methods of instructional delivery.*

As noted above, the Department has requested and received approved to search for three faculty members in 2013-14, and is preparing a request for two faculty members for this spring.

In terms of online and innovative methods of instructional delivery the Department is already piloting such methods. Indeed, the reviewers commented on “the Department’s openness and sensitivity to the opportunities offered by the use of new and innovative modes of course delivery” and they referred to instances of this in which pre-recorded videos were used to supplement classroom instruction.

Short-term response:

- In the fall of 2013, the Faculty of Arts & Science implemented a new funding initiative, Advancing Teaching and Learning in Arts & Science (ATLAS), in order to support a wide range of teaching and learning initiatives within the Faculty, including supporting enhanced and innovative teaching that incorporates leading pedagogical approaches and contributes to a body of evidence-based effective practices. Fourteen proposals were

received this winter and more than half have been funded for 2014-15. The Dean's Office has encouraged departments to apply for next year's fund.

• *The reviewers noted a strong spirit of collegiality in the Department but felt all the same that the morale of faculty was low.*

The reviewers' noted that the Department and its faculty have achieved an elite status through international research and strong spirit of collegiality. Their comment regarding morale was attributable to retirements and resignations of faculty members over the past few years that have not been replaced, and matters related to space. The issue of complement is addressed above and space issues are discussed below.

Resources and Planning

• *The reviewers praised the Department's recent efforts to consolidate space but flagged continued concerns over the location and set-up of faculty and graduate student offices on campus and lack of common undergraduate student study space.*

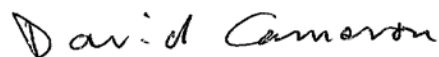
For the past five or so years, largely due to the Faculty's and the University's constrained financial situation, we have not been in a position to pursue any major construction or renewal of our physical infrastructure. As a first step towards understanding our physical infrastructure, we expect that the A&S Office of Infrastructure Planning comprehensive Faculty-wide Space Benchmark Study, initiated last year, will be complete in 2014-15. This information will serve to identify the space needs of users as well as opportunities for better utilization of our space, including consolidating departments that are currently spread across the St. George campus.

Short-/Intermediate-term response:

- The Department is working with the Faculty's Office Director of Infrastructure Planning regarding consolidation of its space, as well as developing a common undergraduate study space.

The review report provides a thoughtful analysis of the Department and undergraduate and graduate programs. We appreciate that the reviewers identified the Department's strengths and noted areas for development. The Faculty and the Department have already implemented and/or has begun to move forward with plans to address the key recommendations highlighted by the reviewers.

Sincerely,



David Cameron,
Dean and Professor of Political Science

cc. Kumar Murty, Chair and Graduate Chair, Department of Mathematics
John Bland, Acting Chair and Graduate Chair, Department of Mathematics
Amrita Daniere, Vice-Dean Graduate, UTM
William Gough, Vice-Dean Graduate Education and Program Development, UTSC

Review Summary

Program(s):	Physics, B.Sc. (Hons.): Specialist, Major and Minor Biological Physics, B.Sc. (Hons.): Specialist Philosophy and Physics, B.Sc. (Hons.): Specialist Physics “Life and Environmental”: Minor Physics, M.Sc., Ph.D.
Division/Unit:	Department of Physics, Faculty of Arts & Science
Commissioning Officer:	Dean, Faculty of Arts & Science
Reviewers (Name, Affiliation):	<ol style="list-style-type: none">1. Dr. John Berlinsky, Director of Academic Programs, Perimeter Institute for Theoretical Physics; Professor of Physics & Astronomy (emeritus), McMaster University2. Dr. James C. McWilliams, Louis B. Slichter Professor of Earth Sciences, UCLA Institute of Geophysics and Planetary Physics and Department of Atmospheric and Oceanic Sciences, UCLA3. Dr. J. Michael Roney, Professor of Physics and Astronomy, Department of Physics and Astronomy, University of Victoria
Date of review visit:	February 25 – 26, 2013

Previous Review

Date: September 9 – 10, 2004

Summary of Findings and Recommendations:

1. Undergraduate Programs (Physics, BSc: Spec, Maj; Biological Physics, BSc: Spec; Applied Physics, BSc: Spec; General Physics, BSc: Maj)

The reviewers observed the following strengths:

- Excellent undergraduate teaching
- Well-thought out courses; admirable at providing service education
- Curriculum prepares students for top graduate schools

The reviewers identified the following areas of concern:

- Undergraduate students frequently recruited to schools in the U.S.

The reviewers made the following recommendations:

- Better capitalize on undergraduates ready for graduate school by fast-tracking admissions, offering substantial stipends, and communicating about post-graduate possibilities

- Engage in planning and development for upgrades to laboratory equipment

2. Graduate Programs (Physics, M.Sc., Ph.D.)

The reviewers observed the following strengths:

- Quality space for graduate students

The reviewers identified the following areas of concern:

- Competition for top graduate students; stipends not as competitive

The reviewers made the following recommendations:

- Establish clear metrics for graduate students' satisfactory progress through a set of core courses and offer more flexibility in the timeline to complete courses
- Make more attractive offers to both Canadian and international students

3. Faculty/Research

The reviewers observed the following strengths:

- First-rate department with an outstanding faculty
- UTM and UTSC have well-defined agendas for future faculty hiring and research directions
- Strong Atmospheric Physics group

The reviewers identified the following areas of concern:

- Retirement of introductory course lecturers
- Departmental reputation seems to be slipping
- No clear plan for teaching and research priorities
- Issues in the Geophysics research program

The reviewers made the following recommendations:

- Undertake long-range planning for faculty recruitment and resources over the next 10 years; plan should be explicit regarding undergraduate teaching
- Engage junior faculty bolstering the departmental reputation through faculty and graduate student recruitment
- Encourage tri-campus collaboration

4. Administration

The reviewers observed the following strengths:

- Strong, productive ties with cognate units and institutes
- Impressive administrative staff

The reviewers identified the following areas of concern:

- Faculty concerned about lack of clarity
- Budget constraints have put stress on staff; morale is a concern

The reviewers made the following recommendations:

- Explore the formation of a Geological Sciences department including Geophysics
- Create a departmental handbook or constitution to improve clarity
- Commendable efforts on the Chair to support staff through development funds and meetings

Last OCGS Review(s) 2005/06

Date(s):

Current Review: Documentation & Consultation

Documentation Provided to Reviewers:

Terms of Reference; Self-Study; Faculty CVs; Site Visit Itinerary; Faculty of Arts and Science External Review Report (2013); University of Toronto Academic Appointments – Overview; and Faculty of Arts and Science Organizational Chart

Consultation Process:

The reviewers met with the Dean; the Vice Dean, Graduate Education & Program Reviews; the Department Chair, the Chairs/Directors of cognate university departments; junior and senior faculty members; administrative staff; and undergraduate and graduate students.

Current Review: Findings & Recommendations

1 Undergraduate Program

Physics, B.Sc. (Hons.): Specialist, Major and Minor
 Biological Physics, B.Sc. (Hons.): Specialist
 Philosophy and Physics, B.Sc. (Hons.): Specialist
 Physics “Life and Environmental”: Minor

[N.B.: Reviewers did not differentiate between the undergraduate programs.]

The reviewers observed the following strengths:

- Objectives
 - A “full-service” physics program, satisfying all of the physics education needs of the Faculty
- Curriculum and program delivery
 - Curriculum is comprehensive, allows students to learn at high level
 - Program options are appropriate and correspond to standard expectations for the discipline
 - “Considerable creativity and innovation have gone into the design and execution of the large first year course for students in the life sciences”; lectures are “dramatic and memorable”
 - Specialist graduates are prepared for graduate education at top institutions
 - Upper-level courses represent core physics knowledge and are taught almost exclusively by research faculty
- Assessment of learning
 - Assessment practices are appropriate to the programs
- Quality indicators
 - Specialist graduates are successful in transitioning to graduate school

- Support
 - The creative Physics Mentoring Program allows undergrads to learn about the experiences of physics graduate in the workplace and academia
- Faculty resources
 - Students have ready access to faculty for help and advice and view the quality of interaction with faculty as high
- Physical resources
 - New space for Physical Practicals course is innovative and reflects pedagogical best practices

The reviewers identified the following areas of concern:

- Curriculum and program delivery
 - Question of whether sections of 300 students would provide a better learning experience than the current 1,000-student lectures in Convocation Hall
- Quality indicators
 - Significant attrition between Year 2 and 3, though not an inappropriate level given the challenging nature of the programs
 - Only about half of Physics specialists and majors complete in four years or less; nearly one-third require five years
 - Lack of information available about the success of graduates entering the workforce

The reviewers made the following recommendations:

- Curriculum and program delivery
 - Find the the best size and format for large-scale physics lectures
 - If Convocation Hall continues to be used, find a space to store demonstration equipment nearby
- Quality indicators
 - Consider whether administrative and/or scheduling issues are causing students to need to take a fifth year
 - Initiate a system for tracking students' post-graduation employment
- Faculty resources
 - Consider how the addition of a senior research project for specialist would increase students' opportunities to interact with faculty
- Physical resources
 - Consider how facilities similar to those of Physical Practicals would benefit the first-year course for specialists

2 Graduate Program

Physics, M.Sc., Ph.D.

The reviewers observed the following strengths:

- Overall quality
 - “Exceptional” graduate program; “students receive a graduate education experience that is of the highest quality”
 - Graduate program is unique in Canada and covers a broad range of sub-disciplines
 - The graduate program’s “overall reputation, breadth of sub-disciplines, growth in numbers of graduate students, level of financial support for the students, course structure and course offerings are all at a very high level
- Objectives
 - Faculty and department are clearly committed to excellence and the promotion of graduate student research of outstanding international quality
- Admissions requirements
 - Requirements are appropriate for both the M.Sc. and Ph.D.
- Curriculum and program delivery
 - Curriculum is “of the highest calibre” and “exhibits the impressive breadth of the department”
 - Graduate courses are kept current, as expected of a top-tier graduate school
 - M.Sc. is well-structured and prepares students for Ph.D.-level research
 - Successful addition of the innovative biological physics field and consolidation of climate change/geophysics strengths into Earth-Atmosphere-Planetary Physics group
 - Innovative addition of the direct-entry Ph.D. option
 - Commendable use of self-directed, online, technology-related courses
- Quality indicators
 - Completion rates and times-to-completion are comparable to other top-tier physics graduate schools
 - Students are awarded increasingly larger proportion of NSERC scholarships
- Enrolment
 - Planned enrolment growth of 30% since 2006
- Student funding
 - Levels of funding attract the strongest students
- Support
 - Level and quality of supervision are excellent

The reviewers identified the following areas of concern:

- Curriculum and program delivery
 - Tri-campus program delivery complicates scheduling and communications
- Quality indicators
 - No systematic data available on post-graduation employability
 - Department notes that time-to-completion may be increasing
- Student funding
 - Concerns about the high costs to the department and faculty supervisors in supporting international graduate students
 - Limited funding for non-Canadian graduate students hurts the department and the University

- Support
 - Not all PhD committee meetings are being held on an annual basis
- Faculty resources
 - Appears that there is an insufficient number of high energy theorists for the number of students interested in that area

The reviewers made the following recommendations:

- Curriculum and program delivery
 - Department should remain sensitive to scheduling and communications issues arising from the tri-campus nature of the graduate programs
 - Consider additional mini-courses on particular technologies that cross sub-disciplines, such as common instrumentation techniques
- Quality indicators
 - Track and report on what graduate students do upon completion of the program
 - Keep a check on any upwards creep in times-to-completion
- Student funding
 - Re-examine all aspects of funding for non-Canadian graduate students
- Support
 - Consider having the student's supervisor play a larger role in the scheduling of the annual committee meetings; monitor whether or not the meetings occur

3 Faculty/Research

The reviewers observed the following strengths:

- Overall quality
 - High quality research
- Scope, quality and relevance
 - Scope is unusually large for a North American Physics department
 - Outstanding, international-level groups in high energy, quantum optics, and condensed matter physics
- Level of activity relative to national and international comparators
 - Research faculty are all active, well-funded by Canadian standards, and receive above-average grant sizes
- Appropriateness of activities for the undergraduate and graduate students in the programs
 - Undergraduates have research opportunities through participating programs such as the NSERC URSA; working in national and international labs; and through developing teaching exercises and lab experiments for the department
 - Almost all Ph.D. students produce a refereed publication in one of the field's top tier, high impact, international, peer-reviewed journals
- Faculty
 - Current plan for faculty renewal is justified and logical

The reviewers identified the following areas of concern:

- Research
 - Challenge of maintaining high quality research while NSERC budget for basic research is being cut
- Faculty
 - Serious challenge of a shrinking faculty contingent in light of growing enrolments
 - Practice of replacing one faculty member for every two retirements could be detrimental to the department over time
 - Lost opportunity to recruit a joint faculty member with the Perimeter Institute
 - Current complement and plan for the Earth, Atmospheric, and Planetary Physics group (EAPP) does not sufficiently cover the core range of scientific areas claimed by EAPP; group has shrunk from its original complement

The reviewers made the following recommendations:

- Research
 - Engage federal and provincial government in discussions regarding NSERC budget allocations
- Appropriateness of activities for the undergraduate and graduate students in the programs
 - Lobby the government to protect and enhance programs like NSERC USRA and NSERC PGS
- Faculty
 - Maintain a critical mass of faculty in each of the research areas to maintain the department's excellence
 - Take appropriate action to ensure relationship with the Perimeter Institute
 - Need for the Faculty and department to decide whether to commit to a hire in planetary-interior physics in the EAPP group

4 Administration

The reviewers observed the following strengths:

- Relationships
 - Working relationships with cognate units is very positive
- Morale of faculty, students and staff
 - Department is remarkably cohesive and collegial despite its large size and scope
- Relationships with external government, academic and professional organizations
 - Relationships with external research institutes and organizations enhance departmental research and professional activities, including teaching, and are highly valued both by those in the department as well as in the partner organizations
- Social impact in terms of outreach and impact locally and nationally
 - Department engages in outreach to youth, including the Physics Outreach Program
- Staff
 - Significant complement of technical support staff

- Management and leadership
 - Structure management and committees are standard and commensurate with the size of the department
- Department/unit/programs relative to the best in Canada/North America and internationally
 - Only Canadian department in the top 50 world physics departments, according to the Shanghai Academic World Ranking of Universities

The reviewers identified the following areas of concern:

- Staff
 - Current staffing appears to be appropriate, though more evaluation needed
 - Staff expressed concern regarding the increased administrative burden from new regulatory requirements

The reviewers made the following recommendations:

- Resource allocation, including space and infrastructure support
 - Encourage the University to fund upgrades to the departmental library
- Staff
 - Analyze whether current staffing levels are appropriate
 - Encourage the University and the Faculty to be critical of new regulatory requirements, which could cause increased administrative duties for staff
 - Provide the staffing resources outlined in the department's academic plan to support research, undergraduate labs, and bring Practical Labs to all for all first year courses

ADMINISTRATIVE RESPONSE – Appended



10 March 2014

Professor Sioban Nelson
Vice-Provost Academic Programs
University of Toronto

Re: Review of the Department of Physics and its undergraduate and graduate programs

Dear Sioban,

Along with the faculty, staff and students of the Department of Physics, I am very pleased with the external reviewers' positive assessment of the Department and the undergraduate and graduate programs: Physics, BSc (Specialist, Major and Minor); Biological Physics, BSc (Specialist); Physics and Philosophy, BSc (Specialist); Life and Environmental BSc (Minor); and Physics (MSc, PhD). The reviewers commended the graduate program, which they consider to be of the highest quality and unique in Canada. They praised the creativity and innovation of the first year physics course for students in the life sciences, the cohesiveness and collegiality of faculty and high morale of faculty, students and staff and the high quality and diversity of the research programs in the department. The Department has strong relationships with other units both within and external to the university, and is very involved in outreach efforts.

As per your letter of 9 January 2014, I am writing to address the areas of the review report that you identify as key. The response to these items is separated into short-(current-3 months)/intermediate- (3-12 months)/long-(12+months) term action items for the Department. The Department has seriously considered the reviewers' comments and a number of changes have been instituted over the past few months to respond to their suggestions.

Curriculum & Program Delivery

- *The reviewers believe that there are opportunities for improvement in undergraduate curricular delivery.*

The reviewers praised the first year course for life sciences students as creative and innovative, noting the variety of options that are available so that students can tailor program to their specific needs. Renovation of new space to accommodate practicals allows for computer-assisted experiments that are innovative and keeping with modern pedagogical best practices. The reviewers also highlighted the research opportunities that are available to students, in particular the NSERC USRA are very valuable; as are opportunities at other research facilities. The reviewers highlighted three areas for consideration in the undergraduate program: the quality of student experience in large lecture sections, upgrading first year practicals for physics specialists to match physics for life sciences labs, and improvement to interactions between students and faculty by making a senior research project mandatory for physics specialists.

Large lecture sections

Short-term response:

- The Department will continue to work on optimizing these large courses, but notes that the student evaluations for these courses have improved dramatically over the past few

years, with 85% of students in 2013 giving favourable responses regarding their overall experience. The undergraduate chair has initiated discussions with the Dean's Office to explore whether space can be provided to store demonstration equipment nearby to Convocation Hall.

Intermediate-term response:

- The Faculty of Arts & Science has identified as an academic priority a comprehensive review of its large course learning environment with the aim of further enhancing student learning and the student experience. This review will be conducted in 2014-15. The review will consider pedagogical differences as related to the disciplinary sectors (humanities, social sciences, and sciences). Any recommendations related to Physics emerging from the Faculty's review will be implemented and monitored.

Upgrading first year practicals for physics specialists to match physics for life sciences labs

Short-term response:

- The Department has carried out a pilot project on weekly "laboratorials" for PHY151 / PHY152, the courses for physics specialists. Over the course of this summer, the Department will roll these out fully. Renovations to room 126 in the McLennan Physical building are underway to create a suitable temporary space for the laboratorials.

Intermediate-term response:

- The space being created in MP126 is temporary. The Department has set aside some infrastructure funds and is working with the Dean's Office to move forward on a more permanent renovation.
- The Department will monitor the impact of the laboratorials and renovations for the undergraduate program.

Improvements to interactions between students and faculty by making a senior research project mandatory for physics specialists.

Short-term response:

- The Chair will continue to encourage faculty members to offer projects, and students to take them up. The Chair has explored whether faculty members outside the Physics Department may be able to supervise research projects of physics specialists. This has already been put in place for the Biological Physics stream.

Intermediate-term response:

- The Department is exploring whether a system of graduate student involvement in undergraduate research is feasible.

• The reviewers recommend that the department remain sensitive to issues related to the tri-campus nature of the graduate program, and associated challenges with general communication and exchange of information.

The reviewers were supportive of the Department's continued commitment to the excellence of graduate student research and the consolidations of their strengths in climate change and global geophysics has seen an increase in graduate student enrollment since 2006.

Short-term response:

- The Department is installing "smart-lecture theatre" capability in MP606 that will allow courses to be delivered / attended remotely by professors and students at UTM and UTSC.

Intermediate-term response:

- The Physics Graduate Associate Chair will work with graduate students (e.g. through their Graduate Liaison Committee) to increase communications and exchange of information, and to address issues as they arise. Depending on the success of remote lectures, the Department may develop more capacity in this area.

• *The reviewers recommend additional graduate mini-courses on particular technologies that cross sub-disciplines, such as common instrumentation techniques.*

The reviewers praised the scope of research of the Department's faculty which has meant a unique graduate program with faculty members who cover a broad base of physics sub-disciplines. The reviewers also highlighted the diverse and numerous courses provided to students which are kept current.

Short-term response:

- New courses in parallel computing have been introduced recently. These courses have proven to be popular with students. The Department has also begun the development of more courses in electronics.

Intermediate-term response:

- The Department will continue to explore such courses, consulting with graduate students and faculty members with respecting to possible offerings.

