Green Paper

Academic Restructuring at Ryerson University: Some Scenarios

Provost's Academic Structure Commission November 27, 2009

CONTENTS

Preface	3
Background	6
Scenarios	9
Scenario 1: The Existing Faculty Structure	10
Scenario 2: A Traditional Structure: Faculty of Arts & Science	11
Scenario 3: Implications of a Science Faculty.	12
Scenario 4: Implications of a Faculty of the Built and Physical Environment	13
Scenario 5: Implications of a Faculty of Health & Behavioural Science	14
Scenario 6: Implications of a Faculty of Nursing	15
Scenario 7: Faculties of: Design; and Media & Communication	15
Scenario 8: Implications of a Professional Social Science Faculty	16
A Faculty of Interdisciplinary Studies	17
The Role of Graduate Studies	18
Facilitating Change	20
Appendix A: Departments in Scenarios	

Appendix B: Programs and Departments

PREFACE

On May 6, 2009 the Provost announced the establishment of an Academic Structures Commission to prepare a Report to him on possible reorganization of some parts of the University. The Commission arises from Recommendation 16 in *Shaping Our Future: Academic Plan for 2008/13*, which was approved by Senate (May, 2008). In the consultations and discussions which guided the formation of the plan, it was argued that the academic structure be revisited to ensure the University responds effectively to internal and external pressures arising from recent and expected growth and change.

The mandate of the Provost's Academic Structures Commission (PASC) is to prepare a Report on such possible reorganizations within the context of current and anticipated teaching and research developments, following an extensive consultation process. The Commission is tasked to explore a range of possibilities with respect to restructuring existing Faculties and establishing new ones. Since becoming a university in 1993, Ryerson has grown exponentially in undergraduate student numbers and programs, has established a graduate school, and placed greater emphasis on scholarly, research and creative activity. This has occurred within the framework of a long established five-Faculty structure.

Given the Report is to be submitted to the Provost by January, 2010, the Commission (members listed below) has established a tight schedule of written reports and university-wide consultations:

 Create a generic e-mail address (<u>pwg@ryerson.ca</u>) to which any person in the university community may send comments, ideas, suggestions, and so forth.
 By the end of June, 2009, hold two Town Halls to explain the process, respond to questions and concerns, and receive suggestions. These were held May 29 (91 in attendance) and June 26 (41 in attendance).

3. Prepare a Discussion Paper to be transmitted to the university community by the end of September (transmitted electronically via 'infoline' and Campus News, Sept 22, 23 and 29). http://www.ryerson.ca/provost/planning/documents/

4. Convene a Town Hall at which Commission members welcomed input on the Discussion Paper and the topic in general (held on Oct 2, 45 in attendance).

5. By the end of November prepare a Green Paper containing the Commission's preliminary restructuring scenarios, and transmit to the university community.

6. Hold a Town Hall to present and discuss the Green Paper.

7. Prepare a White Paper containing the recommended restructuring scenarios by the end of January, 2010.

8. Present to Provost and university community.

Interleaved within this schedule have been discussions with other groups as requested.

Commission Members

Faculty Members:

Sandeep Kumar Agrawal MPI Program Director and Professor, School of Urban and Regional Planning

Mehru Ali Professor, School of Early Childhood Education

Robert Burley Professor, School of Image Arts

David Checkland Professor, Department of Philosophy

Michelle Dionne Professor, Department of Psychology

Gervan Fearon Dean, The G. Raymond Chang School of Continuing Education

Abby Goodrum¹ Velma Rogers Graham Research Chair and Professor, School of Journalism

Murtaza Haider Professor, Ted Rogers School of Management (Retail Management)

Darrick Heyd Professor and Chair, Department of Chemistry and Biology

Don Kinder Senior Librarian, Reference and Instruction

Sri Krishnan² Professor and Chair, Department of Electrical Engineering

Rena Mendelson³ Professor, School of Nutrition

Paul Missios Professor and Chair, Department of Economics

Annick Mitchell Professor and Chair, School of Interior Design

Kendra Schank Smith Professor and Chair, Department of Architectural Science

Jim Tiessen MBA Program Director and Professor, Ted Rogers School of Management

¹ Subsequently also Associate Dean, Research, FCAD

² Subsequently Associate Dean Research, Development, and Graduate Programs, FEAS

³ A member of Board of Governors

Nancy Walton Professor and Associate Director, Daphne Cockwell School of Nursing

Mehmet Zeytinoglu⁴ Professor, Department of Electrical Engineering

Undergraduate Students:

Hamed Basseri Medical Physics

Andrew West Politics and Governance

Natasha Williams⁵ Ted Rogers School of Business Management

Graduate Students:

Asif Sharif Doctoral student, Mechanical Engineering

Angela Joosse Doctoral student, Communication and Culture

Alumnus:

Chris Nguyen Ted Rogers School of Information Technology Management '05

Chair:

Maurice Yeates Dean, School of Graduate Studies

 ⁴ Appointed Interim Vice-Provost Academic, September 2009.
 ⁵ Withdrew due to pressure from other commitments.

BACKGROUND

In the Town Halls, and other local group discussions, it has been clarified that the next stage in the process beyond the contextual *Discussion Paper* involves this 'green' paper which includes a variety of possible Faculty structure scenarios. Following distribution and discussion of the 'green' paper, a Final Paper will provide a summary of the Commission's deliberations, and suggest to the Provost a short list of possible alternatives. It is the Provost, following normal consultative University procedures, who will decide the timing and format of any changes that may occur. Such changes will require Senate and Board approval.

The Commission takes the existing Department structure as the building blocks of Faculties. It is, therefore, assumed that Departments as they are currently constructed will still exist (unless sub-groups within Departments suggest change), and departmentally based programs, whether they be single discipline or locally multi-discipline, remain the norm. The conclusion of the *Discussion Paper*⁶ includes a summary of considerations used by the Commission in its discussions of possible Faculty structures⁷:

Legacy: There is no doubt that Ryerson has a lengthy and successful tradition of strong, accountable, and responsible administration through its five-Faculty structure. If the ensuing considerations indicate that little or no restructuring should occur with respect to a particular Faculty, then none will be suggested. This is entirely consistent with the Commission's mandate, which is to prepare a Report on "… possible reorganization of some parts of the University".

Congruency or "Fit": A Faculty should include departments that are as congruent as possible. This does not imply sameness. Rather, it requires some shared assumptions and/or practices among Departments regarding things such as: prerequisites and important student skills; pedagogic structures; current and possible future teaching and research; and necessary facilities. There may or may not be any particular one (or set) of these shared by all Departments in a Faculty; overlapping threads of such assumptions and practices generally suffice. Further, such "fit" is not always clearly in favor of locating a Department uniquely in a particular Faculty.

