DRAFT FOR DISCUSSION ONLY

Implementation of the New Curriculum Model at Ryerson University: Green Paper

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Implementing the New Curriculum Model: Green Paper

1. Introduction

This document presents an interim report from the Curriculum Implementation Committee (CIC) on the enactment of the new curriculum model approved by Ryerson University's Senate in June 2012. As with the green paper presented by last year's Curriculum Renewal Committee (CRC), this report's purpose is to inform the broader Ryerson community about the directions the CIC is considering, to foster discussion on these proposed directions, and to solicit advice.

a. Background to the Curriculum Renewal Project

In June 2011, a new curriculum framework was approved for Ryerson, and the Curriculum Renewal Committee (CRC) was appointed to work out its implications. This new framework was devised to provide students with more flexibility to define their personal educational and career goals, while maintaining Ryerson's mandate to provide a well-rounded career-relevant education that includes broad educational objectives such as critical thinking and communication (particularly writing) skills. The new framework was also explicitly aligned with the undergraduate degree level expectations (UDLEs), which are now part of Ryerson's Institutional Quality Assurance Process (IQAP).

In June 2012, the framework developed by the CRC in its white paper was approved by Senate. At this same Senate meeting, the CIC (Appendix 1) was created to develop an effective plan to turn this framework into a full-fledged curriculum model. In its white paper, the CRC made 19 recommendations (Appendix 2), including the establishment of the CIC, whose key goals it envisioned as follows:

➤ Development of a mechanism and criteria related to creation and maintenance of restrictions and exclusions for open electives.

➤ Development of strategies and processes to ensure student access (improved course intentions, use of SCIF, mandated seats in open electives, and caps on class sizes as appropriate).

➤ Development of strategies to present open and breadth electives to students that facilitate student choice.

➤ Development of processes to ensure writing courses (W-courses) as graduation requirements are introduced in the appropriate sequence.

➤ Identification of resource needs related to implementation.

The remainder of this document outlines the CIC's interim proposals for the full-fledged curriculum model based on the goals set out by the CRC. It also discusses the ways the CIC proposes dealing with the wide-ranging issues of transitioning to the new curriculum. Finally, this document summarizes several areas where we believe further discussion and consultation are necessary. In the meantime, the CIC's work on detailed strategies and processes to address scheduling, access and transition issues, as well as its identification and estimation of implementation-related resource needs is ongoing, in preparation for a CIC white paper to be submitted in time for a June Senate meeting.

2. Proposals for Refinement of the New Curriculum Model

This section presents an overview of policy ideas that would involve further refinements to the curriculum model presented by the CRC in their 2012 white paper.

Proposal 1. Transitioning to Mandated Breadth
In its white paper, the CRC recommended that open electives provide "choices related either to personal interest and exploration or to a student's own particular career path," to give students the chance "to gain additional depth in their core discipline, to pursue a minor or to develop other interests." Breadth electives were envisioned as courses that "expose students to varied and diverse ways of seeing the world." In addition they were conceived as developing students' "capacity to understand and critically appraise the issues and context of a discipline outside their field of study, and specifically expose [them] to varied types and methods of reasoning and analysis, and modes of communication." As a result of feedback the CRC received during consultations with the community, the white paper presented to Senate in June 2012 also exhorted the University to "express its intent to make the breadth elective category a field for *mandated breadth* over time." Three categories were provisionally suggested in the white paper, including the social science and humanities, science and technology, business and design. We are suggesting that this range be broadened to a set of categories which reflects the entire spectrum of Ryerson programming as listed here:[1]

- ➢ the humanities
- ➢ the social sciences
- ➢ science and engineering
- ➢ business
- ➢ communication and design
- ➢ community service

Applying mandated breadth requirements in addition to the white paper's conceptual definition of breadth creates formidable challenges, however. In its discussion of its goal of mandated breadth, the CRC noted "[t]here will need to be a commitment by the University to ensure that sufficient courses exist in whatever set of breadth categories is finally selected." Let's take the case of a fairly straightforward mandated breadth requirement that extends the current breadth elective component of the proposed curriculum model: that all undergraduate full-time students should be required to take six breadth elective courses (four in engineering) in at least three of the above six categories. Students would be excluded from taking breadth courses from the category deemed closest to their own disciplinary or interdisciplinary area (i.e., major subject). It is possible to use some hypothetical calculations to gain a sense of the number of seats each Faculty needs to make available once the new curriculum model reaches steady state. Presuming that students have uniform preferences in choosing from among the five categories open to them (i.e., all except the category deemed