Quality Indicators

• *The reviewers note that only about half of the undergraduate physics specialists and majors completed their program in four years or less, with nearly a third requiring five years to complete.*

The reviewers found the undergraduate programs to be complete and comprehensive, allowing students to achieve a high level of physics learning with the possibility to pursue graduate studies. They highlighted the need to ensure that administrative / scheduling problems do not delay graduation of students.

Short-term response:

- The Department has begun to offer a greater number of summer sections of courses. Offering additional courses in the summer has resource implications, but are popular with students. Summer courses are particularly helpful for students who transfer into the physics program and need to catch up on prerequisites.

Intermediate-term response:

- The Department will monitor undergraduates' progress through their degrees, and will continue to review and monitor the impact of offering more summer courses.

• *The reviewers suggest a system for tracking post-graduate employment for undergraduate and graduate students should be considered.*

The reviewers concluded that the Department employs standard practices which are appropriate and correspond to expectations for the discipline.

Short-term response:

- The Department is attempting to build more permanent links to their students while they are in their programs, in the hope that they can be tracked after graduation. This is a challenge for many departments in the Faculty. The Vice-Dean, Graduate Education & Program Reviews is in the process of looking at units within the Faculty that do track

post-graduate employment with the aim of sharing best practices across Arts & Science departments.

- *Although the PhD time-to-completion rates are comparable to those of peer institutions, the reviewers note the department is concerned time-to-completion may be increasing slightly and suggest the Department should monitor annual supervisory meetings more closely.*

The reviewers praised the Physics graduate programs as exceptional and of a very high level with quality students who are supported by external fellowships and scholarships and with a high completion rate among the MSc students. The Department has recently imposed more structure on the PhD Supervisory Committee meetings, in the hope that they will be more useful in helping students to progress. The reviewers considered that this would help control potential upwards creep on time-to-completion.

Short-term response:

- The Department has revised the forms that are used in Supervisory Committee meetings, to clearly specify the date of the next meeting. The Physics graduate office is now tracking committee meetings more carefully and is proactive in contacting faculty members for follow up.

Intermediate-term response:

- With the assistance of the Vice-Dean, Graduate Education and Program Reviews, the Department will look at current best practice in the other science departments. One approach, as recommended by the External Review, will be to involve supervisors in scheduling committee meetings, when they are overdue.

- *The reviewers commented on the importance of admitting international graduate students and providing the resources to support them.*

Finding expanded funding for international graduate students is a challenge shared across the Faculty of Arts & Science. Strengthening support for international students is an identified priority in the Faculty's academic plan and its importance reiterated in the 2013 Faculty external review. The Faculty's financial challenges constrain our graduate programs in limiting our ability to recruit the best students, in limiting admissions of international students, and in supporting our students. We have worked with our units to devise funding packages for recruitment purposes. A&S Advancement has had success in raising funds for graduate fellowships, and the Graduate Admissions Committee has usefully offered strategic direction for units' admissions.

Short-term response:

- The Department is working with Arts & Science Advancement to raise funds to support international students.

Resources and Planning:

- *The reviewers observed that the Department faced considerable challenges arising from the decline in the faculty complement and continued enrolment growth. They noted the evolving landscape in Arts & Science with the establishment of the School of the Environment and the evolution of the Department of Earth Sciences, and the opportunities inherent in this for complement planning. The reviewers specifically noted that there appear to be an insufficient number of high energy theorists for the number of students expressing interest in this area of research.*

Short-term response:

- The Department requested and received approval to search for two positions in 2013-14. The first is a tenure-stream position in the field of Atmospheric/Ocean Theory at the rank of Assistant Professor and the second is tenure-stream position, also at the rank of Assistant Professor in the field of Climate Physics. The latter is a joint appointment with the School of the Environment. These positions relate to some of the reviewers' concerns.
- A request for a position in experimental quantum physics is being prepared by the Department for submission to the A&S Appointment Committee to be considered for the spring of 2014. The Department is also working to prepare a submission for a joint position in high energy theory with the Perimeter Institute for Theoretical Physics.

The Faculty of Arts & Science Appointment Committee meets annually to review requests for teaching staff from Arts & Science units. Requests are reviewed on the basis of criteria that are announced in advance through an annual memorandum to unit heads, including: the unit's Academic Plan and the Faculty's response; any subsequent external review reports; any subsequent discussion and developments that have led to changes in direction; new information and changes to circumstances facing the unit, as well as new academic priorities, challenges, and/or opportunities that have arisen; enrolment pressures at the undergraduate and graduate levels; and the integrity of the unit's programs of teaching and research, given the projected impact of any retirements or resignations. Given the uncertain state of the Faculty's financial position, including the serious impact of recent Provincial changes to the Faculty's program fee funding, budget planning has proceeded cautiously with respect to the number of appointments available across the entire Faculty, although endowments and external sources funded a number of additional positions.

- *The reviewers suggested that an analysis of the Department's administrative and research support staffing is warranted.*

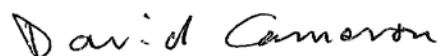
The reviewers highlighted that the morale of the Department is high and the organization is standard.

Short-/Intermediate-term response:

- The Department recently carried out a reorganization of Physics Stores and Cryogenics, creating efficiency savings. A review of the current administrative and support staffing will be conducted in coordination with the Arts & Science Human Resources Office.

The review report provides a thoughtful analysis of the Department and undergraduate and graduate programs. We appreciate that the reviewers identified the Department's strengths and noted areas for development. The Department has already implemented and/or has begun to move forward with plans to address the key recommendations highlighted by the reviewers.

Sincerely,



David Cameron,
Dean and Professor of Political Science

Review Summary

Program(s):	Medical Radiation Sciences, B.Sc. (Streams: Nuclear Medicine Technology, Radiological Technology, Radiation Therapy)
Division/Unit:	(Review of program only; offered jointly by the University of Toronto Department of Radiation Oncology and The Michener Institute for Applied Health Sciences)
Commissioning Officer:	Dean, Faculty of Medicine
Reviewers (Name, Affiliation):	<p>UTQAP Reviewer: Dr. Catherine de Metz, Associate Professor, Department of Oncology, School of Medicine, Queen's University; Head, Radiation Oncology Department, Cancer Centre of Southeastern Ontario</p> <p>Canadian Medical Association Accreditation Reviewers:</p> <p><u>Chair, CMA Survey Team</u></p> <p>Louise Gordon, MSW, Dean, School of Health Sciences and Community Services, Red River College, MB</p> <p><u>Nuclear Medicine Technology</u></p> <ol style="list-style-type: none">1. Dr. Sandor Demeter, MD, MHSc, FRCPC (NM), Medical Director Diagnostic Imaging, Winnipeg Regional Health Authority, Health Sciences Centre, Department Chair, Radiology, University of Manitoba, MB2. Kevin Hudkins, RT(NM), Clinical Coordinator, British Columbia Institute of Technology, BC3. Patricia Munro, RT(NM), BHSc, Educator, School of Health Sciences, Queen Elizabeth II Health Sciences Centre, NS4. Deborah Scollard, MRT(N), BAppSci(NM), Regulatory Body Representative (College of Medical Radiation Technologists of Ontario) <p><u>Radiation Therapy Technology</u></p> <ol style="list-style-type: none">5. Michael Evans, BA, MSc, FCCPM, RTR, Medical Physicist, Department of Medical Physics, McGill University Health Centre, QC6. Chris Zeller, MA, BEd, ACT, Manager, Education Services, Radiation Therapy, CancerCare Manitoba, MB

	<p>7. Roseanne Pegler, BSc, MRT(T), ACT, Regulatory Body Representative (College of Medical Radiation Technologists of Ontario)</p> <p><u>Radiological Technology</u></p> <p>8. Dori Kaplun, RTR, Med, Program Head, Medical Radiography, British Columbia Institute of Technology, BC</p> <p>9. Dr. Wayne Papoff, MD, FRCPC, Radiologist, London Health Sciences, ON</p> <p>10. Francoise Ternovoy, MRT(R), ACR (Phase I), Practicum Coordinator, Northern Alberta Institute of Technology, AB</p> <p>11. Janet Scherer, ACR, BA, RTR, MRT (R), Regulatory Body Representative (College of Medical Radiation Technologists of Ontario)</p>
Date of review visit:	January 14 – 16, 2013

Previous Review

n/a

Current Review: Documentation & Consultation

Documentation Provided to Reviewers:

Terms of reference; self-study report of the Dept. of Radiation Oncology (September 2011); external review report of Dept. of Radiation Oncology (October 2011), and Chair's and Dean's response to it; Canadian Medical Association Phase I Report; three Program Self-Assessment Reports (one for each discipline); CMA surveyor's accreditation schedule; Faculty of Medicine's strategic academic and research plans; UTQAP document.

Consultation Process:

The reviewers met with the Dean, Faculty of Medicine; Deputy Dean, Faculty of Medicine; Vice-Provost Academic Programs and Interim CEO, Michener; Chair, Department of Radiation Oncology, Faculty of Medicine; Director, MRS Program, Department of Radiation Oncology; Academic Chairs, Michener; Program Communication Liaisons, all three streams, Michener; Clinical Liaison Officers, all three streams, Michener; all teaching faculty for all three streams, Michener; all teaching faculty, University of Toronto; all first, second and third year students for all three streams; Directors/Managers, Imaging and Therapy departments for all three streams at all clinical site affiliates; Clinical Coordinators, Imaging and Therapy for all three streams at all clinical site affiliates; teaching technologists/therapists for all three streams at all clinical site affiliates; graduates for all three streams at all clinical site affiliates

Current Review: Findings & Recommendations

1 Undergraduate Program

Medical Radiation Sciences, B.Sc. (Streams: Nuclear Medicine Technology, Radiological Technology, Radiation Therapy)

The reviewers observed the following strengths:

- Overall quality
 - Very strong program
 - One of very few programs to offer inter-professional involvement from the first year
- Objectives
 - Educational objectives are clearly delineated
 - Complex program, involving three distinct disciplines
- Curriculum and program delivery
 - Courses are realistic, deliverable, and achievable
 - Innovative simulation technologies part of curriculum, which students appreciate
 - Program structure provides an integrated learning experience
 - Course sequence is logical
- Assessment of learning
 - Suitable frequency, completeness, and appropriateness of evaluations
 - Performance criteria in place for all three streams
- Quality indicators
 - Students very happy with their preparedness for clinical practice
 - Students confident that they are receiving a high quality program
 - Good success rates on provincial/national examinations
 - Employers are happy with students' preparedness for the work environment
 - Many graduates succeeding in management or leadership levels within their organizations
- Support
 - High-level of academic support and advising services provided to students

The reviewers identified the following areas of concern:

- Admissions requirements
 - Students come in at a much higher level than admissions requirements, with many students having completed an undergraduate or master's degree
- Curriculum and program delivery
 - Very few students do a research project. Research experience for students most embraced by Radiation Therapy stream; less so by the other two streams.
 - Introduction to research methodology many be too simplistic for students who have already completed a thesis
 - University courses more difficult than Michener courses

- Students with previous degrees find program more difficult than previous coursework
- Students have mixed experiences with online courses, especially Anatomy and Physiology courses
- Nuclear Medicine students felt that the first year Instrumentation course should not be self-directed
- Interprofessional education (IPE) coursework can be repetitive
- Students would like earlier access to real patients
- Simulation out of sequence in second year, especially after a clinical placement in first year
- Clinical personnel concerned about the reduction of clinical education time and students' ability to become competent and gain confidence within the specified time
- Assessment of learning
 - Inconsistent use of defined assessment methods in Nuclear Medicine Technology and Radiological Technology streams; not all Radiological Technology students meeting accreditation competencies
- Quality indicators
 - Few graduates engaged in research as part of their subsequent employment
 - Concerns about the job market post-graduation for Radiation Therapy students
- Students
 - Nuclear Medicine stream admissions currently suspended, having a negative impact on the delivery of the program to currently enrolled students
 - Students view themselves as 'Michener Students'; UofT seems more remote to students, and they do not feel a part of the University community
 - Some at clinical sites outside GTA concerned that students do not have the same ease of access to services as students in the GTA
- Outreach / Promotion
 - Discrepancies between Michener website and UofT Student Handbook

The reviewers made the following recommendations:

- Curriculum and program delivery
 - Build a stronger research component into advanced students' (i.e., those with previous undergraduate or master's degrees) training, such as through a research project before the third year
 - Provide students with additional research opportunities, such as through a collaborative research program between the disciplines
 - Consult with partners to determine how this can be expanded to include Nuclear Medicine and Radiological Technology
 - Look at an enhanced role for research in Radiation Therapy, and identify career opportunities for this
 - Seize opportunity to change professions by including more research experience in program; developing and promoting the Master's Program is a positive step towards this
 - Better align online and 'hands-on' courses

- Consider delivering IPE material in a non-lecture format, such as interdisciplinary research activities or development of a student-led teaching program
- Expand clinical placement time
- Make curriculum revision of Nuclear Medicine a priority
- Quality indicators
 - Track the careers of recent graduates to highlight the University's efforts in training leaders in the profession
- Students
 - Consider ways to involve students in UofT student life; increase involvement of UofT faculty in teaching courses
- Outreach / Promotion
 - Ensure that all published material is accurate

2 Graduate Program

n/a

3 Faculty/Research

The reviewers observed the following strengths:

- Overall quality
 - Dedication, commitment, and passion of the faculty are major program strengths
- Faculty
 - Extensive support for continuing professional education for instructors, clinical coordinators, and preceptors
 - Students appreciate that instructors are well-grounded in current clinical practice and technology

The reviewers identified the following areas of concern:

n/a

The reviewers made the following recommendations:

- Faculty
 - Encourage instructors to take advantage of opportunities to remain current with both theory and clinical practice
 - Ensure that clinical site personnel are aware of professional development opportunities and continue to meet defined standards in teaching adult learners

4 Administration

The reviewers observed the following strengths:

- Relationships

- Overall morale is good
- Scope of unit is expanding; most students train and work in Toronto, but some are expanding into other provinces
- Good collaboration between clinical sites and between clinical sites and the program
- Organizational and financial structure
 - Program is well-organized, well-coordinated, and well-supported
 - Michener Institute offers excellent facilities and resources including unique labs, and extensive and up-to-date equipment and simulation facilities
- Department/unit/programs relative to the best in Canada/North America and internationally
 - Leading Canadian program
 - Other programs want to emulate the program's emphasis on interprofessional education

The reviewers identified the following areas of concern:

- Relationships
 - Uncertainty about Nuclear Medicine stream having negative impact on morale
 - Concern that experts in Nuclear Medicine are not being consulted as the program is redeveloped
- Planning / Vision
 - Development plans for Nuclear Medicine not clear

The reviewers made the following recommendations:

- Relationships
 - Address Nuclear Medicine issues to mitigate impact on morale
 - Involve and consult with key stakeholders in redeveloping Nuclear Medicine stream, providing them with timely and comprehensive updates
 - Provide clinical coordinators with more feedback from the program on the student experience at their sites

ADMINISTRATIVE RESPONSE – Appended



Catharine Whiteside, MD PhD
Dean

Vice Provost, Relations with Health Care Institutions

EXTERNAL REVIEW | UNDERGRADUATE MEDICAL RADIATION SCIENCES PROGRAM Dean's Response

On behalf of the Faculty of Medicine, I would like to thank Dr. Catherine de Metz, Head of the Radiation Oncology Department at the Cancer Centre of Southeastern Ontario, for her comprehensive review of the undergraduate Medical Radiation Sciences (MRS) Program in response to the requirements of the University of Toronto Quality Assurance Program (UTQAP).

The MRS is a joint program between the University of Toronto, Faculty of Medicine, and The Michener Institute for Applied Health Sciences responsible for the education of three professional streams: Nuclear Medicine Technology, Radiological Technology, and Radiation Therapy. The Faculty of Medicine's Department of Radiation Oncology, in collaboration with the appropriate counterparts at the Michener Institute is responsible for the delivery of the curriculum in these three disciplines. This second entry BSc/Diploma Program is the largest in Canada, and one of the most successful such programs in the world. The Program is accredited every 6 years by the Canadian Medical Association (CMA) Conjoint Services for Accreditation. It was during this accreditation phase, when the Faculty of Medicine was notified that an external review to meet the UTQAP requirements was also required. With the approval of the Vice-Provost, Academic Programs and agreement from the CMA, the University of Toronto was allowed to appoint an external reviewer to the CMA team, which was Dr. de Metz.

Professor Fei-Fei Liu, the Chair of the Department of Radiation Oncology, has provided comments on specific issues identified in the report. The Faculty of Medicine, the Department of Radiation Oncology, and the MRS Program will work together to resolve those issues highlighted in the report. I will comment on some of those issues as follows.

1. MRS Students' Identity with the University of Toronto

Given the amount of time MRS students spend on site at The Michener, they may identify more closely as students with The Michener Institute, rather than University of Toronto students. The Department of Radiation Oncology, along with the Faculty of Medicine, will explore potential solutions to this issue, such as realignment of the Registrar's Office or regular "meet and greet" sessions.

2. Future Leaders Being Trained in MRS

The MRS Program currently does not have a database monitoring the career track of its graduates; hence its intention to train leaders in the field can only be supported when such individuals are occasionally identified. The Department of Radiation Oncology, with The Michener, will develop an alumni engagement strategy, part of which will include a systematic capturing of such longitudinal data and profiling these leaders in communications with the alumni community.

3. Curricular Improvements

The Department of Radiation Oncology with The Michener will develop strategies to improve the research experience, particularly in the Nuclear Medicine and Radiological Technology streams, by identifying appropriate research champions to promote a research culture. The MRS students described redundancies in Interprofessional Education courses; this will be streamlined by the MRS Joint Curriculum Committee.

4. Nuclear Medicine Curriculum Renewal

In acknowledgement of the shift in the external clinical practice environment, the lack of job opportunities and the requirement for “hybrid skills” in Nuclear Medicine, the MRS leadership team made the decision to suspend intake into this stream for 2 years. The MRS Program is currently redesigning and transforming the Nuclear Medicine curriculum by providing innovative hybrid content and by responding to the current and future practice needs in this group of professionals. Changes of this magnitude are always associated with anxiety amongst both the faculty and the student bodies; the MRS leadership is undertaking specific action plans to manage this change as seamlessly as possible in collaboration with the Department of Medical Imaging.

SUMMARY

The joint University of Toronto-Michener Institute MRS Program is unique in Canada and, as stated by Professor Liu, we are leaders in this domain; other similar programs seek directions from us. I am confident that under Professor Liu’s leadership, the MRS Program will continue to meet the health care needs of the patients of Ontario, Canada, and the world.