Legitimacy: Following from the congruency principle, a Faculty should adequately represent through its leadership and designation its current and possible future foci of teaching and inquiry. Does the Faculty name and structure adequately reflect the congruent departments therein? Clarity is required.

Quality of Programs: Given Ryerson's unique concentration in professional and quasi-professional areas, this consideration addresses the quality issue particularly in context of general Provincial standards (through OCGS and UPRAC), but also various

⁶ The *Discussion Paper* has been circulated three times via 'infoline' throughout Ryerson's academic community. It can be found at: <u>http://www.ryerson.ca/provost/planning/documents/</u>

⁷ Edited slightly from: *Discussion Paper: Academic Restructuring at Ryerson University* (PASC, September 21, 2009), 26-28.

professional bodies (particularly those with regulatory obligations covered by Provincial or Federal statute). The 'tests' are whether the Faculty would be able to focus properly on maintaining and enhancing quality among its constituent parts.

'Branding' and Strategic Opportunities: Given increasing Governmental 'shaping' (primarily through fiscal means) of post-secondary education and research, it is becoming increasingly important that what a university does be highly visible to the external (and internal) community. The 'test' question in this case is whether a Department is in a Faculty which reveals adequately the true import of what it is doing, thereby increasing the possibility of emphasizing its immediate relevance to new opportunities as they arise.

Administrative and Operational Efficiency: This is in many ways linked to congruence and size of Faculty. It is easier for Chairs and Deans to do their jobs if Faculties are of reasonable size, and Departments are intellectually congruent. Huge Faculties (such as traditional Faculties of Arts & Science) are invariably subdivided for administrative purposes into congruent groups, with many Associate and Assistant Deans. The 'tests', therefore, are whether a Faculty is too big (perhaps 8 Departments, ± 4 , would be about right), or too disparate; or, on the other hand, include sufficient RFA+CUPE instruction resources to warrant necessary Faculty-based support services.

Financial Viability: The important issue is that all Faculties implement modes of operation, particularly on the instructional side, that encourage financial efficiency and flexibility. The 'test' question in this case, therefore, becomes whether a new or restructured Faculty would be more likely to add to financial efficiency and academic flexibility, and not impoverish those existing. At Ryerson, a good part of increased financial efficiency can be achieved by re-organizing academic programs through some form of common first and (perhaps) second year courses.

Growth and Opportunities: While the potential for another phase of growth in student numbers at both the undergraduate and graduate levels is on the horizon, any Faculty restructuring that may be proposed is not predicated upon it. Furthermore, opportunities of various kinds occur that are not associated with significant growth. Faculties and Departments organized to take advantage of such situations in a financially viable manner will be in a favorable position. The general 'test' question would be whether any Faculty restructuring leaves Ryerson as a whole better positioned to take advantage of a variety of opportunities that may arise.

Interdisciplinary/Multi-Disciplinary Activities: Ryerson is not the only university in which faculty members and students appear to want more interdisciplinary programs. Equally, all universities find them difficult to design, implement, and manage in a Department based environment. There are few real interdisciplinary programs at the undergraduate level at Ryerson. The three highly successful interdisciplinary programs at the graduate level provide clear *economic incentives* for cooperation. Would Faculties consisting of more congruent disciplines foster greater within-Faculty interdisciplinary work? Should a Faculty (or School) of Interdisciplinary Studies be

established to develop cross-Faculty interdisciplinary work at the undergraduate level? What kinds of economic incentives should be required?

Single-Discipline Professional Faculties: One of the reasons some 'traditional' universities have many Faculties is that single-discipline professional areas (such as Social Work), particularly those subject to Provincial regulations (such as Education or Nursing), are often designated as Faculties. Questions related to separate Faculty status include: is a single-discipline area too 'large' to be included with other much smaller Departments in a Faculty; and, does such a Department's professional obligations require sufficiently different administrative and/or pedagogic structures?

Acceptability: Previous decisions at Ryerson concerning Faculty restructuring have not involved as much community involvement as the current exercise. Any outcome will have to be acceptable to those involved. Unfortunately, whatever restructuring happens, there may be knock-on effects. One or more Departments may have to make a Faculty location decision that it might prefer not to contemplate. While the Commission contemplates alternative scenarios, it will have to keep in mind the question of acceptability, and undoubtedly it will be front and centre in the minds of the Provost, Senate, and Board of Governors.

Perusal of the above list immediately suggests that scenarios will differ in response to the considerations that underlie their formation. It is evident that if a particular restructuring paradigm commences with emphasis on one particular consideration, it is likely that the rest of the structure will incur knock-on effects. It is for this reason that the Commission decided to simulate possible consequences in a set of scenarios if a particular change in faculty structure were to be implemented. Thus, these simulations are merely designed to illustrate an impact of the change.

SCENARIOS

Although the most obvious 'metric' for comparison of scenarios is the Departmental complement involved, other measures indicative of aggregate Faculty size are needed. The *Discussion Paper* includes: undergraduate BIUS and FFTEs generated by program; undergraduate BIUs and FFTEs by teaching Department; and RFA+CUPE instructional resources by Department. The easiest and most comprehensive to use as a measure of size is RFA+CUPE⁸ by Department because this embraces resources reflective of both undergraduate and graduate teaching and supervision, and includes the recent departmentalization of TRSM (Figure 1). However, undergraduate FFTEs and graduate



Figure 1. Departments by RFA+CUPE Size.

⁸ It will be recalled from the *Discussion Paper* (pp 18-24) that the RFA+CUPE measure is derived from: UPO (2008) *Decision Support Indicators and Data* (Ryerson University: University Planning Office, December, 2008), Table of "RFA and CUPE Counts" p. 2.11. The following formula is used by UPO with respect to CUPE resources: 1FTE = 15 ACH over two semesters for sessional CUPE instructors; and 16 ACHs over two semesters for PT.

headcounts (domestic + visa) are also included for illustrative purposes⁹.

One parameter to which the Commission is adhering concerns the maximum number of Faculties to be suggested. A cursory listing of the number of Faculties compared with university headcount suggests that Ryerson has relatively few compared with other institutions. Indeed, it was suggested in the Discussion Paper (p. 15) that as many as eight would not be unusual, and even more so if Ryerson were to be at 33,000 headcount. Furthermore, it is expected that aggregate administrative costs with respect Faculties would be no greater than the current share of total University income.





Scenario 1: The existing five Faculties have served the University well since they began as Divisions in 1970, metamorphosing into Faculties in 1982 when the university was half its current student size. This legacy has not been re-examined in a comprehensive manner for almost three decades, during which time new Departments and many new programs have been accommodated (as well as some withdrawn or redefined). With the departmentalization of TRSM the existing structure now exhibits Faculties with similar

⁹ FFTE (Fiscal Full-Time Equivalent) undergraduate data from UPO, 2008/9, SAS files, three terms, totals (ie. domestic+visa).