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[1] As a comparison, the Faculty of Arts at the University of Waterloo requires breadth in the categories Fine/Performing/Communication Arts, Humanities, Languages and Cultures, Social Science, Trans-disciplinary Studies. In the Faculty of Mathematics the categories are Humanities, Social Sciences, Pure Sciences, and Applied Sciences. In the Faculty of Science no categories are indicated – students are required to take 16 electives in a major program such as Chemistry. At Western University the breadth categories for undergraduate programs are Arts and Humanities, Social Science, Technical (sub-categories are Engineering, Medical Science, Science, Communication Sciences) At Carleton University the categories are Arts/Social Science and Free Electives in the Faculty of Science while for the Faculty of Arts they are Culture and Communication, Humanities, Science/Engineering/Design and Social Sciences. There are several BA Programs exempt from breadth requirements as they are considered to be interdisciplinary.

closest to their own subject area), and based on 2012-13 Faculty enrollments (employing FFTE equivalents), the following estimates apply for the number of seats that need to be made available in each of the six academic Faculties to meet mandated breadth requirements for out-of-Faculty students:

Figure 1: Steady-State Estimates of Seat Requirements in Mandated Breadth Categories

Faculty	Enrollment	Humanities	Social Sciences	Science and Engineering	Business	Communication and Design	Community Services
Arts	3064	586 [=2342 × 0.25]	181	766*	766	766	766
FEAS	3604	613 [= 3604 × 0.17)]¶	613	-	613	613	613
Science	1596	399 [= 1596 × 0.25]	399	-	399	399	399
TRSM	8325	2081 [= 8325 × 0.25]	2081	2081	-	2081	2081
FCAD	4019	1005 [= 4019 × 0.25]	1005	1005	1005	-	1005
FCS	4858	1215 [=4858 x 0.25]	1215	1215	1215	1215	-
		5898	**5312**	**5067**	**3997**	**5073**	**4864**

*For example, the estimate that the 3064 students enrolled in 2012-13 in Faculty of Arts programs would need 766 seats in electives in the science and engineering category is based on the mandated breadth requirement for Arts students of six courses during a four-year program, or an average of 1.5 courses annually, with students in these programs presumed to access the 1.5 courses uniformly from the five categories (i.e., 0.25 courses per category) open to them. In the case of humanities and social sciences, the Arts total of 3064 can be divided into enrolment in humanities programs (722) and social sciences programs (2342), with the estimate of Arts students taking humanities courses being the number of social sciences program students multiplied by .25.

¶The mandated breadth requirement for FEAS students is presumed to be four courses during their four-year programs, so that on average they take one course annually. These students are presumed to access this single course uniformly (i.e., 0.17 courses per category) from the five categories open to them.

These numbers are approximate, but they nonetheless reveal some of the extraordinary challenges that Faculties outside of Arts would face meeting the steady-state enrollment demands associated with mandated breadth. It is also important to note that the challenge for the Faculty of Arts would be very different from that of other Faculties. At present, most liberal studies courses are offered by this Faculty. With a mandated breadth requirement gradually expanding to encompass all of the University's undergraduate programming, a large majority of the seats currently allotted to Arts-delivered liberal studies courses (in the order of two thirds, or over 20,000 seats annually, according to the hypothetical estimates in Figure 1) would shift to courses delivered by the other five academic Faculties. Differential growth in different sectors of the University might exacerbate this issue.

Such a shift could have a disruptive impact on the University in two ways. First, it could significantly reduce undergraduate teaching in Arts departments, especially those with large numbers of liberal studies courses. Second, it could create a major new set of teaching demands for departments and schools in the rest of the University – demands that in a period of budget austerity would not necessarily be easy to meet.

To reduce such risks, the CIC proposes that a long-term transition strategy needs to be worked out for mandated breadth – one that starts with a breadth elective component of the new curriculum model that mirrors the liberal studies component of the current curriculum, but with the following amendments. To begin with there would be three categories of breadth electives:

➢ Humanities;
➢ Social Science;
➢ Non-Arts/Other.