Catharine Whiteside
Dean, Faculty of Medicine
Vice-Provost, Relations with Health Care Institutions, University of Toronto
(February 2013)

Review Summary

Program(s):	Journalism, B.A., Hons. (Joint Program with Centennial College): Specialist
Division/Unit:	University of Toronto, Scarborough (UTSC)
Commissioning Officer:	Dean and Vice-Principal (Academic), UTSC
Reviewers (Name, Affiliation):	<ol style="list-style-type: none"> 1. Dr. Paula Price, Consultant, PQAPA Panel Chair 2. Janet Kolodzy, M.S.J., Associate Professor, Journalism Department, Emerson College 3. Dr. Christopher Waddell, Associate Professor; Director, School of Journalism and Communication; Carty Chair in Business and Financial Journalism, Carleton University 4. Rick MacLean, M.A., Instructor, Journalism Program, Holland College 5. Larry Cornies, M.A., Coordinator, Print Journalism and Broadcast Journalism Programs, Conestoga College
Date of review visit:	May 30 and May 31, 2013

Previous Review

Date: May 15 – 16, 2008

Summary of Findings and Recommendations:

1. Undergraduate Program: Journalism, B.A., Hons: Specialist (Joint)

The reviewers observed the following strengths:

- “Genuine opportunity” for UTSC in the areas of diversity, global media, and critical journalism, as these areas have been underdeveloped in Canada

The reviewers identified the following areas of concern:

- Significantly different approaches to teaching journalism at the two institutions
- Lack of clearly articulated learning outcomes
- Competing bureaucratic structures impede the student experience
- Focus on industry at the expense of the student experience

The reviewers made the following recommendations:

- Make the student experience a priority

2. Graduate Programs (n/a)**3. Faculty/Research**

The reviewers observed the following areas of concern:

- Lack of contact between faculty at the partner institutions negatively impacts curriculum design

The reviewers made the following recommendations:

- Clarify expectations and provide training for Centennial instructors who may be balancing careers and part-time teaching loads

4. Administration

The reviewers identified the following areas of concern:

- Absence of a functioning governance structure for the program
- “Extremely limited contact” between UTSC and Centennial faculty and administrators; faculty at both institutions expressed concern about activities at the partner institution
- No clear, overarching vision for the joint program
- Significant leadership, communication, and resource challenges

The reviewers made the following recommendations:

- Create clear lines of communication between the two institutions
- Reorganize programs around a strategic vision that capitalizes on the strengths of both institutions, the communities that they serve, and the program’s position within Ontario and Canada

Last OCGS Review(s) n/a

Date(s):

Current Review: Documentation & Consultation

Documentation Provided to Reviewers:

UTSC Strategic Plan, 2008

UTSC Academic Plan, 2010-15

UTSC Annual Review, 2011-12

UTSC Viewbook, 2013-14

Joint Programs Student Handbook, 2012-13

JPQR Terms of Reference, Specialist (Joint) program in Journalism (B.A.)

Program and Course descriptions from UTSC Calendar

Course Syllabi – Centennial College

Course Syllabi – UTSC

Faculty CVs – Centennial College

Faculty CVs – UTSC

Program Self Study, March 2008

External Review Report, July 2008

Summary and Administrative Response, March 2009

Program Self Study, May 2013

JPQR Student Survey

Student Services Statement
Library Statement

Consultation Process:

The reviewers met with the Associate Vice President, Academic Excellence (Centennial College) and the Vice-Dean, Undergraduate (UTSC); Chair, School of Communications, Media and Design (Centennial College) and Chair and Associate Chair, Department of Arts, Culture and Media (UTSC); Program Coordinator (Centennial College) and Program Director (UTSC); Chair, Journalism Program Advisory Committee (Centennial College); Joint Programs Administrative Coordinator (Centennial College and UTSC) faculty (Centennial College and UTSC) and Journalism program students (Centennial College and UTSC).

Current Review: Findings & Recommendations

1 Undergraduate Program

Journalism, B.A., Hons. (Joint Program with Centennial College): Specialist

The reviewers observed the following strengths:

- Overall quality
 - Students feel that the integrated program model offers the “best of both worlds”: the highly valued UTSC degree & the applied practice and skills for employment from Centennial
- Objectives
 - Program is consistent with both institutions’ missions
- Admission requirements
 - Appropriate to program learning outcomes
- Curriculum and program delivery
 - “Curriculum reflects the current state of the art in the field of journalism”
 - Many innovative, creative approaches to course design and delivery, particularly the commendable “real-world” experience of working on community papers
 - Integration of new internship component is consistent with the goals of the program

The reviewers identified the following areas of concern:

- Objectives
 - Lack of a strategic vision for the program and no specific, overall learning outcomes
 - Unclear picture of who a typical successful graduate would be
- Curriculum and program delivery
 - Registration/ROSI issues have negatively impacted the student experience
 - Few higher level university courses means that students cannot meet graduation requirements
 - Students identified duplication of content within courses at UTSC

- Students would like more hands-on learning earlier in the program so that they can use these skills in UTSC courses
- Quality indicators
 - Lack of data about current students' retention and graduation rates hinders staff ability to accurately plan for courses
 - Absence of evidence of data on program graduates and their accomplishments
- Assessment of learning
 - Students experience uneven or unexplained assessment of their grades/assignments in college courses
- Students
 - Inconsistent and stressful student experience; students do not have a "go to" person and receive conflicting/no information about the program and internships
 - Imbalanced workload between college and university portions
- Support
 - Absence of a formal orientation for students
- Program Administration
 - Inadequate support for operational issues and general troubleshooting
- Outreach / Promotion
 - Inconsistent program information online

The reviewers made the following recommendations:

- Objectives
 - Increase commitment to the program and forge stronger connections between the institutions
 - Engage joint program personnel in more clearly articulating the vision for the program and the unique contributions that the program makes to undergraduate journalism education
- Curriculum and program delivery
 - Engage in a curriculum mapping process to develop course learning outcomes for every course and map course learning outcomes to overall program learning outcomes
 - Revise the curriculum to add more practical, skills-based learning earlier in the program
 - Add a capstone course to consolidate earlier learning and provide an additional opportunity for students to engage in research
 - Pilot alternative course delivery models to accommodate resequencing
 - Include an integrative seminar (possibly online) and non-English placements in the internship course so that students can engage in reflection and analysis of their experiences
 - Conduct an annual review of the curriculum and present this information the Joint Programs Steering Committee
- Quality Indicators
 - Track retention, graduation, and employment data, and present this information annually to the Joint Programs Steering Committee
- Assessment of learning

- Explore other assessment methods at other institutions, and review and revise assessment methods used in Centennial courses
- Support
 - Initiate strategies to better support students, such as offering a formal orientation at UTSC, creating a program handbook, creating a student association, starting a mentoring program, and engaging social media
- Program Administration
 - Re-examine the resources allocated to the Joint Programs Administrative Coordinator and consider whether the role is appropriately positioned
 - Create a leadership position to oversee the program's continued development and success
 - Increase advising capacity to better support students and improve their experiences
- Outreach / Promotion
 - Annually update the website and create a marketing plan
 - Designate a point person for ensuring current, accurate marketing/promotional information and to liaise with the marketing department

2 Graduate Program

(n/a)

3 Faculty/Research

The reviewers observed the following strengths: None.

The reviewers identified the following areas of concern:

- Faculty
 - Faculty have limited opportunity to engage in discussions about curriculum with colleagues at the partner institution

The reviewers made the following recommendations:

- Faculty
 - Engage all joint program faculty in planning and curriculum mapping processes

4 Administration

The reviewers observed the following strengths:

- Morale of faculty, students and staff
 - Positive morale among students, faculty, and staff, despite operational issues

The reviewers observed the following areas of concern:

- Planning / Vision

- Program has not fully realized its potential in the areas of diversity and critical journalism studies

The reviewers made the following recommendations:

- Morale
 - Continue to address operational issues to relieve student frustration and improve morale
- Planning / Vision
 - Establish a timeline and identify resources to build diversity into the program
 - Develop a bridge program for diploma students who wish to complete the degree at UTSC

ADMINISTRATIVE RESPONSE – Appended



UNIVERSITY OF
TORONTO
 SCARBOROUGH

OFFICE OF THE DEAN &
 VICE-PRINCIPAL (ACADEMIC)

14 February 2014

Professor Sioban Nelson
 Vice-Provost, Academic Programs
 Office of the Vice-President and Provost
 Simcoe Hall
 University of Toronto

Dear Sioban,

Administrative Response, External Review of the Journalism Joint Program with
 Centennial College (B.A., Hons: Specialist)

Thank you for your letter of 3 October 2013 requesting my administrative response to the external review of the Journalism Joint Program with Centennial College. I appreciate the seriousness with which the reviewers approached the external review process, and am grateful for the careful consideration they have given to this program. I note with particular pleasure that students describe the Journalism program as “the best of both worlds” in journalism education, since it provides them with a highly valued university degree and the professional skills offered by a college program. In addition, I am grateful for the reviewers’ assessment of the challenges facing the program and for their many helpful recommendations.

The external review report was sent to the Chair of the Department of Arts, Culture and Media (UTSC), the Dean and Chair, School of Communications, Media and Design (Centennial College), and all faculty and staff associated with the program, for their information and feedback. The Vice-Dean, Graduate Education and Program Development met with the Associate Chair of the Department of Arts, Culture and Media as well as the faculty and staff associated with the program on January 23, 2014, and I met with the Joint Programs Executive Committee on February 3, 2014. I am pleased with the depth of the discussion that has taken place. We are taking the recommendations of the reviewers seriously and already have begun to act upon them.

Let me address now the specific points raised in your letter of 3 October.

Curriculum and Program Delivery

- The reviewers noted that the program lacks specific overall learning outcomes.

Steps have already been taken to address this concern. UTSC’s Department of Arts, Culture and Media and Centennial’s School of Communications, Media and Design are working collaboratively to develop a clearly articulated set of learning outcomes for the

Joint program in Journalism. They are using the Core Competencies for Journalism Schools (2008) as a guide. These Core Competencies, recommended by the Knight Foundation, were rewritten a few years ago by UTSC's J. Dvorkin and were proposed, with amendments for the unique Canadian experience, to the Ryerson School of Journalism when he was a Distinguished Visiting Professor (2008-2010). As a first step, we have begun to develop a mission statement and a list of program objectives that will be the overarching statement of the learning outcomes for the program. The second step will be to develop closely aligned learning outcomes for the UTSC and Centennial components of the program.

- The reviewers praised the program curriculum, but they suggested that the student experience can be inconsistent and confusing, especially when moving between the university and college portions. They noted an imbalanced student workload between UTSC and Centennial.

This is an important and vexing issue shared with the other Joint Programs. Confusion arises primarily from two sources: first, the differences in pedagogy, expectations, and course material at the two institutions, and second the communication of program expectations to students.

In order to address these concerns, UTSC has initiated a curricular review of the Journalism offerings. This review will include close consultation with the Centennial partners and include a curricular mapping exercise to ensure appropriate sequencing, workload distribution and alignment with program learning outcomes. This review will be presented to the Joint Steering Committee.

To address the second source of confusion, we will seek ways to provide students with a better understanding of the differences in the demands of various aspects of the program. We hope that a more explicit articulation of expectations for each component of the program will help to sustain enthusiasm and morale among students and reduce attrition rates. We note that Orientation sessions and classroom visits have taken place during the last couple of years. We will augment these efforts by developing ways to proactively reach out to students to provide them with the counseling they need. We also are committed to working directly with students to identify workload tensions and where feasible address them through better scheduling and sequencing, and to working with UTSC's Academic Advising and Career Centre to ensure consistent messaging of program requirements.

As indicated by the reviewers, there is a need to integrate the scheduling more effectively so that Centennial students are able to return to UTSC for one course in their 3rd year. At the same time, UTSC students have expressed a strong interest in having a course in digital skills available to them before they leave UTSC for their Centennial experience. We are committed to pursuing the practicality of these aspirations through the curricular review process, noting that scheduling at UTSC and Centennial employ substantially different methodologies and timelines and that course offerings are shared with other programs.

- The reviewers noted that there are increasingly less higher-level university courses, which can result in delayed graduation.

In order to comply with its Degree Level Expectations, all UTSC Specialist programs require students to complete 4.0 FCEs at the C and D levels (third and fourth year), 1.0 FCE of which must be at the D-level. This requirement is explicitly articulated in the Joint program in Journalism, however, in the past there were no D-level courses in Journalism so students met this requirement with courses outside of Journalism. This situation has been rectified with the introduction of a new D-level course – JOUD10H3 (Senior Seminar in Journalism) as a program requirement. This course will be offered on an annual basis, which should enable students to finish more easily in a timely fashion. We also acknowledge that many D level courses have pre-requisites and thus sequencing can be critical to a timely completion. This issue will be addressed through program counseling during the second year and third year. It is important to mention that UTSC has commenced a search for an additional faculty member in Journalism. This new hire should provide the teaching capacity to address this issue.

Planning and Vision

- The reviewers remarked upon the apparent lack of communication and the absence of a sense of partnership or shared vision between UTSC and Centennial.

This comment is not consistent with the experience of those involved in the program. UTSC and Centennial faculty enjoy an excellent working relationship, most specifically between the UTSC and Centennial program coordinators, who feel a shared sense of ownership and vision for the Journalism program. This productive relationship was explicitly highlighted in the external review report.

Nevertheless, we agree that more should be done to foster and articulate a shared vision. Specific actions already have been taken and will continue. We note that the recent review process itself has improved connection between the Centennial program coordinator and the UTSC director including more regular UTSC contact with Centennial administration.

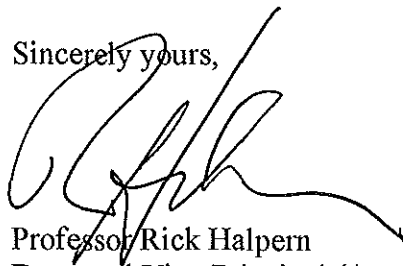
- The reviewers observed that better tracking of retention, graduation, and experiences post graduation would improve course and program learning.

Retention issues are important to us. Although much has been gained anecdotally by those involved in the program, we will work with the UTSC Registrar to track these numbers more systematically.

Post graduation experiences too are an important consideration. We hope to engage the university and college alumni associations more effectively, which should be of significant assistance. As per the website, <http://www.utsc.utoronto.ca/aacc/> there seems to be the potential to track and sustain contact with our graduates. We are certainly eager

to work with the Alumni Offices to help in this process.

Sincerely yours,

A handwritten signature in black ink, appearing to be 'R. Halpern', written over the text 'Sincerely yours,'.

Professor Rick Halpern
Dean and Vice-Principal (Academic)

Appendix A: Core Competencies for Journalism Education at UTSC/Centennial College

DRAFT

FIVE AREAS OF COMPETENCE IN JOURNALISM EDUCATION

The following five areas of competence, and individual competencies within them, are adapted from “The Journalism School Curriculum Enrichment Program,” a study by the Carnegie-Knight Initiative on the Future of Journalism Education (October 2008).

A. GENERAL COMPETENCE

1. To assess and place information in context
2. Have a broad intellectual perspective
3. Have a deep knowledge of Canadian and international current events
4. Have a strong educational foundation
5. Be able to engage in analytical thinking
6. Understand the value of teams and motivation

B. PRACTICAL TECHNIQUES

1. Bibliographic research skills
2. Interviewing skills
3. Deadline reporting skills
4. Narrative story-telling skills in different media (audio video and digital)
5. Descriptive writing
6. Familiarity with CP Style
7. Investigative research methods
8. News visuals
9. Editing
10. Photography
11. Headline writing
12. Web, TV and/or radio production
13. Knowledge of TV field production skills (focus, research, structure, writing, shooting and editing)
14. Knowledge of inter-platform media skills

C. PROCESS COMPETENCIES

1. Understanding media influences and consequences
2. Understanding unintended consequences such as pack journalism, lack of independence, detachment and attachment dilemmas
3. Understanding how different media approaches, disciplines and platforms affect journalism outcomes

4. Understanding the social context, purposes and particular challenges of doing journalism in a diverse environment

D. PROFESSIONAL ETHICS

1. Stimulating the moral imagination
2. Recognizing moral issues and consequences
3. Living a professional life that is ethically informed
4. Tolerating disagreement and ambiguity

E. SUBJECT COMPETENCIES

1. Acceptable levels of specialization in areas such as law, economics, foreign affairs, science, business, religion, travel and sport
2. Ability to exercise independent judgment about the value and importance of news events
3. Ability to create and transpose content from one media platform to another with an emphasis of digital creation

Review Summary

Program(s):	New Media Studies, B.A., Hons. (Joint Program with Centennial College): Major
Division/Unit:	University of Toronto, Scarborough (UTSC)
Commissioning Officer:	Dean and Vice-Principal (Academic), UTSC
Reviewers (Name, Affiliation):	<ol style="list-style-type: none"> 1. Dr. Paula Price, Consultant, PQAPA Panel Chair 2. Dr. Charles H. Davis, Edward Rogers Sr. Research Chair in Media Management and Entrepreneurship, and Associate Dean, Scholarly Research and Creative Activities, Faculty of Communication & Design, Ryerson University 3. Dr. Kelly Lyons, Associate Professor, Faculty of Information, University of Toronto 4. Dave Nourse, B.A., V.P., Managing Director – Digital, Saatchi & Saatchi 5. Dr. David Harris Smith, Assistant Professor, Department of Communication Studies and Multimedia, McMaster University
Date of review visit:	May 23 and May 24, 2013

Previous Review

Date: May 15 – 16, 2008

Summary of Findings and Recommendations:

1. Undergraduate Program: New Media Studies, B.A., Hons: Major

The reviewers observed the following strengths:

- Successful incubator for new media talent
- Good placement track record for graduates

The reviewers identified the following areas of concern:

- Lack of clearly articulated learning outcomes
- Competing bureaucratic structures impede on the student experience
- Focus on industry at the expense of the student experience
- Students do not adequately understand the program nor its requirements

The reviewers made the following recommendations:

- Prospective students should be better informed about the nature of the program
- Make the student experience a priority

2. Graduate Programs (n/a)

3. Faculty/Research

The reviewers observed the following strengths:

- Enthusiasm of the two faculty members who teach and manage the program

4. Administration

The reviewers identified the following areas of concern:

- Absence of a functioning governance structure for the program
- Low staff morale due to limited resources and stagnant curriculum
- Significant leadership, communication, and resource challenges

The reviewers made the following recommendations:

- Reorganize programs around a strategic vision
- Consider moving the program to the Department of Humanities
- Establish a working group to advance the program

Last OCGS Review(s) n/a

Date(s):

Current Review: Documentation & Consultation

Documentation Provided to Reviewers:

UTSC Strategic Plan, 2008

UTSC Academic Plan, 2010-15

UTSC Annual Review, 2011-12

UTSC Viewbook, 2013-14

Joint Programs Student Handbook, 2012-13

JPQR Terms of Reference, Specialist (Joint) program in Journalism (B.A.)

Program and Course descriptions from UTSC Calendar

Course Syllabi – Centennial College

Course Syllabi – UTSC

Faculty CVs – Centennial College

Faculty CVs – UTSC

Program Self Study, March 2008

External Review Report, July 2008

Summary and Administrative Response, March 2009

Program Self Study, April 2013

JPQR Student Survey

Student Services Statement

Library Statement

Consultation Process:

The reviewers met with the Associate Vice President, Academic Excellence (Centennial College) and the Vice-Dean, Undergraduate (UTSC); Dean and Chair, School of Communications, Media and Design (Centennial College) and Chair and Associate Chair, Department of Arts, Culture and Media (UTSC); Program Coordinator (Centennial College) and Program Supervisor (UTSC); Chair, New Media Studies Program Advisory Committee (Centennial College); Joint Programs Administrative Coordinator (Centennial College and UTSC) faculty (Centennial College and UTSC) and New Media Studies program students (Centennial College and UTSC).