Graduate headcount also domestic+visa and is for Nov 1 2009. ComCult, EnSciMan, and I&SS headcounts distributed *pro rata* among contributing departments based on courses taught.

numbers of Departments, though the aggregate number of instructors in each Faculty is quite varied:

Table 1. The Existing Faculty Structure, 2008/9

	FEAS	FCS	TRSM	Arts	FCAD	Total
Departments	10	10	10	10	8	48
RFA+CUPE	232.3	191.4	147.7	205.7	181.3	958.4
FFTEs by Program	3925.0	3628.1	5253.2	1977.7	3366.3	18150.3
FFTEs by Department	3589.7	2868.2	4415.2	4360.1	2917.1	18150.3
Graduate Headcount	1012	316	191	328	241	2088

It was noted in the *Discussion Paper* (pp. 21-24) that within each of these Faculties are clusters of Departments which are generally recognized to have more in common with each other in terms of congruency than those in other clusters.

- The Faculty of Arts, for example, involves Departments in the social sciences and humanities, and in some universities these are separate Faculties.
- FEAS includes Departments in engineering and science again clusters that are often in separate Faculties in other institutions. At Ryerson, Architectural Science, which is located currently in FEAS, includes foci in building science and project planning (construction) as well as architecture.
- In TRSM the clustering is around Business Management (including retail, and hospitality and tourism management), and Information Technology Management.
- In the *Discussion Paper* (p.22) it was suggested that FC&D involves two groups of Departments those in the design area, and others in the general area of communication. The Dean of FC&D indicates that there are three "... distinct and interrelated..." areas within the Faculty: "communication, design, and visual and performing arts"¹⁰.
- FCS includes Nursing and health related Departments; leaving four that appear little related (Social Work, ECE, Urban & Regional Planning, and Child and Youth Care). Nursing is often a separate Faculty in other universities, and by itself is one-third of FCS in teaching resources and enrolment.

In essence, while it is Departments that form the building blocks of Faculties, it is wise that Faculties be developed in the context of existing clusters. That is why in the Mt. Allison case, when the objective was to encourage greater inter-departmental curriculum cooperation in the first and second bachelor level years, the university disaggregated one Faculty into three by cluster¹¹. Alternately, of course, clusters can be the basis of large-scale aggregations, as with a traditional Faculty of Arts & Science.

Scenario 2: One feature of many established universities that cannot be ignored is the traditional **Faculty of Arts and Science** – a Faculty structure that is predicated on an idea that the social sciences, humanities, and science disciplines lie at the 'core' of a university's educational operation (see Appendix A). This is not the Ryerson heritage, and does not clearly reflect its professionally-oriented program mandate.

¹⁰ Doz, D. (2009) "FCAD: Repositioning Paper" draft, 2 pages, October 14, 2009.

¹¹ See *Discussion Paper*, 10-13. Mt. Allison and University of Calgary vignettes.

$1 \alpha \beta \beta \omega \omega$

	Eng+Arch	FCS	TRSM	Arts⪼	FCAD
Departments	6	10	10	14	8
RFA+CUPE	158.1	191.4	147.7	279.9	181.3
FFTEs by Program	2786.8	3628.1	5253.2	3115.9	3366.3
FFTEs by Department	1660.1	2868.2	4415.2	6289.7	2917.1
Graduate Headcount	901	316	191	440	241

However, the traditional Faculty of Arts and Science, which in some universities includes also a few fine arts disciplines (eg. Toronto, Queen's), does provide a means for dealing with many of the issues arising from interdisciplinary (and multidisciplinary) undergraduate and graduate programs. As enunciated in the Town Halls, and in writing¹², these issues include: a 'home' for the program; provision of TAs and GAs; access to study space and labs; transferability with respect to majors and minors; teaching and supervisory arrangements; and, faculty hiring, assessment, and promotion procedures. In one large Faculty of this type the majority of the resources and management procedures required are 'under one roof', and coordination difficulties with other Faculties are mitigated.

Scenario 3: A strong impetus for faculty restructuring has come from a cluster of four Departments which advocate a **Faculty of Science** – Chemistry & Biology; Physics; Computer Science; and Mathematics. The argument for this is based on the congruency of the Departments and programs involved, the efficiencies to be realized in the administration of similar units, and the enhanced legitimacy gained from the clarity of the Faculty name. However, the separation of these Departments from FEAS (see Appendix A) has raised issues concerning: whether its size is sufficient to warrant Faculty status; assuring the quality of science teaching in Engineering education; and the 'default' placement of Architectural Science in what becomes a Faculty of Engineering.

Table 3. Including a Science Faculty.

	Science	Eng+Arch	FCS	TRSM	Arts	FCAD
Departments	4	6	10	10	10	8
RFA+CUPE	74.2	158.1	191.4	147.7	205.7	181.3
FFTEs by Program	1138.2	2786.8	3628.1	5253.2	1977.7	3366.3
FFTEs by Department	1929.6	1660.1	2868.2	4415.2	4360.1	2917.1
Grad Headcount	146	867	316	191	328	241

With respect to these issues, it may be observed that: many universities have faculties with four or less Departments; there should be every incentive for science to maintain and enhance the quality of its contributions to education in Engineering for that is its major 'market'; and Architectural Science should be located, if possible, in a Faculty in which it (and other departments) can realize the greatest net positive externalities and feel comfortable.

¹² Letter received from M. Bardecki and R. Pushchak, August 6, 2009.

In most universities, architecture is usually located with other design departments, for example: U of Manitoba, where the **Faculty of Architecture** includes departments of architecture, env. design, city planning, interior design, and landscape arch.; U of NSW, where a **Faculty of Built Environment** includes architecture, planning, sustainable development; U of Melbourne – **Faculty of Architecture & Planning**; UC-Berkeley, where a **Faculty of Environmental Design** includes architecture, city & regional planning, landscape architecture & environmental planning, and urban design. Less commonly, architecture may be associated with engineering (eg. U of Waterloo).

Scenario 4: One of the themes about Ryerson that has attracted great interest is the University's role as a 'city builder', and its engagement with urban/environment issues. This emphasis is quite consistent with the institution's heritage – it is, however, an articulation that requires clarity in its Faculty structure, as well as presence in curricula (undergraduate and graduate), SRC, and community service and involvement. While considerable activity exists across the University with respect to this thrust, our 'Faculty face' in this regard is obscure.

It could be argued there is a coterie of Departments -- Architectural Science, Urban and Regional Planning, Interior Design, and Geographical Analysis – that might form a **Faculty of the Built and Physical Environment**. Such a Faculty would highlight many aspects of what Ryerson is doing, and serve as a creative force for the development of cross-disciplinary courses, multidisciplinary majors, and applied research, within this broad theme. The Commission recognizes that this grouping has not emerged as a 'natural' cluster at Ryerson -- each of these Departments is currently located in a different Faculty – but believes they have a high level of academic congruence, and there are exciting curricula and research developments to be realized.