The first two would include all areas subject inside Arts, and the third would include all subject areas outside Arts (TRSM, FCAD, FEAS, FoS, FCS).

For the first step all breadth electives would be scheduled in the current liberal studies bands. Arts students in humanities would be required to take six breadth electives from either social sciences or the third category from outside Arts. Arts students in social sciences would be required to take their six breadth electives from either humanities or the third category. Non-Arts students would be required to take either humanities or social sciences breadth electives.

As soon as sufficient courses and potential seats had been created outside Arts, the third category would be divided into two or more separate categories. Given that it would likely be quicker to introduce a significant number of seats in new business and in science breadth electives, and given the possible synergies between new business courses and those in communication and design, the third category might initially be divided into three separate categories: (1) business, communication and design, (2) science and technology and (3) other. Note – these additional categories are, at this juncture, simply examples provided to illustrate the point. The final step would involve the full implementation of the breadth elective requirement. In the long run, as the number of breadth electives from outside Arts increases, the mandated breadth requirement would be enriched by introducing courses from all four of the envisioned categories outside Arts, with all students having to take their six breadth electives from at least three of the six categories cited above, other than the category associated with their major subject.

An incremental approach to implementing this new requirement would allow for the gradual development of required courses but also encourage research and testing to observe and measure the effects of these changes on enrolment and student engagement.

Finally, it should be noted that the analysis above is based on an "equal selection of categories by students" model as noted. This is, of course, an unlikely scenario. Other factors will come into play including student preferences, scheduling constraints and seat availability. In spite of such challenges, the CIC firmly believes that the university should work towards mandated breadth over time.

Proposal - According to the amended breadth elective requirement, students will need to take six breadth electives (four in engineering) from categories unassociated with their own major subject. In order to create the resources to support this requirement, the committee is advising a gradual transition plan that begins, as outlined above, with accepting the current liberal electives as breadth electives but concludes with a breadth requirement that reflects all subject areas taught at Ryerson.

Breadth electives will initially comprise the liberal studies list of courses, divided into three categories – humanities, social sciences and other – with all students needing to take their breadth electives from a selection in two categories.

Proposal 2. Introduction of 'Flagship' Electives
Over time, special 'flagship' elective courses in each of the non-Arts breadth categories should be encouraged. These courses would be tailored to the white paper's breadth elective definition, while being geared to a large-capacity lecture format and offered in multiple sections. Not only would these new breadth elective courses help ensure students could satisfy their mandated breadth requirement, they would also provide a range of specially tailored introductory offerings in each of the breadth elective categories. In addition, they might be used as prerequisites to other available electives. And, maintaining the CRC's recommendation that students be able to use breadth electives as open electives, these flagship elective courses could be used to meet open elective requirements as well.

Proposal - Special 'flagship' elective courses should be introduced in each of the six categories outlined in the previous proposal. These courses should all meet the breadth elective definition outlined in the CRC's white paper and it should be possible for students to use them to meet either mandated breadth or open elective requirements.

Proposal 3. Review of all Breadth Elective Courses
The Breadth Elective and Writing Committee (BEWC) will need to review all breadth electives to ensure that they fit under the breadth elective definition. This review will initially involve all new courses. But, over time, all breadth elective courses, including the current liberal electives should be reviewed to ensure that they fulfill the breadth elective mandate

Proposal - The BEWC shall ensure that all breadth elective courses are consistent with the definition of such courses.

Proposal 4. Interim Maintenance of Banding
The gradual transition to the breadth elective requirement will require a gradual modification of the bands system. Once students have wider access to breadth electives in the Outside Arts categories, the bands should be removed. These changes should occur incrementally and with care. It is possible that some bands might have to remain for programs with accreditation issues. This process will minimize the timetabling risks associated with the transition to the new curriculum model.

Proposal - The CIC proposes that breadth electives continue to be offered in the current bands system, and that a gradual transition to a non-banded system be implemented.

Proposal 5. Lower- and Upper-Level Writing-Intensive (W) courses.
The CRC recommended the adoption of the concept of writing-intensive (W) courses that "include an individually prepared writing component outside of class that develops the student's critical skills and ability to mount a sustained argument." Courses that are either core or elective could be classified as writing-intensive, with programs having the same number of W-course slots in the new curriculum as they have liberal studies courses in the current curriculum.