Current Review: Findings & Recommendations

1 Undergraduate Program

New Media Studies, B.A., Hons. (Joint Program with Centennial College): Major

The reviewers observed the following strengths:

- Overall quality
 - “Opportunity to be a cachet program”
 - “Provides a media literacy that few other programs do”
 - Program produces graduates with sought-after theoretical and practical knowledge
 - Integrated program model is highly valued by students
- Objectives
 - Significant advancement of program goals since the previous review
 - Program is consistent with both institutions’ missions
 - Commendable initial efforts towards articulating program and course objectives
- Admissions requirements
 - Delayed admission requirement is appropriate given program learning outcomes
- Curriculum and program delivery
 - Teaching staff identify the need for the curriculum to be adaptive to change and open to new technology and modes of delivery
- Assessment of learning
 - Assessment methods are appropriate and reflect a variety of strategies
- Support
 - Innovative and creative program initiatives, such as the Media Studies speakers and film series, new media club, the Hub, and student contributions to the Art Side Out celebration

The reviewers identified the following areas of concern:

- Objectives
 - Lack of a shared strategic vision for the program; learning outcomes are isolated to each institution
 - Program has not yet fully realized its potential

- Admissions requirements
 - Students may lack some essential technical skills prior to entry
- Curriculum and program delivery
 - Curriculum does not always use or teach students about current industry-level tools
 - Students would like more access to hands-on practice throughout the program
 - Current 12-week length of the capstone course is too short to produce a new media artifact
 - Registration/ROSI issues have negatively impacted the student experience
- Quality indicators
 - Lack of data about current students' retention and graduation rates hinders staff ability to accurately plan for courses
 - Absence of evidence of data on program graduates and their accomplishments
- Students
 - Inconsistent and confusing student experience, especially when moving from one institution to another
 - Limited opportunities for students to showcase their projects; unclear whether the Hub is intended as a business accelerator or a showcase for student work
 - Limited opportunities for students to develop collaborative relationships with each other
- Support
 - Absence of a formal orientation for students
 - Absence of student awards to recognize achievements
- Program Administration
 - Lack of support to students with technical issues, in particular in the senior-level courses
- Outreach / Promotion
 - Inconsistent program information in marketing materials and online
- Physical resources
 - No dedicated physical space at UTSC and limited access to gear needed for student work

The reviewers made the following recommendations:

- Objectives
 - Engage joint program personnel in more clearly articulating the vision for the program
 - Establish a Joint New Media Studies Curriculum Review Committee to review the curriculum and ensure the program reflects expected levels of scholarly rigor and discipline currency
- Curriculum and program delivery
 - Identify overall joint program learning outcomes
 - Engage in a curriculum mapping process and develop course learning outcomes for every course
 - Consider moving the current applied courses offered at Centennial College in year 3 of the program to year 2 of the program
 - Pilot alternative course delivery models at Centennial

- Develop three different timetable models to address issues of increasing student enrolment and daytime delivery
- Examine opportunities to develop more international internship/field education learning experiences for students
- Create an enduring research project for students by extending the capstone course to one year to allow more time for hands-on learning
- Consider development of an additional Specialist program, emphasizing applied research and practical courses; this would be in addition to the Major program already offered
- Quality indicators
 - Regularly review job postings to identify employers' software expectations
 - Track retention, graduation, and employment data, and present this information annually to the Joint Program Steering Committee
- Support
 - Consider developing the Hub into a service facility where fee-for-service media production is provided to industry
 - Better support students' technical skills and web authoring tools through intensive resource programs or workshops
 - Develop additional language/ESL support for students
 - Consult with the Centennial Program Advisory Committee to develop a student awards program
- Program Administration
 - Re-examine the resources allocated to the Joint Programs Administrative Coordinator and consider whether the role is appropriately positioned
 - Consider adding more capacity to support to students with technical issues, such as through a teaching assistant role
- Outreach / Promotion
 - Enhanced marketing strategies could lead to the recruitment of higher quality students
 - "Cast a wider net" and consider recruiting students from unexplored program areas as the program's profile rises
 - Designate a point person for ensuring current, accurate marketing/promotional information and to liaise with the marketing department
- Physical resources
 - Invest in tools, speakers, projects, gear, and methods for showcasing student projects

2 Graduate Program

(n/a)

3 Faculty/Research

The reviewers observed the following strengths:

- Faculty

- Commendable efforts to engage in curriculum discussions
- Some excellent faculty who are passionate about their discipline and committed to the program

The reviewers identified the following areas of concern:

- Faculty
 - Limited complement is a strain on faculty

The reviewers made the following recommendations:

- Faculty
 - Create opportunities for faculty to attend each other's classes
 - Develop a formal succession plan for full-time faculty

4 Administration

The reviewers observed the following strengths:

- Morale of faculty, students and staff
 - Collegial relationship between the two full-time faculty members and positive morale among students, despite operational issues
- Consistency with University's academic plan
 - UTSC goal of increasing internationalization is reflected in the program's diverse student population and in students' desire to work internationally
- Department/unit/programs relative to the best in Canada/North America and internationally
 - No direct competitors; similar to programs offered at New York University (NYU) and McMaster University

The reviewers made the following recommendations:

- Morale
 - Continue to address operational issues to relieve student frustration and improve morale
- Scope and nature of relationships with cognate Faculties, academic departments and units
 - Explore synergies with other programs in the Department of Arts, Culture & Media Studies and the Humanities
- Social impact in terms of outreach and impact locally and nationally
 - Examine opportunities to build the program's global network and develop more international experiential education opportunities for students
- Planning / Vision
 - Engage in more effective marketing strategies and reinstate the annual presentation of the program marketing plan
 - Engage in a visioning process for the next five years of the program and anticipate ways to recruit and support increasingly higher quality students

ADMINISTRATIVE RESPONSE – Appended



UNIVERSITY OF
TORONTO
 SCARBOROUGH

OFFICE OF THE DEAN &
 VICE-PRINCIPAL (ACADEMIC)

14 February 2014

Professor Sioban Nelson
 Vice-Provost, Academic Programs
 Office of the Vice-President and Provost
 Simcoe Hall
 University of Toronto

Dear Sioban,

Administrative Response, External Review of the New Media Studies Joint Program with Centennial College (B.A., Hons: Specialist)

Thank you for your letter of 28 November 2013 requesting my administrative response to the external review of the New Media Studies Joint Program with Centennial College. I appreciate the seriousness with which the reviewers approached the external review process, and am grateful for the careful consideration they have given to this program. I note with particular pleasure the reviewers' assessment that the program "provides a media literacy that few other kinds of education do." In addition, I am grateful for the reviewers' assessment of the challenges facing the program and for their many helpful recommendations.

The external review report was sent to the Chair of the Department of Arts, Culture and Media (UTSC), the Dean and Chair, School of Communications, Media and Design (Centennial College), and all faculty and staff associated with the program, for their information and feedback. The Vice-Dean, Graduate Education and Program Development met with the Associate Chair of the Department of Arts, Culture and Media as well as the faculty and staff associated with the program on January 23, 2014, and I met with the Joint Programs Executive Committee on February 3, 2014. I am pleased with the depth of the discussion that has taken place. We are taking the recommendations of the reviewers seriously and already have begun to act upon them.

Let me address now the specific points raised in your letter of 28 November.

Curriculum and Program Delivery

- The reviewers noted that the program lacks specific overall learning outcomes.

Although the overall learning outcomes may not have been explicitly articulated, the New Media Studies program does have a specific set of learning outcomes. We have initiated meetings with the two groups to develop an articulation of this shared vision and

learning outcomes. These will take the form of a mission statement and list of program objectives (see Appendix A for a draft mission statement).

We provide below a summary of the current thinking that emerged from our initial discussions. The curriculum of the Joint Program in New Media Studies is composed of the academic study of media and new media from theoretical, historical, cultural, and global points of view (provided by UTSC), and a year of practicum courses in new media design and communications (provided by Centennial College). This combination of critical media studies and digital media practice allows students to develop critical and creative thinking skills that will serve them well no matter their digital future. Our goal is to foster critical, engaged, and creative students who have the knowledge and skills needed to adapt to the demands of an ever-evolving digital media environment in which new and emergent communication technologies arrive with dizzying speed. Given our technological and digitized culture, it is crucial to teach students to communicate well in different contexts and through different media technologies. This is the key learning objective that underpins our curriculum. Coursework at UTSC develops students' critical reading and writing skills, while coursework at Centennial develops technical and design skills needed to communicate through digital visual forms.

- The reviewers praised the program curriculum, but they suggested that the student experience can be inconsistent and confusing, especially when moving between the university and college portions.

Movement between the university and college portions of the curriculum is a challenge for all of our Joint programs. Some aspects that appear confusing and inconsistent may stem from the realities of navigating between two different institutional cultures. Further confusion arises from two sources.

The first is the difference in pedagogy, expectations, and course material at the two institutions. While we have a clear vision of the program (as articulated in the previous section), further refinement is necessary to fully integrate the UTSC and Centennial components and address the problem of student confusion. We plan to move the Centennial component, which currently takes place during students' third year, to the second year. In addition, during the fall semester of the second year alongside their Centennial courses students will take a critical-theoretical course on new media at UTSC. These structural changes streamline the curriculum and clarify the logical progression in meeting the program goals and learning outcomes noted above. Courses will be taken in the following sequence:

Year 1: Gateway courses MDSA01H Intro to Media Studies and MDSA02H History of Media and Technology; application to Joint Program
 Year 2: Centennial Courses; MDSB61H Mapping New Media (fall)
 Year 3: Designated digital project courses MDSB62H Visual Culture and MDSB63H Sound and Visual Media. (additional courses may be designated as Media Studies continues to expand course offerings.)

Year 4: Capstone new media studies courses NMED20H Theory and Practice in New Media and NMED01H Senior New Media Project

Students will continue to have the opportunity to take an additional course, including a field placement, during the summer at Centennial and earn a Certificate in New Media Design.

These changes offer several advantages:

1. Placing academic analysis and digital practice in the same semester and earlier provides students greater context for the scope and purpose of the program. (In the current curricular structure, students don't combine academic analysis and digital practice until their senior year.)
2. Developing students' technical and design skills earlier allows them to apply these skills in the digital media projects required in their courses in the following two years. (In the current curricular structure, students only have their senior year for such study.)
3. The wait time between students' application for entry (at the end of their first year) and beginning course work at Centennial (currently in the third year) will be substantially reduced. Currently students gain entry but must wait a full year to begin the component of the program that most likely attracted them in the first place. After the planned reorganization, students will apply for admission in May and transition to Centennial the following September.

The second source of confusion may arise from the communication of program expectations to students. Currently, students are invited to an orientation session at Centennial, to provide them with information on the College portion of their program, including information about courses and the expectations at the College, and to answer any questions they may have. We have learned that this orientation has not been scheduled at a time that is favourable for the students. We will do our best to ensure that in future this session is scheduled at a time that is easiest for students to attend. In addition to this session, a formal orientation is held by the College a week prior to the start of the fall semester. Here again, we will endeavor to ensure that this orientation is held at an optimal time and is well publicized among students.

The Academic Advising Office at UTSC is another important source of information for Joint program students. We are continuing to work with staff in this Office to ensure that they have the most up to date information regarding the program and its requirements. The Administrative Coordinator of the Joint Programs will work closely with Academic Advising to provide them with materials that explain the complexities of how the program operates, and to ensure consistent guidance is given to students.

Planning and Vision

- The reviewers remarked upon the apparent lack of communication and the absence of a sense of partnership or shared vision between UTSC and Centennial.

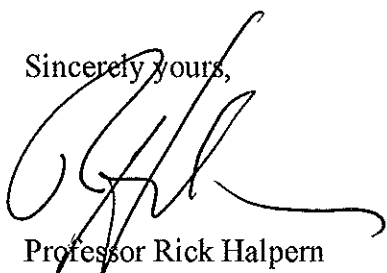
This comment does not resonate with the personal experience of those involved in the program. UTSC Faculty enjoy an excellent working relationship with colleagues at Centennial, especially with the Program Coordinator, and they feel a shared sense of ownership and vision for the New Media Studies program.

However, as noted in the section above on the program vision, the two groups have begun to meet more regularly and faculty have begun to develop a shared vision for the program.

- The reviewers observed that better tracking of retention, graduation, and experiences post-graduation would improve course and program planning.

Retention issues are important to us. Thus far, we have gained knowledge of student experience from anecdotal evidence provided by those involved in the program and by alumni who have remained in contact with us. Some of this information is gathered informally, but also we interview graduating new media studies students each year to solicit their feedback on the program. We agree that having a broad and reliable set of data analyses would be very useful for program planning and facilitating student recruitment into the program. In future, we will work with the UTSC Registrar to track admission, enrolment, and graduation numbers more systematically and will begin systematically to collect feedback from alumni into a database that can be used for analysis of their experience as students and as media professionals. In addition, we will begin to effectively engage the university and college alumni associations and are eager to work with the Alumni Offices to help in this process.

Sincerely yours,

A handwritten signature in black ink, appearing to read 'Rick Halpern', with a long horizontal flourish extending to the right.

Professor Rick Halpern
Dean and Vice-Principal (Academic)

Appendix A: Joint Program in New Media Studies Draft Mission Statement

The Joint Program in New Media Studies fosters critical, engaged and creative students who have the knowledge and skills needed to communicate effectively in written and visual modalities through the use of new and emerging digital media technologies. The curriculum is divided between academic study of media and new media from theoretical, historical, cultural and global points of view at UTSC and a year of practicum courses in new media design and communications at Centennial College.

Rationale: As more and more of contemporary life takes place on and through screens, developing an understanding of the interplay of texts and images and the ability to communicate effectively through them are key to full participation and citizenship in Canadian society as well as in the global digital village in which our students increasingly must compete. The unique structure of the Joint Program provides students with theoretical understanding of new media through academic study and practice-based digital media skills that prepare them for entry-level positions in new media industries and to continue academic study in new media and communication at the graduate level.

Curriculum & Program Delivery

Guiding Principles for Learning Outcomes

1. University of Toronto, "UTSC Undergraduate Degree Level Expectations" (attached)
2. Ontario, Ministry of Training, College and Universities, "Internet Applications and Web Development Fundamentals Program Standard" (attached)

UTSC Learning Outcomes	Joint Program in New Media Studies	Centennial College Learning Outcomes
<p>1. Develop an understanding of media theory and the history of media in order to contextualize how media works in today's world, on both local and global scales.</p> <p>2. Enhance awareness of the importance of media in the production and reproduction of contemporary cultures.</p> <p>3. Develop a capacity to critically evaluate the content of media, including the visual and aural, and analyze its underlying ideologies and implications.</p> <p>4. Critically evaluate the constraints of as well as the opportunities provided by modern media institutions and</p>	<p>Program Delivery by Year (Note: Reflects proposed changes in program structure)</p> <p><u>Year 1</u></p> <p>Fall: MDSA01 Introduction to Media Studies (UTSC)</p> <p>Winter: MDSA02 History of Media and Technology (UTSC)</p> <p>First-year introduces students to media studies, critical-theoretical approaches to understanding media, and a historical contextualization of media. Meets UTSC learning</p>	<p>1. Hand code HTML, CSS level 1 and 2, Javascript and Actionscript to produce web pages.</p> <p>2. Operate and evaluate a variety of computer hardware, software and peripheral devices in the development of new media design, including Adobe Suite.</p> <p>3. Develop, produce and implement audio, video and text content for new media environments such as social networks, interactive installations, entertainment, public environments, and interactive presentations.</p>

<p>information technologies to nourish humanistic and democratic values.</p> <p>5. Gain competency with a set of media theories applicable to students' own social contexts in order to better understand relationships between media and how individuals understand the self.</p> <p>6. Use digital technologies to create media projects and thereby also acquire basic media production and dissemination skills as well as a better understanding of media platforms, rhetoric and logic.</p>	<p>objectives 1, 2, 3, 4, 5.</p> <p><u>Year 2</u></p> <p>Fall: MDSB61 Mapping New Media (UTSC) (UTSC learning outcomes 1, 2, 3, 4, 5, with a special emphasis on 6 for NME students)</p> <p>NMEA01H Digital Fundamentals (CC) (focus on coding; CC learning outcomes 1 and 2)</p> <p>NMEA02H Intro to New Media Communications (CC)</p> <p>NMEA03H The Language of Design (CC)</p> <p>NMEA04H Interface Design, Navigation and Interaction I (focus on interface design and software)</p> <p>Winter: NMEB05H Interface Design, Navigation and Interaction II</p> <p>NMEB06H Project Development and Presentation (focus on project management, client project, and entrepreneurship; CC learning outcomes 3, 5, 6, 8, 9)</p> <p>NMEB08H Application Software Interactive Media</p> <p>NMEB09H Sound and Video</p> <p>NMEB10H Design for New Media</p> <p>The second year provides students a broad overview of new media design and communication with a focus</p>	<p>4. Write appropriate content for new media using techniques of non-linearity and interactivity.</p> <p>5. Create and present, as a member of a production team, new media project proposals. Project proposals will include project schedules, design documents, advanced information architecture maps, along with marketing documents and prototype solutions that meet the clients' needs.</p> <p>6. Prepare a solid financial business plan for a new media venture.</p> <p>7. Analyze, design and test navigation and interface for new media applications on multiple platforms.</p> <p>8. Apply appropriate new media design and management strategies according to client preferences and project requirements.</p> <p>9. Evaluate the goals, norms and development of multimedia projects.</p>
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	<p>on the development of basic technical skills that prepare students for more advanced digital projects in years 3 and 4.</p> <p><u>Year 3</u></p> <p>Fall: MDSB62 Visual Culture (UTSC)</p> <p>Winter: MDSB63 Sound and Visual Media (UTSC) (Course builds on work students do at CC in NMEB09H Sound and Video)</p> <p>The third year focuses on digital projects. The academic content meets UTSC learning objectives 1-6 and the technical content meets CC learning objectives 1, 3, 4, 9.</p> <p><u>Year 4</u></p> <p>Fall: NMED20 Theory and Practice of New Media (UTSC)</p> <p>Winter: NMED01 New Media Senior Project (UTSC)</p> <p>The fourth year focuses on advanced digital projects. Students continue to refine their technical skills while studying new media theory and practice from an academic arts perspective; in the second semester they develop a senior project to be included in their digital portfolio when entering the job market or when apply to graduate school for advanced study.</p> <p>The senior year invites student</p>	
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	to put together the learning outcomes of coursework at UTSC and CC. The combination of critical media studies and digital media practice from industry and art perspectives allows students to develop critical and creative thinking skills that will serve them well no matter their digital future.	
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Students may take an additional course, including a field placement, during an extra summer semester at Centennial College and earn a Certificate in New Media Design in addition to their bachelor's degree from the University of Toronto.

Review Summary

Program(s):	Paramedicine, B.Sc., Hons. (Joint Program with Centennial College): Specialist
Division/Unit:	University of Toronto, Scarborough (UTSC)
Commissioning Officer:	Dean and Vice-Principal (Academic), UTSC
Reviewers:	<ol style="list-style-type: none"> 1. Dr. Paula Price, Consultant, PQAPA Panel Chair 2. Dr. Walt Stoy, EMT-P, Professor and Director, Emergency Medicine Program, University of Pittsburgh 3. Dr. John Tallon, M.D., M.Sc., F.R.C.P.C., Professor, Department of Emergency Medicine, Dalhousie University; Vice President, Medical Programs, BC Emergency Health Services 4. Michael East, EMT-P, Prehospital Healthcare Educator; Communications Director, Society for Prehospital Educators in Canada 5. Dr. Jennifer McVey, M.D., M.Sc., F.R.C.P.C., Assistant Professor, Department of Emergency Medicine, Dalhousie University; Medical Director, Medavie HealthEd; Regional Medical Director, EHS Nova Scotia
Date of review visit:	May 28 and May 29, 2013

Previous Review

Date: June 2-3, 2008

Summary of Findings and Recommendations:

1. Undergraduate Program: Paramedicine, B.Sc., Hons. (Joint Program with Centennial College)

The reviewers identified the following areas of concern:

- Though students had positive outcomes, progression through the program “was at times rough”
- No marketing or promotion for the program contributing to low enrolment; inadequate online information
- Students had difficulty completing higher-level biology courses; unclear whether a biology

major is the most appropriate for students

- Not enough advanced courses
- Concern that students are either completing quickly (3 years) or taking longer than four years to graduate

The reviewers made the following recommendations:

- Develop more clinically-related courses
- Consider part-time or alternative delivery of third and fourth-year courses

2. Graduate Programs (n/a)

3. Faculty/Research

The reviewers observed the following strengths:

- Faculty committed to teaching excellence
- Ideal faculty and resources for program delivery

The reviewers identified the following areas of concern:

- Though faculty are supportive of the program, there is a perception among faculty that the program as imposed on the two institutions without consideration of faculty input

4. Administration

The reviewers observed the following strengths:

- Faculty and administration are committed to improving the program components to ensure success

The reviewers identified the following areas of concern:

- Communication between UTSC and Centennial is insufficient

The reviewers made the following recommendations:

- Increase communication and collaboration between UTSC and Centennial, via administrative changes, joint support for student success, and improved faculty connections
- Establish a joint curriculum review committee

Last OCGS Review(s) n/a

Date(s):

Current Review: Documentation & Consultation

Documentation Provided to Reviewers:

UTSC Strategic Plan, 2008

UTSC Academic Plan, 2010-15

UTSC Annual Review, 2011-12

UTSC Viewbook, 2013-14

Joint Programs Student Handbook, 2012-13

JPQR Terms of Reference, Specialist (Joint) program in Journalism (B.A.)