0		,		2			
_	Science	TRSM	Eng	CS	SS&H	C&D	B&PE
Departments	4	10	5	9	9	7	4
RFA+CUPE	74.2	147.7	126.5	180	186.1	162.5	81.4
FFTEs by Program	1138.2	5253.2	2255.7	3319.6	1771.2	3036.7	1375.7
FFTEs by Department	1929.6	4415.2	1190.1	2652.1	3968.6	2601.0	1393.7
Graduate Headcount	146	191	785	263	283	229	191

Table 4: Including Faculties of Science, and the Built & Physical Environment.

An advantage of a Faculty of B&PE is that it would help to address some of the issues raised with respect to interdisciplinary studies in the environmental area¹³: a 'home' for the existing PhD/MASC program in Environmental Applied Science and Management¹⁴; a place from which proposed multidisciplinary/multi-Faculty undergraduate (such as in 'environment and urban sustainability') and graduate programs may be developed; and, designated space for student research and interaction. Although these types of programs involve more Departments than those included in the simulated

¹³ Letter received from M. Bardecki and R. Pushchak, August 6, 2009.

¹⁴ Which currently involves 14 Departments in four Faculties.

Faculty of the B&PE, it would provide a strong base from which multidisciplinary programs could be maintained and negotiated¹⁵.

Scenario 5: With about 10.1% of the nation's GDP associated with health care¹⁶, it is unsurprising that many universities which do not have Faculties of Medicine wish to identify the programs they have in health care and associated activities. Health related employment is labor intensive, and the demand for places in professional programs in the area strong. It is interesting that Ryerson did have a Division of Health Sciences prior to 1970 which changed into Community Services with the addition of non-health programs.

The Commission has, therefore, discussed re-creating a **Faculty of Health and Behavioural Science**. The University is far stronger today in health care activities at both the undergraduate and graduate levels, and in research, than it was thirty years ago. Apart from this programmatic strength, there is also the University's responsibility to help meet society's health employment and research needs. Examples of non-medical universities that have established Faculties in the health area are:

- SFU, which has a non-departmentalized Faculty of Health Sciences offering bachelor (BA, BSc) and masters (MPH, MSc) degree programs in such thematic areas as: infectious disease; environmental health and toxicology; social determinants of health; mental health and addiction; and, global health;
- The U of Waterloo which has a Faculty of Applied Health Sciences including Departments of: Health Studies and Gerontology; Kinesiology; and Recreation and Leisure Studies. Notably, the Departments of Optometry and Pharmacy are in the Faculty of Science; and Psychology is in the Faculty of Arts.
- York University, which, as was noted in the *Discussion Paper*, has established a Faculty of Health including Departments of: Nursing; Kinesiology; Health Policy & Management; and Psychology.

Table 5. Including Faculties of: Health & Behavioural Science; and, the Built & Physical Environment

	Science	TRSM	Eng	CS	SS&H	C&D	B&PE	H & B
Departments	4	10	5	4	8	7	4	6
RFA+CUPE	74.2	147.7	126.5	71.9	156.9	162.5	81.4	137.3
FFTEs by Program	1138.2	5253.2	2255.7	1685.7	1455.5	3036.7	1375.7	1949.6
FFTEs by Department	1929.6	4415.2	1190.1	1306.1	3448.8	2601.0	1393.7	1865.8
Graduate Headcount	146	191	785	84	228	229	191	234

Inclusion of a Faculty of Health & Behavioural Science is simulated here in the context of Scenario 4, but it could just as well be included in other scenarios. Those that could be involved are Departments of: Health Services Management¹⁷; Midwifery; Nursing; Nutrition; Occupational and Public Health; and Psychology. The latter Department is suggested because of its major research fields in clinical psychology and

¹⁵ Recognizing that, at Ryerson, Faculties are the designated locus of RFA positions.

¹⁶ Health Care in Canada, 2009: A Decade in Review (Canadian Institute for Health Information), p. 47. ¹⁷ Isaac, W. and J. Pringle Health Services Management: Recommendations for Academic Restructuring, Oct 15, 2009. 3pp.

psychological science. Such a Faculty would appear to provide greater presence in the general area of 'health' than the three Canadian universities mentioned above. Furthermore, it would clearly 'brand' and clarify Ryerson's involvement in health activities, and enhance the University's case for expanded enrolment and research in the area should such opportunities arise.

Scenario 6: This scenario addresses the notion of single-discipline Faculties. They are common in virtually all large universities, though none exist at Ryerson. But, with research and possible certificate-type developments in Law now above the horizon, the possibility of such Faculties in the future cannot be ignored¹⁸.

Some of the parameters and implications may be outlined in the context of a possible **Faculty of Nursing**. Ryerson has the largest undergraduate enrolment in Nursing education in Canada, and yet others are Faculties¹⁹. The reason for this is that Nursing programs are subject to strong provincial regulation and review with respect to access (eg. college transfers) and curriculum; have extensive practicum arrangements with a variety of practice settings; and, complex administrative requirements because of the internal/external nature of all their programs. Ryerson also has one of the largest masters programs with 150 graduate students, and a growing research presence.

Such a Faculty could be established within the context of any scenario, except one involving a Faculty of Health. For comparative purposes, in Table 6 Nursing is included in the context of Scenario 3. This placement emphasizes that a Faculty of Nursing would have an instructional complement similar to that of a Faculty of Science, though its undergraduate FFTEs by program are somewhat less.

Table 6. Including a Faculty of Nursing in the Context of Scenario 3

	Science	Eng+Arch	FCS	TRSM	Arts	FCAD	Nurs.
Departments	4	6	9	10	10	8	1
RFA+CUPE	74.2	158.1	123.6	147.7	205.7	181.3	67.8
FFTEs by Program	1138.2	2786.8	2787.9	5253.2	1977.7	3366.3	840.2
FFTEs by Department	1929.6	1660.1	2162.1	4415.2	4360.1	2917.1	706.1
Graduate Headcount	146	867	167	191	328	241	149

Scenario 7: The importance of the 'design economy' to Ontario, and Toronto's, competitiveness is emphasized in a DIAC (2004) report *Design Matters* and in Vinodrai $(2009)^{20}$. On the basis of an analysis of employment in architecture, landscape architecture, graphic design, interior design, industrial design, and fashion, the DIAC report suggests there are about 40,000 workers in the design economy in Ontario. It is

¹⁸ The Law Working Group (2009) *Law at Ryerson: Submission to the Provost's Academic Structures Commission*, pp6.

¹⁹ Daphne Cockwell School of Nursing Submission to PASC, November, 2009, 5pp.

²⁰ DIAC (2004) *Design Matters*, is based on research undertaken by M. Gertler and T. Vinodrai, (University of Toronto) for the Design Industry Advisory Committee.