One issue the CRC did not discuss is whether or not to maintain in any way the existing division of liberal studies courses into lower-level and upper-level. Currently the main distinction between these two levels is the specification of their writing component. Lower-level liberal studies courses incorporate one or more out-of-class assignments totalling at least 1200-1500 words; upper level liberal studies courses incorporate the same requirement except in the range of at least 1500-2000 words. An additional distinguishing feature is that upper level liberal studies courses are pitched at a year three and year four level, while lower-level course content is at a year one and year two level.

There are resource implications associated with this recommendation. While the total amount of marking (and employment of markers to assist faculty members in assessing students' written work in some of these courses) would be the same as at present, the distribution of this marking across the University would change. The financial resources used to fund this marking will therefore need to shift as well.

Currently the presence of significant writing assessments in coursework is concentrated in liberal studies courses in Arts as well as some professional and professionally related courses in other Faculties, especially FCAD. To ensure that students in all parts of the University can access a sufficient number of writing-

intensive courses to satisfy the overall requirements in their program, a significant number of the electives will need to be writing-intensive as well. The risks associated with the availability of W courses will be minimized in the transition to the new model if the breadth elective proposals above are followed.

Proposal - The CIC proposes that W courses also be divided into lower- and upper-level categories, extending the same minimum word ranges as presently exist for lower- and upper-level liberal studies courses. This would ensure that the writing requirements already built into Ryerson's curriculum are maintained in the new curriculum model.

3. Transitioning to the New Curriculum Model

Each of the proposals in the previous section represents a substantive refinement of the curriculum model presented in the CRC white paper. The remainder of this report deals with questions of practical implementation as we plan for the transition to the new curriculum model – issues that the CRC only touched on in its white paper and which the CIC was explicitly tasked to study.

A. Estimation of the Impact of Restrictions/Exclusions

i. Establishing a Pool of Potential Open Electives
The list of possible open elective courses is constrained by several factors discussed in the CRC white paper. First, some core courses will be restricted to students in a specific program only, which means they will not appear in the open elective pool. Second, departments and schools may exclude their own program students from taking a course as an open elective. Finally, courses formally classified as open electives but with significant numbers of prerequisites may be out of reach to many students, especially if some of these prerequisites are not part of the open elective list.

How will these factors operate in practice? So far the CIC has concentrated on the first. The issues associated with course restrictions differ for the various elements of the proposed open elective pool. It is presumed that liberal studies will move over in a relatively straightforward fashion to become the breadth elective portion of the new open elective list. For courses comprising the remainder of the new pool, the CRC considered several ways to construct a preliminary list:

> ➢ using an existing professionally related elective table (e.g. Faculty of Arts)
> ➢ aggregating lists self-selected by programs
> ➢ incorporating all courses currently in minors
> ➢ some combination of the above

After some deliberation, we adopted the last option. We conducted a survey requesting all programs select a list of potential open electives from the courses they teach. A template form was sent, to be returned to the Office of the Vice Provost Academic. A total of 31 programs of 56 polled provided this information (Response of ~ 55%), allowing us to construct a partial aggregated list of courses self-selected by programs. For non-reporting programs, we have incorporated all courses currently in minors. As summarized in Figure 2, with details provided in Appendix 3, the reporting programs self-identified almost 550 courses as potential open electives (Column 4 in Figure 2). Of the 550 self-reported courses, only 35 are liberal studies. Some reporting programs neglected to include some or all of the courses they offer in minors in their list of proposed open electives. The tally of such courses in included in the 5th column of Figure 2. The total of

such courses for the programs that have self-reported is 150. By combining these two lists, the self-reported courses plus the minor courses not included by the reporting units, we determine a preliminary pool of potential open electives with approximately 700 courses.

Figure 2 also provides information for programs which did not complete the open elective survey but do provide minors. We have included the courses in those minors in our tally. Minors are, in theory, open to students from across campus, so minor courses have the characteristic of open electives. The number of minor courses offered by the non-reporting departments is 151. Adding these to the estimate above brings the potential pool to about 850 courses.

It can be deduced from Figure 2, that about 390 of the courses included by reporting programs are liberal studies or courses in minors.[2] This leaves over 160 others, representing the reporting programs' current professional courses or courses they offer in non-minor contexts as professionally related electives. As a preliminary estimate, this figure can be pro-rated by a factor of 1.67 giving a figure of about 270, to account for the fact that about two-fifths of programs have not responded to our survey.