Program and Course descriptions from UTSC Calendar

Course Syllabi – Centennial College

Course Syllabi – UTSC

Faculty CVs – Centennial College
 Faculty CVs – UTSC
 Program Self Study, May 2008
 External Review Report, June 2008
 Summary and Administrative Response, March 2009
 Program Self Study, May 2013
 JPQR Student Survey
 Student Services Statement
 Library Statement

Consultation Process:

The reviewers met with the Associate Vice President, Academic Excellence (Centennial College) and the Vice-Dean, Undergraduate (UTSC); Dean, School of Community and Health Studies (Centennial College), Chair, Department of Biological Sciences (UTSC), and Chair, Collaborative Programs (Centennial College); Program Coordinator (Centennial College) and Program Supervisor (UTSC); Joint Programs Administrative Coordinator (Centennial College and UTSC) faculty (Centennial College and UTSC) and Paramedicine program students (Centennial College and UTSC).

Current Review: Findings & Recommendations

1 Undergraduate Program

Paramedicine, B.Sc.. Hons. (Joint Program with Centennial College): Specialist

The reviewers observed the following strengths:

- Overall quality
 - Leader in Canadian paramedic education
 - Valued, sought-after program, which attracts highly qualified applicants
- Admissions requirements
 - Requirements are appropriate to the degree expectations of the program
 - Innovative addition of non-academic skills to the admissions screening process
- Curriculum and program delivery
 - Curriculum positions the program as a leader in paramedic education
 - Curriculum and length of the program are appropriate to degree objectives
 - The foundation year provides an important maturational period for the students
- Assessment of learning
 - Innovative new assessment methods, including simulation-based assessment and the development of the Global Rating Scale, which is used nationally
- Quality indicators
 - Graduates are highly employable

The reviewers identified the following areas of concern:

- Objectives
 - Lack of clear, strategic vision with specific, overall learning outcomes that defines the unique contribution that the program offers to paramedic education
- Admissions requirements
 - Lack of accurate and complete marketing information available to applicants
- Curriculum and program delivery
 - Curriculum caters to students with a biology background
 - Curriculum design has become increasingly less flexible with fewer higher-level university courses available
 - Students have a disjointed experience, especially when moving from one institution to another, and face with frustration when navigating registration issues and figuring out how the program works
 - Registration/ROSI issues have negatively impacted the student experience
 - Degree entry may not be wholly supported by employers, threatening placements for graduates
- Assessment of learning
 - Curriculum mapping is isolated to each individual institution
 - Policy allowing students to withdraw from a practicum course after failing components of it is problematic given the limited number of practicum seats available
- Quality indicators
 - Lack of data about current students' retention and graduation rates hinders staff ability to accurately plan for courses
 - Absence of evidence of data on program graduates and their accomplishments
- Students
 - Students expressed desire to be blended with diploma students from the beginning of their programs

The reviewers made the following recommendations:

- Objectives
 - Faculty and administration should more clearly articulate the unique contribution that the joint program makes to paramedic education
 - Develop a clear picture of an ideal graduate of the program and articulate the knowledge, skills and values that the graduate would possess. Tailor the curriculum to meet those goals, keeping in mind what the future role of the paramedicine practitioner might be.
 - Consider potential synergies with other programs at UTSC
 - Clarify the different career paths of graduates of the joint program versus the diploma graduates
 - Examine the learning outcomes and standards developed for paramedicine programs in the U.S., Britain and Australia for parity and possible reciprocal agreement
- Admissions requirements

- Develop marketing materials that accurately describe the program in order attract the right students and ultimately support student success
- Ensure that alumni profiles are included in marketing materials to give an accurate picture of post-program opportunities
- Curriculum and program delivery
 - Develop a more flexible and innovative curriculum design to ensure that students can pursue a variety of interests, develop specialized knowledge bases, and prepare for graduate studies
 - Expand university course options (relevant to prehospital care) and forms of delivery, especially in the fourth year
 - Continue to invest in developing and maintaining relationships with employers and cultivate relationships with new potential employers
 - Introduce more evidence-based research as the basis for clinical instruction
- Assessment of learning
 - Create a curriculum map that connects courses to overall joint program learning outcomes
 - Explore the development of an evaluation model reflecting the more complex skills of communication and critical thinking, and develop resources to support preceptors in using the assessment tool
 - Continue to review the Late Withdrawal Policy and take actions to rectify the issue of available practicum seats
- Quality indicators
 - Collect data on students' completion rates and times to completion
 - Collect and utilize data on student employment and admission to graduate programs
- Enrolment
 - Consider expanding degree completion options and alternative delivery if there is recognized demand
 - Implement strategies to help better support students and achieve the goal of seamless delivery
 - Develop a plan to create a more positive sense of community for both students and faculty
- Program Administration
 - Re-examine the resources allocated to the Joint Programs Administrative Coordinator and consider whether the role is appropriately positioned
 - Increase advising capacity to better support students and improve their experiences

2 Graduate Program

[n/a]

3 Faculty/Research

The reviewers observed the following strengths:

- Overall quality
 - Faculty are recognized experts in the field of paramedicine and biology
 - High quality teaching in the program
- Research
 - Faculty are engaged in commendable research activities

The reviewers identified the following areas of concern:

- Faculty
 - Lack of a connection between the faculty of the two institutions

The reviewers made the following recommendations:

- Faculty
 - Develop faculty recognition awards
 - Create more opportunities for faculty from both institutions to interact with one another

4 Administration

The reviewers observed the following strengths:

- Resource allocation, including space and infrastructure support
 - Excellent lab facilities available for student learning
- Management and leadership
 - Communications and consultation processes between the program coordinator, supervisor, senior leadership and the administrative coordinator are successful
- Department/unit/programs relative to the best in Canada/North America and internationally
 - Leader in paramedic education in Canada

The reviewers identified the following areas of concern:

- Morale of faculty, students and staff
 - Noticeable lack of a unified community
- Social impact in terms of outreach and impact locally and nationally
 - Room for growth in the national-level impact of the program through the work of faculty and graduates in the field
- Management and leadership
 - Decisions appear to be made from the perspective of the graduate as a diploma-prepared paramedic, rather than as a joint program graduate
- Department/unit/programs relative to the best in Canada/North America and internationally
 - Program is not as flexible or student-oriented as leading international programs in paramedic education

The reviewers made the following recommendations:

- Morale of faculty, students and staff
 - Develop a plan of action for creating a more positive sense of community and belonging for students and faculty
 - Engage in joint program planning, joint administration and joint student advising to bring both populations together
- Scope and nature of relationships with cognate Faculties, academic departments and units
 - Pursue opportunities to develop synergistic relationships with other departments, in particular the new Health Sciences Cluster
- Social impact in terms of outreach and impact locally and nationally
 - Continue to support faculty contributions to the literature, presentations at national conferences, and representation on national professional associations to raise program profile
- Planning / Vision
 - Explore opportunities to develop more pathways, both for degree completion and for developing new graduate programs in Paramedicine
- Management and leadership
 - Establish a joint Paramedicine curriculum committee that would annually present at the Joint Programs Steering Committee
 - Create a leadership position to oversee the program's continued development and success
 - Consider marketing data at Joint Programs Steering Committee meetings
 - Re-examine the resource allocation for the Joint Programs Administrative Coordinator role and consider moving the job to a non-managerial administrative role

ADMINISTRATIVE RESPONSE – Appended



UNIVERSITY OF
TORONTO
 SCARBOROUGH

OFFICE OF THE DEAN &
 VICE-PRINCIPAL (ACADEMIC)

14 February 2014

Professor Sioban Nelson
 Vice-Provost, Academic Programs
 Office of the Vice-President and Provost
 Simcoe Hall
 University of Toronto

Dear Sioban,

Administrative Response, External Review of the Paramedicine Joint Program with
 Centennial College (B.A., Hons: Specialist)

Thank you for your letter of 28 November 2013 requesting my administrative response to the external review of the Paramedicine Joint Program with Centennial College. I appreciate the seriousness with which the reviewers approached the external review process, and am grateful for the careful consideration they have given to this program. I note with particular pleasure the reviewers' assessment that the program "is unique in Canada and a leader in the field of paramedicine education." In addition, I am grateful for the reviewers' assessment of the challenges facing the program and for their many helpful recommendations.

The external review report was sent to the Chair of the Department of Biological Sciences (UTSC), the Dean, School of Community and Health Studies (Centennial College), and all faculty and staff associated with the program for their information and feedback. The Vice-Dean, Graduate Education and Program Development met with the Program Supervisor as well as the staff associated with the program on January 24, 2014, and I met with the Joint Programs Executive Committee on February 3, 2014. I am pleased with the depth of the discussion that has taken place. We are taking the recommendations of the reviewers seriously and already have begun to act upon them.

Let me address now the specific points raised in your letter of 28 November.

Curriculum and Program Delivery

- *The reviewers noted that while each institution is clear about their role in the program, there continues to be a lack of clear, strategic vision with specific overall learning outcomes that defines the unique contribution that the program offers to paramedic education.*

We agree that both UTSC and Centennial have exceptionally well defined learning outcomes for their components of the Paramedicine program. There are both internal and external drivers at play that ensure this. UTSC has a set of learning outcomes that must be met for degrees. Likewise paramedicine training is prescribed by government accreditation and all of these requirements must be met. We indicated in the review materials how the courses within the program meet the standards required for both institutions. That said, we agree that it is desirable to have an overarching set of learning outcomes from which the individual components flow. The Joint program personnel from UTSC and Centennial already have begun to develop a Mission Statement and a list of Program Objectives that will provide this overarching structure for the program.

Colleagues' initial thinking focuses on the following two main points: First, from an employer perspective this unique program provides them with employees who have an excellent and very relevant set of skills, as well as sufficient academic depth that informs a progressive approach to clinical practice in the Paramedicine field. We are in essence preparing the future leaders of the field. Second, the program is unique in that it meets all the required learning outcomes for both the degree and diploma in four years. The completion of a university degree and college diploma in Paramedicine provides students with career opportunities that have considerably more scope and progression than is provided by a diploma alone. We plan to include these two main threads in the Mission Statement and Program Objectives.

- *The reviewers observed that the student experience can be inconsistent and confusing, especially when moving between the university and college portions.*

Movement between the university and college portions of the curriculum is a challenge for all of our Joint programs. Some aspects that appear confusing and inconsistent may stem from the realities of navigating between two different institutional cultures. Further confusion arises from two sources.

The first is the difference in pedagogy, expectations, and course material at the two institutions. At UTSC we have initiated a curricular review of the Paramedicine program to address these concerns, and others raised in the review. In undertaking this review we are in close consultation with our Centennial partners. Details of some specific aspects under review are outlined in the next section. The results of this review will be presented annually to the Joint Steering Committee.

The second source of confusion for the Joint Programs is the communication of program expectations to students. We believe this is less of an issue for this program than the others. However we will strive to improve communication. In particular we are working with UTSC's Academic Advising and Career Centre to ensure consistent messaging on program requirements. Furthermore, orientations for Paramedicine students are held

during the semester prior to transitioning to the College portion of their program. Students receive information on courses, the expectations of the College, and on their experience while at Centennial. We will ensure that these orientations are scheduled at a favourable time for students and that they do not interfere with students' classes at UTSC.

- *The reviewers noted that the curriculum has become increasingly less flexible, with fewer higher-level university courses available.*

This comment stems from the highly prescriptive nature of the program, which accounts for 18.0 of the 20.0 FCEs required for graduation. Our goal is to reduce the number of required courses, thus enabling students the flexibility to take other higher level offerings at UTSC. This will be accomplished in the on-going curricular review process referenced above. Below we provide specific details on anticipated changes.

- Over the next few years we will bring the program in line with most Specialist programs in the Sciences, which require 15.0-15.5 specific course credits.
- As a start, we are removing two required third year Anthropology courses in epidemiology (ANTC65H and ANTC67H). These courses were not offered every year, which created difficulties for students sequencing through the program. Removing these courses as a requirement will provide more flexibility for students interested in other disciplines, such as the newly restructured Health Studies program, which dovetail nicely with the Paramedicine curriculum.
- There is a duplication of physiology material (1.5 credits) required both at UTSC and Centennial. The UTSC physiology components will be reduced and will augment physiology covered in the College portion of the program.
- C and D level courses will be grouped in such a way as to permit students to tailor the program to their interests within the requirements of a B.Sc. For example, some may have an interest in a strongly biological program while others may be interested in focusing on health studies and courses will be grouped to enable a focus in such area.

Planning and Vision

- *The reviewers remarked upon the apparent lack of communication and the absence of a sense of partnership or shared vision between UTSC and Centennial.*

This comment is not consistent with the experience of those involved in the program at UTSC. UTSC faculty enjoy excellent working relationships with colleagues at Centennial, especially with the Program Coordinator, and they feel a shared sense of ownership and vision for the Paramedicine program.

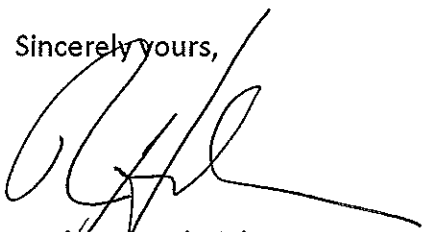
Nevertheless, as stated in a previous section, we agree that more should be done to foster an articulation of the shared vision. To this end, specific actions already have been taken and we are continuing to address this matter by developing a mission statement and program objectives.

- *The reviewers observed that better tracking of retention, graduation, and experiences post-graduation would improve course and program planning.*

Retention issues are important to us. Thus far, we have gained knowledge of student experience from anecdotal evidence provided by those involved in the program and by alumni who have remained in contact with us. Some of this information is gathered informally, but also we interview graduating Paramedicine students each year to solicit their feedback on the program. We agree that having a broad and reliable set of data analyses would be very useful for program planning and facilitating student recruitment into the program. In future, we will work with the UTSC Registrar to track admission, enrolment, and graduation numbers more systematically and will begin systematically to collect feedback from alumni into a database that can be used for analysis of their experience as students and as media professionals. In addition, we will begin to effectively engage the university and college alumni associations and are eager to work with the Alumni Offices to help in this process.

We are keenly aware that the current structure of the program, where students complete the diploma portion by the end of their third year, creates a significant challenge for students to complete their degree. We have considered many options over the years, none of which seemed to be a better option than our current course delivery. However, with the prospect of advanced paramedic community paramedic and health studies (which may include alternative course delivery methods) new options are presenting themselves and will likely be the topic of deliberation in the near future.

Sincerely yours,



Professor Rick Halpern
Dean and Vice-Principal (Academic)

Review Summary

Program(s):	Anthropology, B.A. (Hons.): Spec, Maj, Min Anthropology, B.Sc. (Hons.): Spec, Maj
Division/Unit:	UTSC Department of Anthropology
Commissioning Officer:	Dean and Vice-Principal (Academic), UTSC
Reviewers (Name, Affiliation):	1. Dr. Thomas J. Csordas, Professor, Department of Anthropology, Division of Social Sciences, UC San Diego 2. Dr. M. Anne Katzenberg, Professor, Department of Archaeology, Faculty of Arts, University of Calgary
Date of review visit:	October 21 and 22, 2013

Previous Review

Date: January 17-18, 2008 (as part of the Department of Social Sciences)

Summary of Findings and Recommendations:

1. Undergraduate Programs: Anthropology, BA/BSc: Spec, Maj, Co-op; Medical Anthropology, BA/BSc: Spec

The reviewers observed the following strengths:

- Social Science at UTSC represents great but untapped potential
- Diverse student body

The reviewers identified the following areas of concern:

The reviewers made the following recommendations:

- Track student progress after graduation to measure the success of the programs
- Undertake a curriculum review of all programs in department

2. Graduate Programs

(n/a)

3. Faculty/Research

The reviewers identified the following areas of concern:

- Student-faculty ratio of 40:1 is impacting the quality of the student learning experience

The reviewers made the following recommendations:

- Create new faculty positions in the department
- Add formal mentoring and training programs for new faculty

4. Administration

The reviewers identified the following areas of concern:

- Current structure of the department is not functioning and is unsustainable
- Perception is that management is top-down
- Department is under-resourced

The reviewers made the following recommendations:

- Change the departmental structure
- House interdisciplinary programs within the disciplines
- Commit financial resources to improve the department

Last OCGS Review(s) n/a

Date(s):

Current Review: Documentation & Consultation

Documentation Provided to Reviewers:

UTSC Strategic Plan, 2008

UTSC Academic Plan, 2010-15

UTSC Annual Review, 2011-12

UTSC Viewbook, 2013-14

Terms of Reference, Department of Anthropology

Program and Course descriptions from 2013-14 Academic Calendar

Course Syllabi

Faculty CVs

Department of Social Sciences Academic Plan, May 2011

Departmentalization Proposal: Social Sciences, April 2012

Self Study Report, April 2013

Student Services Statement

Library Statement

Site Visit Schedule, October 2013

Consultation Process:

The reviewers met with the Vice-Dean, Undergraduate; Chair, Department of Anthropology; Associate Chair, Department of Anthropology; senior and junior faculty in the Department of Anthropology; undergraduate students in Anthropology programs; Program Advisor, Department of Anthropology; administrative staff; and the Academic Programs Officer.