See also: Vinodrai, T. (2009). "The place of design: Exploring Ontario's design economy". *Ontario in the Creative Age Working Paper Series*. Toronto: Martin Prosperity Institute, University of Toronto.

also claimed that Toronto has the third largest design labor force in North America (after New York and Boston). In the rhetoric of *Design Matters*, a design workforce can "...build global brands, make companies more competitive, grow the economy, transform our cities, anticipate future needs, create sustainable communities, and enhance quality of life".

It could be argued that Ryerson, with its programs in Architectural Science, Graphics Communication Management, Interior Design, Fashion, and Urban and Regional Planning (with its emphasis on urban design) has unique strength in the broad and fluid area of design. Why not then group these Departments together in a Faculty which through greater focus can gain increased advantages of congruence, legitimacy, branding, and cross-disciplinary curricula developments?

A **Faculty of Design** would obviate the idea of a Faculty of the Built and Physical Environment, and imply the establishment of a distinct **Faculty of Media & Communication** (see Appendix A) which would include existing Departments in communication and visual and performing arts (Table 7). A Faculty of Media & Communication provides a framework for: conflating theory, scholarship, creative activities, technology, and practice; establishing common first and second year courses and electives; and, a 'home' for graduate and undergraduate programs perhaps under the rubric of 'cultural industries'²¹ and 'experiential media'²² (which is not to imply that other disciplines and Faculties could not also be involved). Such a Faculty should more firmly establish itself as the home for the existing graduate program in communication and culture.

rable 7. Simulating ractifies of Design, wiedla & Communication, Science, and fieldin									
	Design	M & C	Eng	CS	SS&H	Science	TRSM	H&B	
Departments	5	5	5	4	9	4	10	6	
RFA+CUPE	95.9	128.3	126.5	71.9	176.5	74.2	147.7	137.3	
FFTEs by program	2071.7	2134.2	2255.7	1685.7	1662.0	1138.2	5253.2	1949.6	
FFTES by Department	1633.8	1969.2	1190.1	1306.1	3840.5	1929.6	4415.2	1865.8	
Graduate Headcount	146	229	785	84	273	146	191	234	

Table 7. Simulating Faculties of Design, Media & Communication, Science, and Health

Scenario 8: This scenario arises from an observation in the Commission that Ryerson has many Departments and programs in the applied social science disciplines which lead to qualifications required for employment in existing or developing professional areas. They all have: a base in social, economic, and political theory; a need for general knowledge concerning administrative law, structures and practices; and, a common demand by potential employers for graduates with related analytical skills. Furthermore, it is a loose grouping that in some universities elements of which may be included in a Faculty whose

²¹ Levine, I. *Proposed School of Creative Industries*, Oct 14, 2009, pp7. This paper appears to call for a restructuring of the current FCAD around four Departments: media production; fine arts; communication; and design.

²² Ball, A. *Proposal Summary: Experiential Media Institute (XMI)*, Nov 12, 2009, pp5. This paper calls for a research and curriculum cluster in its specific area, and that it be one of a larger number of clusters within FCAD. It is also proposed that a curricula be developed that provides for a large number of electives.

title includes the word 'administration', though the Commission believes such an implication unnecessarily confusing in Ryerson's case.

A possible **Faculty of Professional Social Science** could include, but is not limited to: Child and Youth Care; Criminal Justice; Disability Studies; ECE; Economics (ie. int. econ. & finance); Geographic Analysis; Politics; Social Work; and Sociology (Appendix A). Such a Faculty would be quite large; could build on the 'common platform' programs already established in the existing Faculty of Arts; widen possibilities for student transferability between programs; and, provide a 'home' for undergraduate and graduate programs in such areas as immigration and settlement studies, international development, regional studies, and policy studies. It should be noted that in this simulation (Table 8) Psychology remains placed in a Faculty of Health.

Table 8. Faculties of Professional Social Science and Humanities

	Prof.SS	Hum.	M & C	Design	TRSM	Eng.	Science	H & B
Departments	9	4	5	5	10	5	4	6
RFA+CUPE	175.7	72.8	128.3	95.9	147.7	126.5	74.2	137.3
FFTEs by program	2922.9 [*]	424.8 [*]	2134.2	2071.7	5253.2	2255.7	1138.2	1949.6
FFTES by Department	3978.4	1168.2	1969.2	1633.8	4415.2	1190.1	1929.6	1865.8
Graduate Headcount	300	57	229	146	191	785	146	234
*estimate								

An immediate 'knock-on' concern would be the placement of disciplines that traditionally form the Humanities into a new Faculty. Such a grouping is comparable with Science in instructional complement. Furthermore, with current planning for new undergraduate programs and common entry courses, the Humanities Departments are well situated to cater for a significant part of possible future growth, perhaps couched in part in the context of 'culture and diversity'.

Interdisciplinary Studies: Interdisciplinary programs and research are increasingly regarded as a vital component of intellectual inquiry, primarily because they involve **integration** of knowledge across disciplines, which can lead to new insights and innovation²³. In *Shaping Our Future* it is stated that: "Ryerson vigorously expand its response to dynamic change..." by creating "... new and innovative curricula and program structures, including both discipline-based and cross-disciplinary programs ... [and] ...new opportunities for cross-disciplinary inquiry by researchers, creative practitioners, and students."

In consequence, there has been considerable discussion concerning a possible **Faculty of Interdisciplinary Studies,** which could serve as an 'umbrella' for a variety of cross-discipline, cross-Faculty, programs. The discussion arises primarily because, apart from experiences with four successful interdisciplinary programs at the graduate level, cross-Faculty interdisciplinary undergraduate programs are virtually non-existent, and those that do exist could embrace a wider constituency (see Appendix B). For example,

²³ Repko, A.F. (2008) Interdisciplinary Research: Process and Theory (Sage Publications), 115-134.

the highly successful Arts and Contemporary Studies program (in the Faculty of Arts) could well be expanded to include Departments in other Faculties²⁴.

This lack is possibly due to the fact that at Ryerson matters related to: faculty hiring, assessment, tenure and promotion; teaching and supervisory 'loadings'; program and curriculum development; program budgeting; and so forth are all undertaken at the Faculty and Departmental levels. This structure, **as with most other universities**, tends to inhibit development of interdisciplinary programs. In such an administrative situation, faculty and students involved with interdisciplinary programs tend to 'suffer' in various ways. For example, faculty may 'suffer' because the Department in which they are located may view their involvement with interdisciplinary programs as marginal to the Departmental enterprise. Students in such programs may 'suffer' with respect to course selection and supervision availability. Graduate students may 'suffer' because GAs are more readily available to students registered in departmentally-based programs. The University in general 'suffers' through its apparent neglect of interdisciplinarity.