Frequency of Course Offerings - According to the Registrar's Office, as of the 2012-2013 academic year, the total number of courses in our scheduling system is 2742, with 434 liberal studies courses, and 822 in minors. However, not all of these courses are offered frequently. Some evidence on this latter point is given in Figure 3, which shows that the number of inactive courses on the books (defined as those last offered prior to fall 2005) is about one-seventh of the total.

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[2] OE List without Minor Courses or Liberals = Number of OE indicated by program – [(Total Minor Courses offered – Minor Courses not included in OE self-reported list) + Liberals]

Figure 2: Open Electives Self-Identified by Programs + Courses in Minors

Faculty	# of Programs	Total # of Courses Currently Offered in Minor in Academic Calendar	Total # of Courses Available as OEs as Indicated by Program	Total # of Courses offered in Minor but NOT as OEs	Total # of Courses Offered as Liberal Studies	Total # of Liberal Studies included as OE Courses
Faculty of Arts						
Programs that Responded	11	240	257	104	141	35
Programs that did not Respond	2	25	25	25	15	
Total	**13**	**265**	**282**	**129**	**156**	**35**
Faculty of Communication & Design						
Programs that Responded	6	38	114	10	0	0
Programs that did not Respond	3	13	13	0	0	
Total	**9**	**51**	**127**	**10**	**0**	**0**
Faculty of Community Services						
Programs that Responded	4	6	66	3	0	0
Programs that did not Respond	5	29	29	0	0	0
Total	**9**	**35**	**95**	**3**	**0**	**0**
Faculty of Engineering and Architectural Science						
Programs that Responded	2	0	11	0	0	0
Programs that did not Respond	6	0	0	0	0	0
Total	**8**	**0**	**11**	**0**	**0**	**0**
Faculty of Science						
Programs that Responded	3	63	40	29	6	0
Programs that did not Respond	4	0	0	0	0	0
Total	**7**	**63**	**40**	**29**	**6**	**0**
Faculty of Ted Rogers School of Management						
Programs that Responded	4	30	57	4	0	0
Programs that did not Respond	6	84	84	0	0	0
Total	**10**	**114**	**141**	**4**	**0**	**0**
Grand Total	**56**	**528**	**696**	**171**	**156**	**35**

Figure 3: Frequency of Course Offerings

Academic Year	Number of Courses
Prior to F2005	427
F2005/W2006/S2006	13
F2006/W2007/S2007	35
F2007/W2008/S2008	47
F2008/W2009/S2009	41
F2009/W2010/S2010	37
F2010/W2011/S2011	86
F2011/W2012/S2012	176
F2012/W2013	1880
Total Number of Courses	2742

To give a more realistic picture *of the current situation*, we asked University Scheduling to concentrate on the courses offered in the 2012-13 academic year. As can be seen in Figure 4, when comparing total courses, liberal studies and courses in minors offered in the two academic terms, F2012 and WS2013, the corresponding numbers in each term were roughly equal. Meanwhile, liberal studies courses made up more than a tenth, and courses in minors between a quarter and a third, of the total number of courses offered in 2012-2013.

Figure 4: Courses Offered in the 2012-2013 Academic Year

Courses	(1) Offered in F2012	(2) Offered in W2013	(3) Offered in Both Terms	(4) Offered in this Academic Year = (1)+(2)-(3)	(5) Not Offered in this Academic Year
All Courses	1054	1099	273	1880	862
Liberal Studies	121	123	60	184	250
Courses in Minors	289	311	139	461	361

These data provide an independent check of the size of the open elective pool provided above: an estimate of the size of the open elective pool was to use – in addition to the initial figure of 270 for non-liberal studies/no-minors courses cited above – the 184 liberal studies courses and 461 courses in minors found in Figure 5. (Each of these totals can be derived by adding the relevant numbers in columns 1 to 3.) Our initial estimate of the size of the open elective pool each year is therefore in the neighbourhood of 900. The actual pool will be somewhat smaller for three reasons:

- the likely shrinkage in the liberal studies course list, which could numerically outweigh the new list of large-capacity flagship electives, as the new mandated breadth requirement is phased in;
- program-specific exclusions, which will not affect the size of the overall elective pool but will reduce its size in particular programs as departments and schools put selective constraints on the open electives that are available to their own students;
- the impact of pre-requisites.[4]

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[3] For example, some minors have a hierarchical, internal pre-requisite structure (e.g., Chemistry). This will constrain the "openness" of open electives which are higher up the hierarchy. The section size of the foundational courses in these minors will add an additional layer of constraint. These factors do not preclude such courses from being OEs, but it forces students make certain choices to achieve these courses.