Current Review: Findings & Recommendations

1 Undergraduate Program

Anthropology, B.A. (Hons.): Spec, Maj, Min

Anthropology, B.Sc. (Hons.): Spec, Maj

The reviewers observed the following strengths:

- Overall quality
 - Considerable strength in evolutionary anthropology, religion, and ethics
 - Specialist programs are particularly strong and prepare students for graduate school and professional opportunities
- Curriculum and program delivery
 - Curriculum concentrated on two areas of the four traditional anthropology subdisciplines—social/cultural anthropology and biological anthropology
 - This structure makes sense given the size and resources of the department
 - Students have access to courses in the other fields—archaeology and linguistics—at the St. George campus
 - B.A. and B.Sc. programs offer international perspectives and experiential learning opportunities
 - Evolutionary anthropology (B.Sc.) programs provide research opportunities through fieldwork and laboratory analyses, as well as a solid preparation for graduate studies
 - Good range of topics covered by social/cultural anthropology (B.A.) programs
 - Flow of courses is logical yet flexible and leads to increasing specialization in both the B.A. and B.Sc. programs
 - Course sequences create a sense of community among students
- Assessment of learning
 - Evaluation methods are appropriate and effective
- Quality indicators
 - Students are committed to the discipline and are enthusiastic about their courses and instructors
- Enrolment
 - Current enrolment strategy is appropriate

The reviewers identified the following areas of concern:

- Admissions requirements
 - Faculty find students underprepared, especially in writing skills
- Curriculum and program delivery
 - Additional faculty expertise in East and/or South Asia would enhance the program, especially given student demographics
 - Some students find the quantitative content of second-year evolutionary anthropology courses to be difficult

The reviewers made the following recommendations:

- Curriculum and program delivery
 - Add a half-course in each anthropology subdiscipline at the B-level to enhance breadth and further create a sense of community among students
 - Add a capstone seminar or senior thesis to help prepare specialist students for graduate school

- Though current ethnography training is adequate, an additional theory course would be valuable in preparing majors and specialists for graduate school

2 Graduate Program

N/A

3 Faculty/Research

The reviewers observed the following strengths:

- Overall quality
 - Strong faculty with active and ongoing research
- Research
 - Faculty are publishing in high quality, high impact journals
 - Centre for Ethnography provides students with opportunities to engage in cultural diversity projects
- Faculty
 - Current faculty complement includes a diversity of research areas and provides students with education in biological anthropology and primatology
 - Enthusiastic junior faculty who are optimistic about the department's future
 - Complement is more heavily balanced towards junior faculty, which is advantageous

The reviewers identified the following areas of concern:

- Faculty
 - Evolutionary anthropology faculty would like to see an appointment with an archaeological focus

The reviewers made the following recommendations:

- Faculty
 - Importance of stable senior leadership in light of the number of junior faculty
 - Consider whether future growth areas should be in the two current streams or directed towards enhancing linguistic anthropology and archaeology; the best long-term strategy may be to build on existing strengths

4 Administration

The reviewers observed the following strengths:

- Relationships
 - Excellent morale and collegiality in the faculty complement
 - Faculty participate in national and international professional organizations
- Organizational and financial structure
 - Faculty support the new departmental structure

- Staff are generally happy
- Sociocultural anthropology faculty are happy with the Ethnography Centre
- Evolutionary anthropology facilities are very good, with secure storage and display cases
- Planning / Vision
 - Department and its programs fit very well with the goals of the UTSC academic plan
- Department/unit/programs relative to the best in Canada/North America and internationally
 - Programs are comparable to other North American programs

The reviewers identified the following areas of concern:

- Relationships
 - Faculty have been unsuccessful in securing sufficient places for students in Biological Sciences courses, which they would benefit from in preparing for graduate school
- Organizational and financial structure
 - Departmentalization has increased the workload for staff
 - Move to new Social Sciences building has provided new space but research and teaching labs are still limited
 - Transportation to and from St. George poses challenges for T.A.s and staff members

The reviewers made the following recommendations:

- Relationships
 - Build stronger relationships with the Health Studies program to expand offerings in biomedical anthropology, primatology, and medical anthropology; strengthen relationships with other social sciences programs, humanities programs, and Biological Sciences
- Organizational and financial structure
 - Re-examine staffing levels and structure in light of the new departmental structure
 - Make alternative arrangements for faculty without research lab facilities
 - Additional faculty space will be needed for future hires

ADMINISTRATIVE RESPONSE – Appended



UNIVERSITY OF
TORONTO
 SCARBOROUGH

OFFICE OF THE DEAN &
 VICE-PRINCIPAL (ACADEMIC)

13 February 2014

Professor Sioban Nelson
 Vice-Provost, Academic Programs
 Office of the Vice-President and Provost
 Simcoe Hall
 University of Toronto

Dear Sioban,

Administrative Response, External Review of the Programs in the Department of Anthropology at UTSC: Anthropology, B.A. (Hons.): Spec, Maj, Min; and Anthropology, B.Sc. (Hons.): Spec, Maj.

Thank you for your letter of 24 January 2014 requesting my administrative response to the recent external review of the UTSC Department of Anthropology. I note the seriousness with which the external assessors approached the review process, and am appreciative of the careful consideration they gave to the programs in this department. This, as you know, is a relatively new department, and I note with particular pleasure that the review team endorsed the recent decision to departmentalize. I also take satisfaction from the fact that the reviewers made a point of commenting on the high morale and collegiality of the department. Likewise I am pleased by their praise of recent hires and their statement placing the department's programs on par with other leading institutions in North America. In addition, I am grateful for the reviewers' frank assessment of the challenges facing the department and its programs, and for their many helpful recommendations.

The external review report was sent to the Chair of the department, who shared it with staff and faculty members. On 5 February 2014 I, along with the Vice Dean Undergraduate and the Assistant Dean (Academic) met with the Chair as well as faculty and staff to discuss the external review. I am pleased with the constructive tenor and substantive depth of the discussion that took place. The wide-ranging conversation marked the start of an ongoing dialogue between the department and the Dean's Office about the enhancement of Anthropology at UTSC in general and the strengthening of its several programs in particular. It is clear that the department is taking the recommendations of the reviewers seriously and already has begun to act upon many of them.

Let me now address the specific points raised in your letter of 24 January.

Curriculum and program delivery

- *The reviewers noted faculty's concern over students requiring additional support to attain learning outcomes, particularly in the areas of writing skills.*
- *The reviewers were positive about the Specialist programs overall, but suggested that the Specialist would benefit from the addition of a capstone course to better prepare students for graduate school.*
- *The reviewers made a number of observations regarding curricular improvements, including adding B-level courses, adding a theory course, and examining the quantitative content of second-year courses.*

The department is sensitive to the fact that it needs to be explicit about its learning outcomes and communicate these clearly to its students. The department shares a concern with other academic departments at UTSC about improving students' academic skills and has joined a campus-wide discussion about this. It also is committed to developing discipline specific endeavours, particularly around reading and writing. Faculty are experimenting in various ways with writing and reading assignments in their classes, and are sharing ideas with one another. The department will also leverage its connection to the Centre for Ethnography by asking the Centre's writing fellows to offer additional support to undergraduates. Most importantly, the Chair is working with colleagues to formulate a proposal for the Dean for funding in the next cycle for dedicated TA writing support.

On the matter of a capstone course for the Specialist programs, the department believes it was not sufficiently clear to the reviewers that it already offers two capstone seminars in the sociocultural stream. These are D05, advanced fieldwork, which includes developing, conducting and writing up a piece of original ethnographic research; and D15, which is offered annually on a different theme and linked to a colloquium series with invited speakers. These courses are not required, but priority is given to students in the Specialist programs. In response to the review, the department's evolutionary anthropologists are discussing whether it is appropriate to have a single capstone course or simply advanced seminars on particular topics, as currently offered. It should also be noted that the department is proposing that one of its faculty members serve as an "in house" academic advisor to majors and specialists, with particular emphasis on helping prepare students for graduate school.

Several improvements to the Anthropology curriculum are being planned, including two new courses (one each in the evolutionary and sociocultural streams) to be offered annually by postdoctoral fellows or advanced graduate students on a cutting-edge theme of their own choosing (to be selected by the department on a competitive basis). This will bring the undergraduates closer to the experience of graduate school and to the excitement of emerging knowledge formation in cutting edge areas of the discipline.

The department also is considering the suggestion of B level courses in each of the four subfields but is not inclined to make them required for all students. In fact, they recently reduced the requirement in recognition of the differences among the streams. Not requiring students to master the four subfields, leaves room for students to take what may be equally important courses in cognate disciplines, whether that be biology or geology for evolutionary stream students, or history or sociology for students in the sociocultural stream. The department does offer two core B level courses in each of its main streams, plus an optional B level course in linguistic anthropology. Currently they are considering developing a B level course in archaeology. The B level core courses in evolutionary and sociocultural anthropology are required for students in their respective streams and open to all students who have the prerequisite A level courses. The sociocultural anthropologists are taking very seriously the reviewers' recommendation of an additional theory course and, as a first step, will be developing a core C level course that will include components of theory.

Relationships

- *In order to better serve student needs and enhance interdisciplinary offerings, the reviewers recommended furthering links with cognate departments, especially Biological Sciences.*

With respect to building better relationships with cognate departments, the evolutionary anthropologists have tried to do so with Biology and will keep on trying. Sociocultural stream anthropologists will explore further relationships with other departments and programs, in particular English, History, Critical Development Studies, Geography, City Studies, Sociology, and Health Studies. The department sees the external review as an opportunity to update its complement plan, and already is considering the advantages of cross-appointed faculty. Anthropology is inherently inter-disciplinary and colleagues also are interested in co-teaching certain courses with faculty from other departments as a step toward further cross- and inter-disciplinarity. There is another hopeful dynamic at play as well: a recent hire in the, now dissolved, Department of Humanities was welcomed into Anthropology when he sought to transfer a portion of his appointment to that department, and other faculty in our social science and humanities departments, most notably Historical and Cultural Studies, have expressed keen interest in collaborating with Anthropology. Also, it might be noted that while the department currently offers its own quantitative course for evolutionary stream students it plans to explore the possibility of drawing on the statisticians in the Department of Computer and Mathematical Sciences to take over or assist in its delivery.

Program development

- *The reviewers encouraged the department to carefully consider the right balance in future faculty hiring—specifically with respect to the subdisciplines of anthropology.*

Future hires are an ongoing matter of discussion in the department, and between the Chair and the Dean. The reviewers identified the alternatives ahead of the department namely whether to build on its strengths or broaden its scope. Over the next few months, after the department revisits its complement plan in light of the external review, it will propose new positions as part of the annual campus wide budget exercise. Like the reviewers, the department tends to favor depth over breadth, but will continue to reflect carefully on its options.

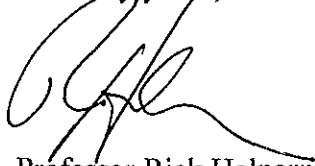
As the reviewers note, it will be a priority for the sociocultural stream to hire new faculty with expertise in Asia and to add regional courses that focus on parts of Asia. The department has not yet determined which topical strengths to highlight but these might include urban anthropology and environmental anthropology. The evolutionary anthropologists have embarked upon a careful discussion about whether or not to expand the archaeology or human biology fields.

Resources and planning

- *The reviewers commented on the impact of departmentalization on staff and recommended a review of the structure.*

This is a problem identified across the social sciences, which share administrative support. In the particular case of Anthropology the problem of staff workload is first with the Business Officer. The recent hire of a financial assistant has lightened her burden, and she is in the process of downloading further work to the assistant. In discussion with the social science chairs, the Dean has explored the option of hiring a second Business Officer for the five units. Anthropology's view is that a continued rebalancing of work between the incumbent and her assistant is a better strategy than putting in place a second business officer. The next step will be to engage the other units in a discussion of available resources and work toward a sense of prioritization. Anthropology also notes that the program assistant has struggled at times from a heightened workload due to the changes in the program in health studies, which is administratively ensconced in the department. It may be that a dedicated program assistant in health studies is called for, and this step is being considered.

Sincerely yours,



Professor Rick Halpern
Dean and Vice-Principal (Academic)

Review Summary

Program(s):	Human Geography, B.A., Hons.: Maj, Min Physical and Human Geography, B.A., Hons.: Maj City Studies, B.A., Hons.: Maj, Maj (Co-op)
Division/Unit:	Department of Human Geography, UTSC
Commissioning Officer:	Dean and Vice Principal (Academic), UTSC
Reviewers (Name, Affiliation):	1. Dr. Kenneth Foote, Professor, Department of Geography, University of Colorado at Boulder 2. Dr. Audrey Kobayashi, Professor, Department of Geography, Queen's University
Date of review visit:	October 17 th and 18 th , 2013

Previous Review

Date: January 17-18, 2008 (with Department of Social Sciences)

Summary of Findings and Recommendations:

1. Undergraduate Programs (Human Geography, B.A.: Maj; Physical and Human Geography, B.A., Maj.; City Studies, B.A.: Maj., Co-op)

The reviewers observed the following strengths:

- Social Science at UTSC represents great but untapped potential
- Diverse student body

The reviewers identified the following areas of concern:

The reviewers made the following recommendations:

- Track student progress after graduation to measure the success of the programs
- Undertake a curriculum review of all programs in department

2. Graduate Programs

(n/a)

3. Faculty/Research

The reviewers identified the following areas of concern:

- Student-faculty ratio of 40:1 is impacting the quality of the student learning experience

The reviewers made the following recommendations:

- Create new faculty positions in the department

- Add formal mentoring and training programs for new faculty

4. Administration

The reviewers identified the following areas of concern:

- Current structure of the department is not functioning and is unsustainable
- Perception is that management is top-down
- Department is under-resourced

The reviewers made the following recommendations:

- Change the departmental structure
- House interdisciplinary programs within the disciplines
- Commit financial resources to improve the department

Last OCGS Review(s) n/a

Date(s):

Current Review: Documentation & Consultation

Documentation Provided to Reviewers:

UTSC Strategic Plan, 2008

UTSC Academic Plan, 2010-15

UTSC Annual Review, 2011-12

UTSC Viewbook, 2013-14

Terms of Reference, Department of Human Geography

Program and Course descriptions from 2013-14 Academic Calendar

Course Syllabi

Faculty CVs

Department of Social Sciences Academic Plan, May 2011

Departmentalization Proposal: Social Sciences, April 2012

Self Study Report, May 2013

Student Services Statement

Library Statement

Site Visit Schedule, October 2013

Consultation Process:

The reviewers met with the Vice-Provost, Academic Programs, Vice-Dean, Undergraduate; Chair, Department of Human Geography; Associate Chairs, Department of Human Geography; senior, junior and sessional faculty in the Department of Human Geography; undergraduate students in City Studies, Human Geography and Physical and Human Geography programs; Program Advisor, Department of Human Geography; Director, Arts and Science Co-op; administrative staff; and the Academic Programs Officer.

Current Review: Findings & Recommendations

1 Undergraduate Program

Human Geography, B.A., Hons.: Maj, Min

Physical and Human Geography, B.A., Hons.: Maj

City Studies, B.A., Hons.: Maj, Maj (Co-op)

The reviewers observed the following strengths:

- Overall quality
 - Overall high quality educational experience
 - Impressive rethinking of curriculum following departmentalization
 - Faculty are committed to ongoing program development and improvement
- Objectives
 - Appropriate length, structure, learning outcomes, and degree expectations for all programs
- Admissions requirements
 - Admission requirements are in line with curricula and program learning outcomes
- Curriculum and program delivery
 - Curricula are rigorous and reflect current trends and research priorities in the discipline
 - Interesting, wide range of new courses in City Studies and Human Geography
 - Faculty employ active pedagogy, including problem and inquiry-based learning, and the quality of teaching is very high
 - In-development two-semester course sequence is designed to improve students' writing and research skills
 - Proposed Minor in Geographic Information Science (GIS) reflects department's forward-thinking approach to curriculum improvement
 - Students appreciate the considerable service learning, community outreach and volunteer programs offered by the department
 - Students are prepared for graduate study and professional opportunities in fields which continue to grow
- Assessment of learning
 - Assessment of student learning is aligned with learning outcomes and degree level expectations
- Quality indicators
 - Admitted students are above normal campus averages; faculty are considering ways to attract even more highly qualified students
 - The unique City Studies program attracts high quality students
 - Times-to-completion are acceptable given the students' work demands and the other courses of study that they may be pursuing
- Students
 - Students are very positive about their experiences in the programs

- Support
 - Students receive high quality advising
- Outreach/Promotion
 - Recruitment materials are effective and emphasize the social and economic relevance of programs

The reviewers identified the following areas of concern:

- Curriculum and program delivery
 - Growth in service learning opportunities are limited by current staffing levels and teaching loads
- Outreach/Promotion
 - Note that faculty are interested in attracting larger numbers of national and international students, though the potential of this is probably limited

The reviewers made the following recommendations:

- Curriculum and program delivery
 - Consider innovative approaches in delivering and developing the GIS minor, exploring the intersections between GIScience and urban and community issues
 - Develop a strategic plan for incorporating more learning technologies, such as virtual office hours, into the programs
 - Explore internship programs with government agencies and non-profit programs to allow students to gain additional relevant experience
 - Redevelop the Physical and Human Geography program to highlight recent development in areas of overlap between human and physical geography
- Assessment of learning
 - Consider developing an assessment plan that involves annual data collection about courses and use it to improve programs

2 Graduate Program

N/A

3 Faculty/Research

The reviewers observed the following strengths:

- Research
 - Faculty are engaged in cutting-edge research projects that reflect current directions in geographical sciences
 - Faculty teaching and research focuses on relationships with external agencies, which are particularly relevant to the City Studies program
 - Faculty are engaged in community-based and participatory action research, which represent growth areas within the discipline

- Students value the Community-University Research Alliance (CURA) programs, which provide them with significant opportunities for community-based research
- Faculty
 - Faculty, who are primarily early career, are “dynamic, energetic, dedicated, and productive”
 - Faculty are enthusiastic about further developing the programs
 - Department is supportive and offers a very effective mentorship program for new faculty
 - Faculty cross-appointments with other social science and humanities departments support the department’s cross-disciplinary focus
 - Thoughtful faculty complement plan that builds on current strengths and anticipates future demands

The reviewers identified the following areas of concern:

- Faculty
 - Concerns about the vulnerability of the faculty complement, which is dependent upon CLTAs
 - Current teaching gaps in areas such as quantitative methods

The reviewers made the following recommendations:

- Faculty
 - Consider adding an orientation for new and continuing sessional instructors
 - Be strategic about the two new appointments in urban geography
 - Develop capacity in areas such as community and participatory GIS to serve both student and faculty interests
 - Add a new GIS lecturer position to enhance the program and address student interests
 - Convert current CLTA appointments to tenure stream positions to ensure stability in the complement and meet teaching needs
 - Maintain the balance of permanent to sessional appointments

4 Administration

The reviewers observed the following strengths:

- Relationships
 - Morale amongst all groups is excellent
 - Strong relationships with cognate departments, including the other social science departments
- Organizational and financial structure
 - Programs are very well-run
 - Faculty willingly spend a substantial amount of time engaged in departmental governance and planning
 - Support staff are well qualified

- Programs are consistent with the University's mission and the 2008 & 2012 strategic and academic plans, advancing many goals of each
- Department benefits from good leadership
- Department/unit/programs relative to the best in Canada/North America and internationally
 - Comparable to a number of North American departments, though exact comparisons are difficult due to the focus and unique structure of the UofT campuses

The reviewers identified the following areas of concern:

- Organizational and financial structure
 - Students and faculty need a common room and a computer laboratory space where they can interact outside of current classrooms/teaching labs

The reviewers made the following recommendations:

- Organizational and financial structure
 - Create a common space and computer lab for the department that also supports GIScience projects as well as supporting emerging areas of research and teaching in urban informatics
 - Consider holding occasional staff meetings to coordinate work among staff who are shared with other programs
 - Given the rapid growth of the department, more support staff resources will be required in the future
 - Within the midst of the field's rapid change, determine the best position for the department to sustain enrolment growth and its successes
 - Future plans should reflect the diverse student body, the department's location within the GTA, and changes in technology

ADMINISTRATIVE RESPONSE – Appended



UNIVERSITY OF
TORONTO
 SCARBOROUGH

OFFICE OF THE DEAN &
 VICE-PRINCIPAL (ACADEMIC)

19 February 2014

Professor Sioban Nelson
 Vice-Provost, Academic Programs
 Office of the Vice-President and Provost
 Simcoe Hall
 University of Toronto

Dear Sioban,

Administrative Response, External Review of the Undergraduate Programs in the UTSC Department of Human Geography: Human Geography, B.A. (Hons.): Maj, Min; Physical and Human Geography, B.A. (Hons.): Maj; and City Studies, B.A. (Hons.): Maj, Maj (Co-op).

Thank you for your letter of 29 January 2014 requesting my administrative response to the recent external review of the UTSC Department of Human Geography. I applaud the thoroughness with which the external assessors approached the review process, and am very appreciative of the careful consideration they gave to the programs in this department. I am pleased that the reviewers found so many aspects of the programs praiseworthy, particularly their rigour and currency, their ability to attract well-qualified students and prepare them for a wide range of professional opportunities, the leadership of the department, the collegiality and dedication of its members, and the strong connections these colleagues have made with others in cognate disciplines. The reviewers believe that the programs would hold their own in any national or international context, especially the unique program in City Studies, which attracts high quality students, and the Geography program, which they see as cutting edge and striking an appropriate balance between covering traditional bases and breaking new ground. Also, the review team made note of the high level of faculty engagement in community-based and participatory action research, which they believe is well suited to our urban environment. At the same time, the reviewers made very frank assessments of the challenges facing the department and its programs. I am grateful for these and for their many helpful recommendations.

The external review report was sent to the Chair of the department, who shared it with staff and faculty members. On 6 February 2014, I, along with the Vice Dean Undergraduate and the Assistant Dean (Academic) met with the Chair as well as faculty and staff to discuss the external review. The tenor of that meeting was constructive, and the discussion that took place was detailed and substantive. It is clear that the department

is taking the recommendations of the reviewers seriously and already has begun to act upon many of them. The Dean's Office is committed to working with the department to strengthen Human Geography at UTSC and to move quickly to further enhance its excellent programs.