At various points during the course of the development of the previous scenarios it has been suggested where Faculty 'homes' for interdisciplinary programs may be. But, it is argued, these would be *ad hoc* arrangements, and still leave loose ends for such programs generally reach across Faculties. The answer may be to establish a **Faculty of Interdisciplinary Studies** (within the context of no more than eight Faculties) that can act like a 'normal' Faculty with respect establishment of programs, with some faculty appointments, but with a budget that includes funds to 'purchase' required instructional and other resources from cooperating Faculties and Departments. Its mandate would be to develop and manage interdisciplinary programs at both the undergraduate and graduate levels, and it would be established as a Faculty so that it could make some key instructional appointments, and provide a 'home' for students. It would also provide an additional avenue for program development, one that focuses on integration of discipline based knowledge.

Graduate Studies: the School of Graduate Studies (SGS) is the academic unit, which administers and delivers graduate programs at Ryerson. Since the year 2000 when SGS was implemented, it has facilitated Ryerson's transformation from a primarily undergraduate university. SGS central coordination has provided mentorship to new and emerging graduate programs and has led Ryerson to meet and surpass its graduate enrolment targets. Currently, Ryerson offers 37 graduate programs including those awaiting, approval by the Board of Governors. Of this total, 4 programs are interdisciplinary and 33 are associated with a single department/school.

For academic units in the latter group, graduate program delivery and research activities carried out by their graduate students are integral to their day-to-day operations. Yet, SGS remains to be the academic home of these graduate programs and students as SGS has not only administrative but also operational responsibility in the delivery of graduate programs.

²⁴ Letter from K. Church, E. Ignagni, C. Frazee, and M. Panitch concerning Disability Studies, Nov 18, 2009, 4pp.

Other universities have addressed these issues by assigning program delivery and financing thereof to Departments; and mainly administrative and coordinating responsibilities to SGS²⁵. Many of our graduate programs have been operational for four or more years; they have established strong track records and produced many graduates. Some have successfully completed their first seven year periodic (or cyclical) program reviews (Table 10). In other words, Ryerson and its academic units have matured and are now significantly more experienced in the delivery of graduate programs compared to the time when we first embarked on this journey.

ruble ro. Ryerson Oniversity. Outcome of r	i chicale ripp		
Program	Year	Type ²⁶	Outcome ²⁷
PhD/MASc/MEng Elect and Comp Eng	2005/06	Abbreviated	Good Quality
MA Photo Preserv & Coll Mngmt	2006/07	Abbreviated	Good Quality
PhD/MASc/MEng Civil Engineering	2007/08	Full	Good Quality
MASc Env App Sc and Mngmt.	2007/08	Full	Good Quality
MSA Spatial Analysis	2007/08	Full	Good Quality
PhD/MASc/MEng Mechanical Eng.	2007/08	Abbreviated	Good Quality
MA Public Policy and Admin	2007/08	Abbreviated	Good Quality
PhD/MASc/MEng Chemical Engineering	2008/09	Full	Good Quality
MA International Economics and Finance	2008/09	Full	Good Quality
(PhD)/MA Psychology	2009/10	Abbreviated	Good Quality
MSW Social Work	2009/10	Abbreviated	Good Quality
PhD/MA Communication and Culture	2009/10	Full	in progress
MA Early Childhood Studies	2010/11	Full	in preparation

Table 10. Ryerson University: Outcome of Periodic Appraisal Reviews

In view of these observations, the university administration may want to revisit the role of SGS in the delivery of graduate programs, and investigate whether alternate administrative structures can bring further efficiencies and enhance the graduate student experience²⁸.

²⁵ Such responsibilities include but are not limited to: administration of oral examinations, doctoral thesis defenses; development and administration of policies and procedures related to graduate studies; administration of graduate admissions and general recruitment (particularly through the GAC); administration of University-based and external graduate scholarships; graduate faculty (SGS) membership; curriculum and calendar development; enhancing opportunities for professional skills development for graduate students; new program development and approval; management of quantitative and qualitative information pertaining to programs and students; degree audit and convocation; and maintaining central communication tools such as the SGS web-site.

²⁶ 'Full' means the program has been implemented for at least two years, and the review involves external consultants. 'Abbreviated' means the program is too close to implementation for external consultants to be required – in such cases a 'paper review' is conducted by Appraisals Committee of OCGS.

²⁷ Possible outcomes: Good Quality; Good Quality with Report; Conditionally Approved; Not Approved to Continue. In general, about 58% of Periodic Appraisal submissions (Full and Abbreviated) are placed immediately in the Good Quality category.

²⁸ SGS has a data survey of the functions of Graduate Schools of comparable size in Canada.

FACILITATING CHANGE

Each scenario, then, brings different strengths to the Faculty structure table. Table 9 provides a summary²⁹ indicating those four of five considerations which **Commission members believe**, based on its discussions, are most clearly met in any particular suggested scenario³⁰. Each person in the University will, of course, have their own views on the matter. The staging of any implementation will be up to discussions between the Provost's office and the Departments involved, which is why the acceptability row is left blank.

Consideration				S	cenario				
	1	2	3	4	5	6	7	8	
	SQ	A&S	Sc	B&PE	H&B	Ν	Des	PSS	Int
Legacy									
Congruency or 'Fit'									
Legitimacy				\checkmark					
Quality Assessment						\checkmark			
'Branding' and Strategic Opps.				\checkmark		\checkmark		\checkmark	
Admin. and Op. Efficiencies						\checkmark			
Financial Viability								\checkmark	
Growth and Opportunities									\checkmark
Interdisciplinary Activities				\checkmark				\checkmark	
Single-Discipline Prof. Fac.									
Acceptability									

Table 10. Attributes of Existing, and Possible Restructured Scenarios

Which raises the question: what is needed with respect to level of faculty support for a Department change in location to occur? The Commission's attention in this regard has been drawn to the University's policy with respect to *Benefactor Naming*. In the policy it is stated that when a benefactor naming is suggested, the Provost:

"... shall undertake to determine whether the tenure stream faculty in that unit support the naming. The term "support" shall not be construed so broadly as to require perfect consensus, nor so narrowly as to consist of a bare majority of the tenure-stream faculty.³¹

There are, of course, differences between the 'benefactor naming' and the 'Department change in location' cases. More than one Department is usually involved in a Faculty formation, and a low level of support in one should not automatically negate a change which appears eminently appropriate to the others.

²⁹ The scenarios are simply labeled for ease of recall by the idea which kick-started the particular simulation.

³⁰ Stuart C. *Academic Restructuring: The Perspective of the School of C & YC*, Oct 26, provides an interesting match of C&YC with this set of attributes/considerations.

³¹ *Benefactor Naming* (updated August, 2007). Office of the V-P University Advancement, Ryerson University, p3.