[4] Some courses which are pre-requisites for courses included in the OE list self-reported list were not included on that same list. The reasons for this are unclear, but this has to be rectified or it reduces the actual number of potential OEs.

ii. Interim Results and Needed Refinements

In summary, the list identified in this initial process strikes the CIC as a good starting point for the content of the open elective category. The next steps are (i) to achieve full reporting and (ii) to establish academically sound restrictions and exclusions for the courses on this list as well as to account for pre-requisites. We emphasize the term 'academically sound' as we believe that these types of constraints should be imposed only for good academic reasons. For restrictions and exclusions, we propose a follow-up survey where we ask reporting programs to identify the restrictions and exclusions they are comfortable with along with a brief justification of these constraints. As the list of open electives is firmed up, the pre-requisite issue needs to be dealt with by informing interested students that some open electives do have pre-requisites and that they will only be able to access those courses if they have a sufficient number of open elective slots in their program to satisfy the pre-requisites. Also the CIC is currently undertaking research to create a list of cases where courses in the general open elective list have pre-requisites that are currently outside the list.

Despite these outstanding issues, the overall conclusion from this analysis is clear. Ryerson is offering a significant volume of courses overall to its students. In terms of electivity, liberal studies courses and courses in minors represent a significant pool of choice for students in the current system. What these data do not show are the impact of two major factors:

➢ Can courses be scheduled in such a way as to give students a wide set of alternatives when choosing their open electives?

➢ What is the "supply and demand" picture – that is, the relative availability of seats in courses on the open elective list compared to student requests to take those courses?

We turn to these issues in turn.

B. Scheduling

i. A Test of Scheduling Availability

Now that we have a preliminary list of open electives, we need to ensure its constituent courses are collectively scheduled in a way that maximizes effective student choice. We want to avoid a situation of false advertising where many courses are available in principle but cannot be accessed by students. In order to get a better sense of current student access to liberal studies courses and courses on the minors list, the CIC asked University Scheduling to construct a test-case scenario. The method applied was to select 100 students from across different Faculties, but from a limited number of programs, focusing on a particular year of each. Of the fifteen highlighted programs, three were from Arts (2nd year Politics and Governance, 2nd year Criminal Justice, 2nd year Geographical Analysis); one each from FEAS and Science (1st year Mechanical, 2nd year Contemporary Science), three from TRSM (3rd year Marketing, 3rd year Retail Management, 4th year Business Technology Management), four from FCAD (3rd year Film Studies, 2nd year Journalism, 2nd year Fashion Design and 2nd year Radio and Television) and three from FCS (3rd year Nursing, 3rd year Social Work and 3rd year Urban and Regional Planning).[5]

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[5] Of the 100 selected students in this test-case scenario, 15 were from the Arts programs (5 each from Politics and Governance, Criminal Justice and Geographical Analysis), 5 each were from FEAS (Mechanical) and Science (Contemporary Science), 20 were from TRSM (10 from Marketing and 5 each from Retail Management and Business Technology Management), 40 from FCAD (10 each from Film Studies, Journalism, Fashion Design and Radio and Television) and 15 from FCS (5 each from Nursing, Social Work and Urban and Regional Planning)

Using the F2012 database, the *required* professional and professionally related courses for each student were entered into the test-case schedule as they were actually scheduled for F2012. All students in this test group had a liberal studies course in the F2012 semester of their curriculum and all were taking a normal course load. With this set of conditions, University Scheduling determined what percentage of liberal studies and courses in minors students could fit into their schedules.

Figures 5 and 6 below present the test-case results for liberal studies courses and courses in minors respectively. The chart in Figure 5a shows the numbers of students in the total test-case sample of 100 who could access various percentage ranges (all the way from 0 to 9 percent up to 90 to 100 percent) of the courses in their program's relevant liberal studies band. The table in Figure 5b breaks down each of the numbers of students shown in the chart by program. For example, one of the five selected 3rd year Nursing students could access only between 0 to 9 percent of the liberal studies offerings available in their scheduling band, while seven of the ten selected 2nd year Radio and Television students could access 90 to 100 percent of their available liberal studies offerings.