Let me now address the specific points raised in your letter of 29 January.

Curriculum & Program Delivery

- *The reviewers noted possibilities for improving the student learning experience through the use of learning technologies and virtualization, redevelopment of the Physical and Human Geography curriculum, and improvement of students' writing and research skills.*

The department shares a concern with other academic departments at UTSC about improving students' academic skills and has joined a campus-wide discussion about this. The department also is working actively on curriculum improvements to ensure the development of stronger writing skills of its students. The main elements are to strengthen teaching of basic writing and critical reading skills in first year tutorials, and the introduction of a required second-year writing and research design course for all departmental major program students. As well, the department is discussing the creation of a more diverse range of writing assignments in different classes to help to develop student enthusiasm for and engagement in writing practices.

Currently almost all the department's courses employ Blackboard for course delivery. Some faculty have ongoing experiments with the use of blogs, online journals, and wikis for writing assignments, student discussions, and content delivery. The department also will consider carefully the reviewers' recommendations regarding the use of learning technologies and virtualization in the curriculum renewal process that is underway.

Program Development

- *The reviewers praised the forward-thinking development of the new minor in Geographic Information Science (GIS). They also noted opportunities to have GIS be used in new and interesting ways, beyond what is already planned, that cut across many curricular areas.*

The department's major plans for expanded use of learning technologies is the creation and implementation in 2014-15 of the new freestanding Minor Program in GIS, with associated courses in web-based mapping and cartography and crowd-based data collection. The department is optimistic about the potential of this program to attract strong interest from excellent students. The department currently is searching to fill a new faculty position in Global Information Science and will look to this colleague for leadership in finding ways to integrate GIS into other programs offered by the department and across UTSC. It is worth noting that both

this particular faculty position and the GIS program more generally will be supported by a hire in the UTSC Library of a data librarian.

As the next step, the department plans to make curricular changes to both the Geography and City Studies programs that take advantage of and contribute to the GIS program. These changes will include new assignments in existing courses that rely on GIS and mapping approaches as research methods, as well as the introduction of new courses that develop critical conceptual frameworks and applications relevant to digital spatial data use and analytical skills. One particularly promising avenue will be to create courses in which students work with our community partners in community mapping and planning projects. It is worth noting that the department will launch a summer pilot program on "Scarborough Streets" that will give select undergraduate students the opportunity to involve themselves in GIS research in the east end of the city.

Enrolments in City Studies Co-op Major and Major programs are growing strongly, and the department currently is working on plans for the next steps of program development. The primary initiative will be the creation of a new stream of workshop courses in years three and four to equip students with essential employment skills in city management such as in running public consultations, managing charettes, doing environmental assessments, and working with teams of volunteers. The workshop courses will be a combination of service learning and professional skills development, and will engage students in interaction with local urban professionals. Finally, essential to the continued growth of the Co-op Major will be continued development of high-quality placement opportunities.

The department also is discussing the revision and expansion of the Major Program in Physical and Human Geography to engage with current debates about human impacts on the global environment and environmental impacts on human geography, and the expanding study and knowledge of those interactions. The strongest thematic link between the two programs is the concentration in Environmental Geography, an area the department hopes to strengthen through future hires.

Resources and planning

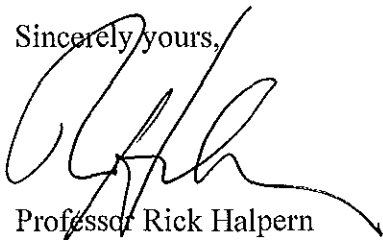
- *The reviewers praised the department's efforts in planning for the future of the faculty complement. They also encouraged specific changes to the composition of the faculty complement in order to continue to meet curricular needs and bring stability to the departments.*
- *The reviewers noted issues with the level of staff in place to support the programs.*
- *Though the department will eventually move into a new space, the reviewers noted the current need for a common space for students and faculty as well as a computer lab to support GIScience projects and emerging areas of research and teaching in urban informatics.*

Between 2011 and 2013, the department has hired four new colleagues, three of whom are CLTAs. The CLTA positions are in areas where the department has experienced enrolment growth and the Dean will be working with the department to ensure that these term positions are converted to on-going appointments over the next few years. In addition, this year the department expects to fill two new tenure stream positions, one in City Studies and the other in "big data," and the teaching stream position in Geographic Information Science discussed above. In developing its complement plan for the future, the department will focus on maintaining the balance between the three areas of concentration within Human Geography, and City Studies.

The level of staff support within the department is a problem identified across the social science units, which share administrative support. The first step towards a solution will be to engage the other departments in a discussion of available resources and work toward a viable sense of prioritization. It is clear that the main point of pressure is upon the Business Officer. The recent hire of a financial assistant has lightened her burden, and she is in the process of transferring further work to the assistant. In discussion with the social science chairs, the Dean has explored the option of hiring a second Business Officer for the five units.

For the next two years UTSC will experience severe limitations on our ability to provide departments with additional space. However, our ambitious infrastructure projects are moving forward on time and on budget, and we anticipate that a new building for the Social Science departments will be ready for occupancy in late 2015. The Department of Human Geography will have sufficient space in this new building to accommodate the Cities laboratory, research and teaching needs. The Cities Laboratory, now housed within the UTSC Library, will fully be utilized starting Fall 2014, and the department will use that space to develop incrementally more classes and projects that are designed to take advantage of a dedicated geography lab space. They expect to be able to make full use of the dedicated Geography lab in the new Social Sciences building starting in 2016.

Sincerely yours,



Professor Rick Halpern
Dean and Vice-Principal (Academic)

Review Summary

Program(s):	Political Science, B.A. (Hons.): Spec, Maj, Min Public Policy, B.A. (Hons.): Maj, Maj (Co-op)
Division/Unit:	<i>Review of programs only</i>
Commissioning Officer:	Dean and Vice-Principal (Academic), UTSC
Reviewers (Name, Affiliation):	1. Dr. Kathryn Harrison, Professor of Political Science, Chair, Department of Political Science, University of British Columbia 2. Dr. R. Kent Weaver, Professor of Public Policy, Comparative Government Field Chair, McCourt School of Public Policy, Georgetown University
Date of review visit:	November 14 and 15, 2013

Previous Review

Date: January 17-18, 2008 (with Department of Social Sciences)

Summary of Findings and Recommendations:

1. Undergraduate Programs Political Science, BA: Spec, Maj; Public Policy, BA: Maj, Co-op

The reviewers observed the following strengths:

- Social Science at UTSC represents great but untapped potential
- Diverse student body

The reviewers identified the following areas of concern:

- Some students unprepared for higher level courses

The reviewers made the following recommendations:

- Track student progress after graduation to measure the success of the programs
- Undertake a curriculum review of all programs in department

2. Graduate Programs

(n/a)

3. Faculty/Research

The reviewers identified the following areas of concern:

- Student-faculty ratio of 40:1 is impacting the quality of the student learning experience

The reviewers made the following recommendations:

- Create new faculty positions in the department

- Add formal mentoring and training programs for new faculty

4. Administration

The reviewers identified the following areas of concern:

- Current structure of the department is not functioning and is unsustainable
- Perception that management is top-down
- Department is under-resourced

The reviewers made the following recommendations:

- Change the departmental structure
- House interdisciplinary programs within the disciplines
- Commit financial resources to improve the department

Last OCGS Review(s) n/a

Date(s):

Current Review: Documentation & Consultation

Documentation Provided to Reviewers:

UTSC Strategic Plan, 2008

UTSC Academic Plan, 2010-15

UTSC Annual Review, 2011-12

UTSC Viewbook, 2013-14

Terms of Reference, Department of Political Science

Program and Course descriptions from 2013-14 Academic Calendar

Course Syllabi

Faculty CVs

Department of Social Sciences Academic Plan, May 2011

Departmentalization Proposal: Social Sciences, April 2012

Self Study Report, April 2013

Student Services Statement

Library Statement

Site Visit Schedule, November 2013

Consultation Process:

The reviewers met with the Vice-Provost, Academic Programs, Vice-Dean, Undergraduate; Chair, Department of Political Science; Associate Chair, Department of Political Science; faculty in the Department of Political Science (by discipline); undergraduate students in Political Science and Public Policy programs; Program Advisor, Department of Political Science; Director, Arts and Science Co-op; administrative staff; and the Academic Programs Officer.

Current Review: Findings & Recommendations

1 Undergraduate Program

Political Science, B.A. (Hons.): Spec, Maj, Min; Public Policy, B.A. (Hons.): Maj, Maj (Co-op)

The reviewers observed the following strengths:

- Objectives
 - Undergraduate programs reflect commitment to University-wide goals
- Admissions requirements
 - Appropriate for all programs
- Curriculum and program delivery
 - Political Science
 - Courses designed to give a general introduction to political science concepts and experience in reading and writing
 - Laudable decision to ensure large lecture courses are taught by popular and skilled tenure-track faculty
 - Public Policy
 - New Public Policy Major has significant appeal for students, providing them with preparation for careers in public affairs
 - Public Policy Co-op students maintain higher GPAs throughout their degree, which is attractive to prospective employers
 - Co-op's impressive collaboration with the English Language Development Centre to provide professional writing workshops for students
- Quality indicators
 - Students satisfied with their programs
 - Course evaluations are on par with UTSC averages
- Support
 - Faculty have had transformative impact on the undergraduate education of some students
 - Students generally very happy with faculty and appreciate their efforts
 - Appropriate and suitable use of course management tools for electronic engagement with students
 - Department makes effective use of using TAs to support writing-intensive courses

The reviewers identified the following areas of concern:

- Objectives
 - Learning objectives are unclear
- Curriculum and program delivery
 - Political Science
 - Overreliance on A and B level courses limiting students' ability to take specialized, topical courses until their third year of studies, which may be causing low motivation

- Courses offered once per week in two-hour blocks challenge students' attention spans
- Department has chosen to have large courses taught by popular instructors; concern that they will grow even larger and will cause constraints for students
- Participant-centred learning methods could be more widely-used
- Public Policy
 - Student surveys indicate that students would prefer greater focus on quantitative methods, research design, and oral communications skills in Public Policy Major
 - Concern that the transfer of the introductory statistics course to the Department of Computer and Mathematical Sciences may lead to diminished focus on Social Science methodologies
 - Concern with relative lack of focus on economics preparation for Public Policy students
 - Students dissatisfied with the quality and number of co-op placements
- Assessment of learning
 - Concern that the move to 0.5 FCE courses has led to students writing multiple papers at the same time
- Students
 - Concern about the academic preparation of students upon admission
 - Emphasized the distinctive characteristics of the student body, including long commutes, off-campus employment, poor motivation, and reluctance to engage with faculty, especially in years one and two
 - Limited availability of extracurricular events
 - Low in-class participation in lectures and tutorial sessions

The reviewers made the following recommendations:

- Objectives
 - Reconsider learning outcomes and teaching approaches relative to better preparing students for engagement in social and political life and their future careers
- Curriculum and program delivery
 - Political Science
 - Consider offering web-option versions of large A-level courses combined with mandatory discussion sections to make courses available to a broader set of students
 - Exempt students with strong preparation and writing skills out of the A-level classes, allowing them to take more C and D-level courses in order to attract more academically strong students to the discipline
 - Ensure that TA budgets are adequate to cap discussion sections for A-level courses at 25 students, which would give students more opportunities to improve their writing
 - Relax the B-level breadth requirements in each subfield, allowing students to specialize in political science subfields of their choosing
 - Add participant-centred learning to classes to increase student engagement

- Consider how to add international study exchange opportunities for Political Science students
 - Public Policy
 - Ensure that social science and public policy examples are included in the introductory statistics course taught by the Department of Computer and Mathematical Sciences
 - Increase the Economics offerings for Public Policy Majors, including electives, to provide them with a stronger foundation and prepare them for graduate school and public service
 - Relocate one Public Policy course (which could be a Canadian policy course) to the B-level to further attract students to the program, provide core courses sooner, and allow students to take more specialized policy electives at the C and D level
 - Offer a career-oriented capstone applied policy analysis seminar for Public Policy majors at the D-level, which would include an applied project and improve oral presentation skills
 - Strengthen the Public Policy curriculum to make students even more attractive to prospective co-op employers
 - Allow co-op students to apply to relevant placements in the Management Division co-op program until there are sufficient public sector placements
- Assessment of learning
 - Consider coordinating assignments, particularly in required courses, to provide greater variety and timing of written assignments
- Enrolment
 - Continue to monitor the balance between enrolment in Political Science and Public Policy so that there is not an overall drop for the department
- Students
 - Continue to support the nascent Political Science students' association and work with them to identify activities that might appeal to students
 - Encourage the ongoing use of online discussion tools, digital engagement, and virtual group work, which may give students greater confidence to participate
- Support
 - Ensure that all students have a one-to-one appointment with a program advisor, ideally as they enter the major or specialist programs

2 Graduate Program

The reviewers made the following recommendation:

- Program development
 - Consider developing a professionally-oriented graduate program that builds on the strengths of the faculty and would benefit students in the Toronto East area
 - Possibilities include a combined program credential that would prepare students for the Ontario and federal public service or degrees tailored to public policy, administration and law, or human services

3 Faculty/Research

The reviewers observed the following strengths:

- Overall quality
 - Community of conscientious teachers who care about their students and devote considerable effort to designing and delivering their courses
- Research
 - Exemplary research record that compares well to those at major research universities
 - Commendable Summer Scholars program could serve as a model for academic-term research programs
- Faculty
 - New hires have reduced reliance on single-course sessional instructors
 - Hire of an additional Assistant Professor planned for next year

The reviewers identified the following areas of concern:

- Research
 - Few students are exposed to serious professional research opportunities with faculty, as research funding is prioritized for Ph.D. and M.A. students, and students indicate that they would like more research experience
- Faculty
 - Some spend little time on campus and view their intellectual community as being at St. George

The reviewers made the following recommendations:

- Research
 - Create a pool of funds to allow highly motivated undergraduates to work as research assistants with faculty
 - Experiment with a thesis option for students at the D-level to provide students with more research experience

4 Administration

The reviewers observed the following strengths:

- Organizational and financial structure
 - Department views departmentalization as successful
 - Impressive collegiality and professionalism of the staff
 - Facilities appear to be appropriate
- Planning / Vision
 - Department's objectives are consistent with UTSC's campus-wide objectives

The reviewers identified the following areas of concern:

- Organizational and financial structure
 - Unclear lines of authority and heavy workload for staff
- Planning / Vision
 - Planning challenge of providing Public Policy students with training outside the discipline that will lead to both co-op placements and enhanced career prospects

The reviewers made the following recommendations:

- Relationships (collaboration)
 - Work with UTSC alumni office to engage with alumni
- Organizational and financial structure
 - Hire a new business manager to manage new workloads
 - Add additional seminar rooms and a medium-sized theatre-style classroom to support curricular changes recommended above

ADMINISTRATIVE RESPONSE – Appended



UNIVERSITY OF
TORONTO
 SCARBOROUGH

OFFICE OF THE DEAN &
 VICE-PRINCIPAL (ACADEMIC)

13 February 2014

Professor Sioban Nelson
 Vice-Provost, Academic Programs
 Office of the Vice-President and Provost
 Simcoe Hall
 University of Toronto

Dear Sioban,

**Administrative Response, External Review of the Undergraduate Programs in the
 UTSC Department of Political Science: Political Science, B.A. (Hons.): Spec, Maj,
 Min; Public Policy, B.A. (Hons.): Maj, Maj (Co-op).**

Thank you for your letter of 29 January 2014 requesting my administrative response to the recent external review of the UTSC Department of Political Science. I applaud the thoroughness with which the external assessors approached the review process, and am very appreciative of the careful consideration they gave to the programs in this department. I am pleased that the reviewers noted the sense of community prevailing in the unit, and am delighted that they recognize the quality of pedagogy and commitment to classroom teaching that runs through the faculty ranks. Likewise, their comments about the department's highly motivated students, and their desire to take advantage of greater research opportunities, are highly satisfying. Also, the fact that the review team made note of the exemplary research record of the colleagues in the department, noting that it compares favorably to other Political Science departments at research-intensive institutions, is very affirming. At the same time, the reviewers made very frank assessments of the challenges facing the department and its programs. I am grateful for these and for their many helpful recommendations.

The external review report was sent to the Chair of the department, who shared it with staff and faculty members. On 6 February 2014, I, along with the Vice Dean Undergraduate and the Assistant Dean (Academic) met with the Chair as well as faculty and staff to discuss the external review. The tenor of that meeting was constructive, and the discussion that took place was detailed and substantive. It is clear that the department is taking the recommendations of the reviewers seriously and already has begun to act upon many of them. The Dean's Office is committed to working with the department to strengthen Political Science at UTSC and to move quickly to further enhance its excellent programs.

Let me now address the specific points raised in your letter of 29 January.

Curriculum & Program Delivery

- *The reviewers noted the tension between breadth and depth in the curriculum, specifically in relation to highly able students and their curricular pathways. They encouraged reflection on both programs' learning outcomes to ensure disciplinary currency and relevance to students' lives and studies after graduation.*
- *The reviewers recommended that the department engage in curricular review, and they made specific recommendations for changing course content and sequencing, including expanded economics training, additional quantitative preparation, thesis and capstone offerings, and more research experience with faculty.*
- *The reviewers encouraged the department to discuss the potential for enhanced involvement in graduate education at UTSC.*

The tension between breadth and depth of the curriculum characterizes the state of play in most undergraduate departments. If it is made explicit – and the external reviewers have done this – it can be a creative prompt for renewal. The department will commence discussion of its curriculum by focusing on learning objectives, and will continue to look closely at the way the curriculum “scaffolds” from first year through to fourth year. It is doing this as a discipline specific exercise; for example, it is giving serious thought to the reviewers' recommendation to relax its breadth requirements at the B level in order to provide students with greater flexibility to take more specialized upper level courses. It also will review its curriculum in concert with other social science departments as part of a larger effort to provide coherence and clarity to degree expectations. There is a very broad consensus among colleagues that while the department can do a better job delineating potential career pathways for its students, the main purpose of its undergraduate programs is to instill specific analytical skills, foster evidence-based argumentation, and develop a pronounced facility for critical thinking about politics and the wider world. By pursuing these objectives, the department is fostering broad transferrable skills that will enhance its graduates' career opportunities.

The place of quantitative training in the curriculum has long been a topic of discussion in the department. After several years of offering an in-house course, the department is now collaborating with the statisticians in the UTSC Department of Computer and Mathematical Sciences to develop and teach a course tailored to the specific disciplinary needs of political scientists. The Department also is introducing new courses at the upper-year levels to provide advanced quantitative methodological training opportunities for its students. Attention to the place of economics in the curriculum already has led to overtures to the Department of Management, which houses most of the economists on the UTSC campus, and will continue to inform the curricular review process as it goes forward.

In discussion with the Dean at the meeting of 6 February 2014, colleagues were particularly keen to underscore the desirability of improving students' basic reading and expository writing skills. There is important innovation already taking place. The first year courses are being restructured to include more writing assignments, some large

second-year courses have been resourced as writing intensive courses, and the instructor of POLC09 is using peer evaluation of writing. Looking ahead, the department is considering ways of institutionalizing these practices, spreading them more widely across the curriculum, and working with the Dean's Office to resource a number of pilot projects. Several instructors also work closely with the Political Science liaison librarian in structuring writing assignments. The Department looks forward to refashioning its connection to the UTSC Centre for Teaching and Learning, which houses the Writing Centre.

The Department also is examining initiatives that will expand research opportunities for high-achieving undergraduate students. These initiatives include support for students to undertake research projects over the summer, as well as a senior year-long research seminar with a major research paper or thesis component.