Existing Faculty Structure

Arts Criminal Justice Economics English French/Spanish Geographic Analysis History Philosophy Politics Psychology Sociology FCS Child and Youth Care **Disability Studies** Early Childhood Ed Health Services Mgmt. Midwiferv Nursing Nutrition Occ. and Public Health Social Work Urban and Reg. Planning FFAS Aerospace Engineering Architectural Science Chemical Engineering Chemistry and Biology **Civil Engineering** Computer Science Electrical Engineering Mathematics Mech. and Ind. Eng. Physics TRSM Accounting Entrepreneurship Finance Global Mgmnt Hosp and Tourism Mgmt. Human Resources Information Tech. Mgmt. Law (Business) Marketing Retail Momt. EC&D Fashion Graphic Comm. Momt. Image Arts Interior Design Journalism Professional Comm Radio and Television Theatre

Criminal Justice Economics English French/Spanish Geographic Analysis History Philosophy Politics Psychology Sociology Chemistry and Biology Computer Science Mathematics Physics FCS Child and Youth Care **Disability Studies** Early Childhood Ed Health Services Mgmt. Midwiferv Nursing Nutrition Occ. and Public Health Social Work Urban and Reg. Planning Eng & Arch Aerospace Engineering Architectural Science Chemical Engineering Civil Engineering Electrical Engineering Mech. and Ind. Eng. TRSM Accounting Entrepreneurship Finance Global Mgmnt Hosp and Tourism Mgmt. Human Resources Information Tech. Mgmt Law (Business) Marketing Retail Momt. FC&D Fashion Graphic Comm. Mamt. Image Arts Interior Design Journalism Professional Comm Radio and Television Theatre

Scenario 2: Arts&Science

Arts & Science

Scenario 4: City Builder

Scenario 3: Science

Chemistry and Biology

Computer Science

Mathematics

Criminal Justice

French/Spanish

Geographic Analysis

Architectural Science

Chemical Engineering

Electrical Engineering

Child and Youth Care

Health Services Mgmt

Occ. and Public Health

Disability Studies

Midwifery

Nursing

Nutrition

TRSM

Social Work

Accounting

Finance

Entrepreneurship

Human Resources

Graphic Comm. Momt.

Global Mgmnt

Law (Business)

Marketing

FC&D

Fashion

Retail Mgmt.

Image Arts

Journalism

Theatre

Interior Design

Professional Comm

Radio and Television

Early Childhood Ed

Mech and Ind Eng

Civil Engineering

Economics

Science

Physics

Enalish

History

Politics

FCS

Philosophy

Psychology

Eng & Arch

Sociology

Arts

B&PE Architectural Science Geographic Analysis Urban and Reg. Planning Interior Design TRSM Accounting Entrepreneurship Finance Global Mgmnt Hosp and Tourism Momt. Human Resources Information Tech. Mgmt. Law (Business) Marketing Retail Mgmt. Science Aerospace Engineering Chemistry and Biology Computer Science Mathematics Physics C&D Fashion Graphic Comm. Mgmt. Image Arts Journalism Professional Comm Radio and Television Theatre SS&H Criminal Justice Economics Enalish Urban and Reg. Planning French/Spanish History Philosophy Politics Psychology Sociology Hosp and Tourism Momt. CS Child and Youth Care Information Tech. Mgmt. **Disability Studies** Early Childhood Ed Health Services Mamt. Midwiferv Nursina Nutrition Occ. and Public Health Social Work Engineering Aerospace Engineering Chemical Engineering Electrical Engineering Mech. and Ind. Eng. **Civil Engineering**

Psychology Health Services Mgmt. Midwifery Nursina Nutrition Occ. and Public Health B&DE Architectural Science Urban and Reg. Planning Interior Design Geographic Analysis C&D Fashion Graphic Comm. Mgmt Image Arts Journalism Professional Comm Radio and Television Theatre SS&H Criminal Justice Economics English French/Spanish History Philosophy Politics Sociology CS Child and Youth Care **Disability Studies** Early Childhood Ed Social Work Engineering Aerospace Engineering Chemical Engineering Electrical Engineering Mech. and Ind. Eng. Civil Engineering TRSM Accounting Entrepreneurship Finance Global Momnt Hosp and Tourism Mamt. Human Resources Information Tech. Momt. Law (Business) Marketing Retail Mgmt. Science Chemistry and Biology Computer Science Mathematics Physics

Health & Behavioral Sc

Scenario 5: Health&Behav Scenario 6: Single Disc. Nursing Nursing Science Chemistry and Biology Computer Science Mathematics Physics Arts Criminal Justice Economics Enalish French/Spanish Geographic Analysis History Philosophy Politics Psychology Sociology Eng & Arch Aerospace Engineering Architectural Science Chemical Engineering Civil Engineering Electrical Engineering Mech. and Ind. Eng. FCS Child and Youth Care **Disability Studies** Early Childhood Ed Health Services Mgmt. Midwiferv Nutrition Occ. and Public Health Social Work Urban and Reg. Planning TRSM Accounting Entrepreneurship Finance Global Momnt Hosp and Tourism Mgmt. Human Resources Information Tech. Momt. Law (Business) Marketing Retail Mamt. FC&D Fashion Graphic Comm. Mgmt. Image Arts Interior Design Journalism Professional Comm Radio and Television Theatre

Design Architectural Science Urban and Reg. Planning Interior Design Fashion Graphic Comm. Momt. Media & Communication Image Arts Journalism Professional Comm Radio and Television Theatre SS&H Geographic Analysis Criminal Justice Economics Enalish French/Spanish History Philosophy Politics Sociology CS Child and Youth Care **Disability Studies** Early Childhood Ed Social Work Engineering Aerospace Engineering Chemical Engineering Electrical Engineering Mech. and Ind. Eng. Civil Engineering TRSM Accounting Entrepreneurship Finance Global Mgmnt Hosp and Tourism Mgmt. Human Resources Information Tech. Mgmt. Law (Business) Marketing Retail Mamt. Science Chemistry and Biology Computer Science Mathematics Physics Health & Behavioral Sc Psychology Health Services Mgmt. Midwifery Nursing Nutrition

Occ. and Public Health

Scenario 7: Design/M&C

Appendix A

Scenario 8: Prof Soc Sc Prof Soc Sc Child and Youth Care Criminal Justice **Disability Studies** Early Childhood Ed Economics Geographic Analysis Politics Social Work Sociology Humanities English French/Spanish History Philosophy Media & Communication Image Arts Journalism Professional Comm Radio and Television Theatre Desian Architectural Science Urban and Reg. Planning Interior Design Fashion Graphic Comm. Mgmt. Health & Behavioral Sc Health Services Mont. Midwifery Nursing Nutrition Occ. and Public Health Psychology Science Chemistry and Biology Computer Science Mathematics Physics Engineering Aerospace Engineering Chemical Engineering Civil Engineering Electrical Engineering Mech. and Ind. Eng. TRSM Accounting Entrepreneurship Finance Global Mgmnt Hosp and Tourism Mgmt. Human Resources Information Tech. Mgmt. Law (Business) Marketing Retail Mamt.

Faculty	Department	Certificate / Degree Completion	Undergraduate Program	Graduate Program
uity of Arts	Criminal Justice and Criminology Department	Criminal Justice and Criminology	Criminal Justice	
	Freedom Decoder and	Freedomine	Justice Studies	Internetional Economics and Eisener (MA (PED)
	Economics Department	Industrial Organization and Policy	International Economics & Finance	International Economics and Finance (MA/FID)
		Introductory International Economics		
		Macroeconomic Theory and Policy		
		Microeconomic Theory and Policy		
	For the Decoderate	Quantitative Economics		1 11 1
	English Department	English as a Second/Additional Language Business French and Translation		Literatures of Modernity (MA)
		Proficiency in French		
		Proficiency in Spanish		
	Geography Department	Applied Digital Geography and GIS	Geographic Analysis	Spatial Analysis (MSA)
	Histon/ Department	Applied Digital Geography and GIS, Advanced		
act	Philosophy Department			Philosophy (MA)
-	Politics & Public Administration Department	(PADP)	Politics and Governance	Public Policy and Administration (MA)
		(PADP)	Public Administration and Governance	
	Psychology Department	Mental Health and Addictions	Psychology	Psychology (MA/PhD)
	Sociology Department	rsychology	Sociology	
	Multidisciplinary		Diploma in Arts	
	Multidisciplinary		Arts & Contemporary Studies	Immigration and Settlement Studies (MA)
	Multidisciplinary			Policy Studies (PhD)
	Multidisciplinary			Env App Sc and Management (MASC/PhD)
	Multidisciplinary		Undeclared Arts	Communication and Culture (MA/PhD)
n and Design	School of Fashion	Fashion Coordination and Styling	Fashion (Design, Comm)	Fashion (MA)
	School of Graphic Communications Mgmt.	Graphic Communications	Graphic Communication Management	
	School of Image Arts	Film Studies	Image Arts (Film, New Media, Photog.)	Photo Pres and Collections Management (MA)
	School of Interior Design	Fundamentals of Interior Design	Interior Design	Documentary media (MFA)
		Lighting Design		
		Design Management		
tio	Cabaal of Javaaalian	Facility Management	la una aliana	Leurendierer (MAI)
nice	School of Journalism	Magazine Publishing		ooumdiisiii (wo)
ar an ar		Publishing	1	
E C	Professional Communication Department	Business Communication		Professional Communication (MPC)
Faculty of Co	School of Radio and Television	Audio Production Fundamentals	Radio & Television Arts	Media Production (MA)
		Media Writing Fundamentals		
	Theatre School	Design for Arts and Entertainment	Theatre - Performance Production	
			Theatre - Acting	
			Theatre - Dance	
	Multidisciplinary			Communication and Culture (PhD, MA)
	School of Child and Youth Care	Family Supports	Child and Youth Care	
	School of Disability Studies		Disability Studies	
	School of Early Childhood Education	ECE Degree Completion	Early Childhood Education	Early Childhood Studies (MA)
	School of Health Services Mgmt.		Health Info Mgmt.	
ş		Health Services Management	Health Services Mgmt.	
< ice	Midwifery Education Program	Degree Completion (BSc)	Midwifery	Nursing (MN)
Ser		Advanced Neuroscience-Stroke Care	Nursing	
≩		Leadership and Management for Nurses		
E E	School of Nutrition	Food Security	Nutrition & Food	Nutrition Communication (MHSc)
Ĕ	School of Occupational and Bublic Health	Physical Activity: Assessment and Promotion	Occupational & Bublia Health	
ŭ	School of Occupational and Public Realth	Environmental Public Health Leadership		
° A		Occupational Health and Safety		
scul	School of Social Work	Canadian Social Work Practice	Social Work	Social Work (MSW)
ц	School of Urban and Regional Planning		Urban & Regional Planning	Urban Development (MPI)
	Multidisciplinary			Policy Studies (PhD)
	Multidisciplinary			Immigration and Settlement Studies (MA)
	Multidisciplinary	Fundraising Management		
		Gerontology		
		Nonpront and Voluntary Sector Management	Engineering Undeclared	
			Science Undeclared	
ineering, Architecture, and Science	Department of Aerospace Engineering		Aerospace Engineering	Aerospace Engineering (PhD, MASc, MEng)
	Department of Architectural Science	Architectural Preservation and Conservation	Architectural Science	Architecture (MArch)
		Architecture, Advanced		
	-	Landscape Design		
				Building Science (MBSc, MASc)
	Department of Chemical Engineering	Chaminal Application	Chemical Engineering	Chemical Engineering (PhD, MASc, MEng)
	Department of Chemistry and Biology		Biology	Molecular Science (MSC)
			Applied Chemistry & Biology	
	Department of Civil Engineering		Civil Engineering	Civil Engineering (PhD, MASc, MEng)
	School of Computer Science	Computer Programming Applications	Computer Science	Computer Science (MSc)
		IBM Mainframe System z Computing		
	Engineering	Is with a monopole of the second and s	Electrical Engineering	Electrical and Computer Eng (PhD, MASc, MEng)
ngi			Computer Engineering	Computer Networks (MASc, MEng)
ulty of E	Department of Mathematics		Math & its Applications	Applied Mathematics (MSc)
	Department of Mech. & Ind. Eng.	Environmental Engineering Science	Industrial Engineering	Mechanical Engineering (PhD, MASC, MEng)
acu	Department of Physics			Biomedical Physics (MSc)
Ľ.	Multidisciplinary		Medical Physics	Env App Sc Management (MASc/PhD)
	Multidisciplinary		Contemporary Science	
The Ted Rogers School of Management	Multidisciplinary	Sustainability	biomedical Engineering	
		Project Management		
	School of Business Management	Accounting - Finance	Accounting	Business Administration (MBA)
			Entrepreneurship	
	<u> </u>	Financial Planning	rmance	
		Human Resources Management	Human Resources Management	
		Business Analysis	Management	
		Business Management		
		International Business	Marketing	
	School of Hospitality and Tourism Momt	Iviarketing wanagement	Hospitality and Tourism Momt	
	School of Information & Technology Mgmt.	Database Knowledge and Management	Info & Tech Management (many options)	Management of Tech and Innov (MBA/MMSc)
		eBusiness		
		Information Systems Development		
	<u> </u>	Telecommunications Management	1	
	School of Retail Mamt.	ressonning monoutoris management	Retail Management	
	Multidisciplinary		Economics and Management Science	Env App Sc and Management (MASc/PhD)
	Multidisciplinary	1		Communication and Culture (MA/PhD)