Political Science is a strong tri-campus department at the University and, up till now, almost all graduate training has taken place on St. George. As UTSC continues to develop its profile as a research-intensive campus, and one with a pronounced graduate presence, the Department of Political Science is eager to craft ways of participating that enhance rather than compete with the robust activities of the tri-campus graduate unit and the Munk School. As first steps towards an increased presence of Political Science graduate students at UTSC, the department is exploring the feasibility of offering a UTSC based research seminar, office space in its new facilities in the R-Wing, and a series of research intensive workshops and day conferences. It also is discussing ways of connecting its TA system to an enhanced graduate presence on the UTSC campus, including through enhanced opportunities for graduate students to teach seminars in their doctoral research field on the campus. The Dean's Office has directed the department to consider the various ways other social science and humanities units have worked creatively within the confines of transportation logistics, campus space, and administrative structures to mount a number of creative and successful graduate initiatives. Moving forward, the Vice Dean Graduate Program Development will work closely with the department to realize this important goal.

Students

- *The reviewers noted opportunities to better engage with students through technology-assisted learning initiatives, enhanced co-op placements, one-on-one advising, and TA support.*

The Department has been engaged, often in a vocal way, in the evolving UTSC campus strategy for on-line learning and evaluation. Like most departments, it supports a blended model that continues to value the face-to-face classroom experience but sees the creative possibilities of enhancing pedagogy through technology. It values highly a student-centred approach to teaching and learning, one that places a premium on experiential education. This has led colleagues in the Department to work closely with the Dean's Office and the co-op office to begin to expand the number of placements available to students, especially those in the existing Public Policy program and the new program in Public Law.

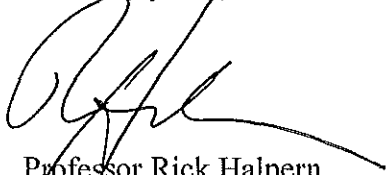
The department's undergraduate program advisor is developing plans to enhance his ability to connect with students, though the scale of the various programs for which he is responsible makes one-on-one sessions impractical. He is planning group meetings with newly declared majors and specialists, and is considering the use of digital technology to enhance his outreach efforts. Ideally, student advising – in Political Science and in other departments – will develop as a shared project that involves faculty members as well as staff in the Registrar's Office and in Academic Advising and Career Counseling. Political Science is well positioned to take the lead in this direction.

Resources and planning

- *The reviewers noted that the recent departmentalization has affected staff workload, and that the current staffing structure might not be the most efficient way to serve department.*

This is a problem identified across the social science units, which share administrative support. The first step towards a solution will be to engage the other departments in a discussion of available resources and work toward a viable sense of prioritization. It is clear that the main point of pressure is upon the Business Officer. The recent hire of a financial assistant has lightened her burden, and she is in the process of transferring further work to the assistant. In discussion with the social science chairs, the Dean has explored the option of hiring a second Business Officer for the five units.

Sincerely yours,



Professor Rick Halpern
Dean and Vice-Principal (Academic)

Review Summary

Program(s):	Sociology, B.A. (Hons.): Spec, Maj, Min
Division/Unit:	UTSC Department of Sociology
Commissioning Officer:	Dean and Vice-Principal (Academic), UTSC
Reviewers (Name, Affiliation):	1. Dr. Kevin McQuillan, Deputy Provost, Professor, Department of Sociology, University of Calgary 2. Dr. Victor Satzewich, Professor, Faculty of Social Sciences, McMaster University
Date of review visit:	October 31 and November 1, 2013

Previous Review

Date: January 17-18, 2008 (with Department of Social Sciences)

Summary of Findings and Recommendations:

1. Undergraduate Programs: Sociology, BA: Spec, Co-op and Maj

The reviewers observed the following strengths:

- Social Science at UTSC represents great but untapped potential
- Diverse student body

The reviewers identified the following areas of concern:

- Program had reduced enrolments by using more rigorous admissions criteria

The reviewers made the following recommendations:

- Track student progress after graduation to measure the success of the programs
- Undertake a curriculum review of all programs in department

2. Graduate Programs (n/a)

3. Faculty/Research

The reviewers identified the following areas of concern:

- Significant revenues come from large classes, but with no increase in the faculty complement
- Student-faculty ratio of 40:1 is impacting the quality of the student learning experience

The reviewers made the following recommendations:

- Create new faculty positions in the department
- Add formal mentoring and training programs for new faculty

4. Administration

The reviewers identified the following areas of concern:

- Current structure of the department is not functioning and is unsustainable
- Perception is that management is top-down
- Department is under-resourced

The reviewers made the following recommendations:

- Change the departmental structure
- House interdisciplinary programs within the disciplines
- Commit financial resources to improve the department

Last OCGS Review(s) n/a

Date(s):

Current Review: Documentation & Consultation

Documentation Provided to Reviewers:

UTSC Strategic Plan, 2008

UTSC Academic Plan, 2010-15

UTSC Annual Review, 2011-12

UTSC Viewbook, 2013-14

Terms of Reference, Department of Sociology

Program and Course descriptions from 2013-14 Academic Calendar

Course Syllabi

Faculty CVs

Department of Social Sciences Academic Plan, May 2011

Departmentalization Proposal: Social Sciences, April 2012

Self Study Report, July 2013

Student Services Statement

Library Statement

Site Visit Schedule, October 2013

Consultation Process:

The reviewers met with the Vice-Provost, Academic Programs, Vice-Dean, Undergraduate; Chair, Department of Sociology; Associate Chair, Department of Sociology; tenure and pre-tenure faculty in the Department of Sociology; undergraduate students in Sociology programs; Program Advisor, Department of Sociology; administrative staff; and the Academic Programs Officer.

Current Review: Findings & Recommendations

1 Undergraduate Program

Sociology, B.A. (Hons.): Spec, Maj, Min

The reviewers observed the following strengths:

- Objectives
 - Strong commitment to educating students in the fundamentals of sociology, sociological theory, and research methods
- Curriculum and program delivery
 - Curriculum provides students with a solid foundation in sociology
 - Inaugural research day was very well received
 - “Immigrant Scarborough” course connects students and faculty with the community, and could lead to new community engagement, research, and internship opportunities
 - Promising new courses in immigration and urban studies
 - Commendable writing skills initiatives include the allocation of substantial TA resources, writing requirement in B-level courses, collaboration with the writing centre, and scaffolding for writing assignments
- Program development
 - Planning for two exciting, new thematic areas is underway: Migration and Ethnic Diversity and Culture, Creativity, and the City
- Quality indicators
 - Time to completion is in line with other social science programs
 - Students are satisfied with their educational experience and find the faculty to be open and friendly
- Support
 - Faculty are committed to improving students’ writing and research skills
 - Positive support provided to the new Departmental Student Association (DSA)

The reviewers identified the following areas of concern:

- Curriculum and program delivery
 - Breadth of courses is limited; only a modest number of courses are offered per year
 - Students expressed concern about the lack of variety in C and D courses
 - Specialist curriculum is rigid and provides little space for students to develop interest in selected fields
 - Course evaluations for the Logic of Social inquiry course are low
 - Not providing TAs for first year courses means that students may not have enough opportunities to improve their writing skills
- Quality indicators
 - Relatively low admissions GPA among specialist students; strongest students tend to be in the major program
- Enrolment
 - Declining enrolment in already-small specialist program
 - Unpredictable, variable course enrolment from year to year; unclear how many students who take introductory sociology courses go on to sociology programs
 - Lack of adequate access to B-level courses could create program “bottlenecks,” preventing students who wish to become specialists or majors from doing so

The reviewers made the following recommendations:

- Overall quality
 - Focus on ensuring program quality rather than expanding enrolment
- Curriculum and program delivery
 - Examine major and specialist requirements to make them more attractive to students and more in line with faculty teaching interests
 - Consider whether to continue with specialist program; if it is to continue, make the curriculum more flexible, revise the capstone course, and more clearly articulate the vision for the specialist program to students
 - Encourage student participation in campus-wide international initiatives, such as exchanges and internships, rather than creating such opportunities at the department level
 - Expand experiential opportunities for students
 - Create opportunities for senior students to improve their oral communication skills
 - Assess low course evaluation scores in the Logic of Social Inquiry course
 - Bring more visiting speakers and workshops to the campus to educate students about wider research and opportunities in sociology
- Program development
 - Consider developing a joint graduate program in which Sociology might play an important role
- Quality indicators
 - Examine the job placement outcomes for graduates
- Enrolment
 - Investigate whether B-level course limits are impacting program enrolments
 - Make sure any additional access to B-level courses is well-communicated to students

2 Graduate Program

N/A

3 Faculty/Research

The reviewers observed the following strengths:

- Research
 - Faculty are active researchers, whose work is highly regarded and well cited
 - Department members are active members of professional associations, and they regularly present results at conferences and speak at other institutions/organizations
 - Many faculty have national and international scholarly reputations and have won awards for their research
- Faculty
 - Enthusiastic, long-serving faculty as well as ambitious, energetic junior faculty

- Faculty are optimistic about the future of the department, and are pleased with its current cohesiveness
- Faculty have a positive relationship between undergraduate and graduate responsibilities

The reviewers identified the following areas of concern:

- Faculty
 - Junior faculty experience tension between research and teaching obligations
 - Department is under-staffed when considering course and program enrolments

The reviewers made the following recommendations:

- Faculty
 - Retain current complement of tenure stream positions and consider the addition of one or two growth positions, as indicated by enrolment numbers
 - Consider ways to “bridge” retiring tenure stream faculty and their replacements to ensure continuity in the department
 - If teaching stream lecturers are added, ensure that it is not at the expense of tenure stream positions

4 Administration

The reviewers observed the following strengths:

- Relationships
 - Morale within the department is high
- Organizational and financial structure
 - Excellent departmental leadership
 - Well-supported and welcomed recent move to departmentalization
 - Staff members are highly knowledgeable and committed to their work
 - Teaching assistant resources are well-managed
- Planning / Vision
 - Department is hoping to grow enrolment if appropriate faculty resources are in place
- Department/unit/programs relative to the best in Canada/North America and internationally
 - Department is broadly comparable in scope and structure to other good quality sociology programs

The reviewers identified the following areas of concern:

- Relationships
 - Though there are instances of interdisciplinary collaboration, there are not formal relationships with cognate departments
- Organizational and financial structure
 - Financial Officer’s workload is too high

- Staff shortage linked to rising enrolment and the departmentalization process
- Lack of adequate space for faculty may impede future growth plans. The quality and quantity of faculty office space limits opportunities for visiting scholars, post-doctoral fellows, and undergraduate research assistants to enhance the department.

The reviewers made the following recommendations:

- Relationships
 - Find ways to collaborate further with the Cities Lab in order to build further cross-disciplinary links
- Planning / Vision
 - Identify how the department will realize its vision for the two new thematic areas

ADMINISTRATIVE RESPONSE – Appended



UNIVERSITY OF
TORONTO
SCARBOROUGH

OFFICE OF THE DEAN &
VICE-PRINCIPAL (ACADEMIC)

21 February 2014

Professor Sioban Nelson
Vice-Provost, Academic Programs
Office of the Vice-President and Provost
Simcoe Hall
University of Toronto

Dear Sioban,

**Administrative Response, External Review of the Undergraduate Programs in the
UTSC Department of Sociology: Sociology, B.A. (Hons.): Spec, Maj, Min**

Thank you for your letter of 24 January 2014 requesting my administrative response to the recent external review of the UTSC Department of Sociology. I applaud the thoroughness with which the external assessors approached the review process, and am very appreciative of the careful consideration they gave to the programs in this department. I am pleased that the reviewers found so many aspects of the department praiseworthy, particularly the high morale among new and long-serving faculty members as well as among students, the exceptional leadership of the Chair, and the rigor and currency of the programs. At the same time, the reviewers made very frank assessments of the challenges facing the department and its programs. I am grateful for these and for their many helpful recommendations.

The external review report was sent to the Chair of the department, who shared it with staff and faculty members. On 14 February 2014, I, along with the Vice Dean Undergraduate and the Assistant Dean (Academic) met with the Chair as well as faculty and staff to discuss the external review. The tenor of that meeting was constructive, and the discussion that took place was detailed and substantive. It is clear that the department is taking the recommendations of the reviewers seriously. Indeed, it already has begun to act upon many of them. The Dean's Office is committed to working with the department to strengthen Sociology at UTSC and to move quickly to further enhance its excellent programs.

Let me now address the specific points raised in your letter of 24 January.

Curriculum & Program Delivery

- *The reviewers expressed concern about the Specialist program. They stated that higher achieving students are attracted to the Major program, and enrolment in the Specialist program has been declining. They made specific recommendations for*

ways to improve the program, including the addition of a capstone course, creating more flexibility in the program, and more clearly articulating the vision for the program.

- *The reviewers noted several opportunities for curricular improvement, including the limited variety of course offerings, including at the C and D-level; the need for oral communication skills training for seniors; ongoing improvements of writing skills; and increasing experiential learning opportunities.*

The department welcomed external assessors' recommendations and in fact, already had begun discussing both the future of the specialist program and the discrete offerings in its curriculum prior to the review. Indeed, in the current cycle of governance it has introduced important changes that clearly articulate the vision for the program, create greater flexibility, and introduce a capstone experience to its Specialist program. In preparing these modifications, the department worked closely with the Departmental Student Association (SOS), which remains very committed to the Specialist. It is worth noting, however, that the migration of students from Specialist programs to double Majors is a phenomenon we see across all disciplines at UTSC. Students choose their own version of interdisciplinary studies through a mix of major and minor programs that suit their interests. The department will review the specialist program again in three years to ascertain whether these changes have indeed resulted in greater student interest.

The department shares a concern with other academic departments at UTSC about improving students' academic skills and has joined a campus-wide discussion about this. It also is committed to developing discipline specific endeavours, particularly around oral communication. The department sees the latter as being closely linked to increasing the number of C and D-level courses offered in the program. Already they have added new D-level courses and ensured that at least two D-level courses are taught each semester. More D-levels will be added in the future. In order to facilitate this, colleagues have worked with the Graduate Department of Sociology to adjust their graduate teaching obligations in order to offer more fourth year D-level courses at UTSC. Also, the Chair is working with colleagues to formulate a proposal for the Dean for funding in the next cycle for the addition of more instructor and TA contact hours with students, which will provide greater opportunity for oral discussion. The department now has tutorials in all its B-level courses, and the colleagues are developing a manual on how to increase writing and oral skills in tutorials. Finally, the department is introducing elements of experiential education in a number of its senior courses, such as the two C-level Research Practicums, SOCD50 (Capstone Research Seminar) and SOCD21 (Immigrant Scarborough) that provide students with opportunities to produce and manipulate their own research data.

Resources and planning

- *The reviewers indicated that the department needs to have a thoughtful and integrated approach to faculty planning, including having adequate space and facilities to support the complement.*

- *The reviewers raised issues about the current staffing model to support the department.*

As the department enters its third year of existence, it is well positioned to begin developing a complement plan for the next five years. The Dean will work closely with the Chair and colleagues in the department on this, and will endeavor to find ways to provide the base funding for new faculty as opportunities arise. The Chair already has secured approval for additional faculty staffing for the new minor in Migration and Ethnic Diversity, which will launch in the 2014-15 academic year.

For the next two years UTSC will experience severe limitations to our ability to provide departments with additional space. However, our ambitious infrastructure projects are moving forward on time and on budget, and we anticipate that a new building for the Social Science departments will be ready for occupation in 2016. The Department of Sociology will have sufficient space in this new building to accommodate growth in its faculty complement.

The level of staff support within the department is a problem identified across the social science units, which share administrative support. The first step towards a solution will be to engage the other departments in a discussion of available resources and work toward a viable sense of prioritization. It is clear that the main point of pressure is upon the Business Officer. The recent hire of a financial assistant has lightened her burden, and she is in the process of transferring further work to the assistant. In discussion with the social science chairs, the Dean has explored the option of hiring a second Business Officer for the five units.

Relationships

- *The reviewers encouraged the department to find ways to further collaborate with the Cities Lab.*

The department is launching two new initiatives to strengthen existing collaborations and build new partnerships on campus, in the city, and beyond

First, the Culture, Creativity, and Cities (CC&C) Minor Program in Sociology will establish UTSC as a leader in undergraduate curricular initiatives in the social scientific study of the cultural economy. The program will equip students to understand the social significance of urban experience, cultural consumption, and creative work, as well as prepare them to think analytically about labour markets in technology, governance, media, and education. The program is being developed in partnership with the Departments of English, Management, Political Science, and Arts Culture & Media, and in consultation with external stakeholders such as the Toronto Arts Foundation and Toronto Arts Council.

Second, the Migration and Ethnic Diversity (M&ED) Minor Program in Sociology will harness UTSC cross-department faculty expertise to build an innovative undergraduate initiative on international migration and the differential inclusion of

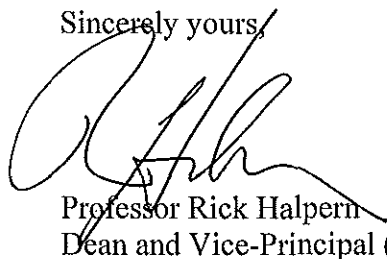
migrants and non-citizens. The program will equip students to analyze cultural, demographic, social, and political transformations associated with global migration with a focus on issues of social inequality and ethnic diversity from local and global, as well as historical and contemporary perspectives. The program is being developed in partnership with the Departments of Anthropology, Geography, Historical and Cultural Studies, and Political Science. It will generate external partnerships with relevant local and international organizations such as the Ontario Council of Agencies Serving Immigrants and the EU-based Platform for International Cooperation on Undocumented Migrants, PICUM, among others.

Both signature initiatives reflect the Sociology Department's effort to enrich existing relationships and build new ones with cognate disciplines and other units. The Cities Lab, an existing partnership between the UTSC Library and the Departments of Geography and Sociology, will serve as teaching and research hub for D-level seminars and fieldwork courses for the CCC and the M&ED. Both minors will generate thematic and substantive complementarity with the Culinarium Initiative housed within the Department of Historical and Cultural Studies via the development of courses on ethnicity and food and on local food scenes. Both programs also will make intentional use of the Library's Digital Scholarship Unit to build data bases for student research, showcase undergraduate research, and potentially generate new data of interest to UTSC faculty and visiting scholars.

Both minors build on the curricular strength of the Sociology department, namely the focus on quantitative and qualitative research skills development, and on writing and logic of argumentation skills. They also are designed to extend the department's curriculum into exciting new terrain by providing significant off-campus experiential opportunities for students to leverage their skills within critical local and global contexts.

Housed in Sociology these projects are indicative of a growing interest in building interdisciplinary curricular initiatives that are grounded in core strengths of a liberal arts education, capitalize on innovative trends in data and curriculum development, and create clusters of world-class research expertise among faculty across a number of Social Science and Humanities departments.

Sincerely yours,

A handwritten signature in black ink, appearing to read 'Rick Halpern', written over a horizontal line.

Professor Rick Halpern
Dean and Vice-Principal (Academic)

APPENDIX

Externally commissioned reviews of academic programs completed since the last report to AP&P

Additional reviews of programs are conducted by organizations external to the University most commonly for accreditation purposes. These reviews form part of collegial self-regulatory systems to ensure that mutually agreed-upon threshold standards of quality are maintained in new and existing programs. Such reviews may serve different purposes than those commissioned by the University. A summary listing of these reviews is presented below.

These reviews are reported semi-annually to AP&P as an appendix to the compendium of external reviews.

Unit	Program	Accrediting Agency	Status
Faculty of Medicine	Continuing Education and Professional Development	AFMC Committee on Accreditation of Continuing Medical Education (CACME)	Accredited from 2013 to 2018 (supplementary status report due in September 2015)
Faculty of Medicine	Post Graduate Medical Education	Royal College of Physicians and Surgeons of Canada and College of Family Physicians of Canada	Accredited from 2013 to 2019
Faculty of Medicine	M.Sc. Biomedical Communication	Commission on Accreditation of Allied Health Education Programs (CAAHEP)	Accredited from 2013 to 2021