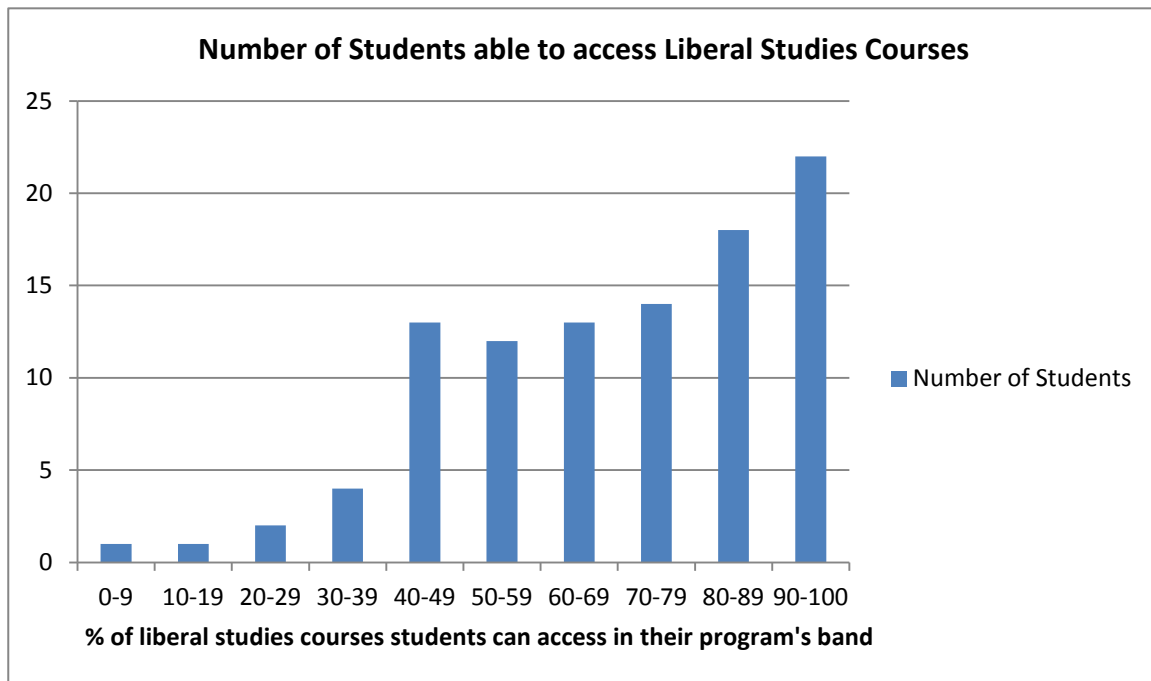**Figure 5a. Access to Liberal Studies (percentage of courses offered)**

Figure 5b. Number of Program Students in Each Percentage Range (total 100)

0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
(1) 3Nursing	(1) 3Nursing	(2) 3Nursing	(1) 3Nursing (2) 2BSContSci (1) 2Design	(5) 2Design (2) 3UrbRegPlan (3) 3SocialWork (1) 1BEMechEng (2) 2BSContSci (1) 3RetailMgt	(1) 2Design (3) 2Journalism (2) 3RetailMngt (2) 3SocialWork (3) 1BEMechEng (1) 2BSContSci	(3) 3Marketing (2) 3UrbRegPlan (2) 3RetailMngt (2) 2Design (1) 2BAPolGov (2) 2Journalism (1) 1BEMechEng	(4) 2BAGeoAnlys (1) 3FilmStudy (3) 4BusTechMgt (2) 3UrbRegPlan (1) 2RadioTV (1) 2Design (2) 2Journalism	(4) 2BACrimJust (4) 3FilmStudy (3) 2BAPolGov (2) 3Marketing (2) 2RadioTV (2) 4BusTechMgt (1) 2BAGeoAnlys	(5) 3Marketing (7) 2RadioTV (1) 2BACrimJust (5) 3FilmStudy (1) 2BAPolGov (3) 2Journalism
1	1	2	4	13	12	13	14	18	22

The chart in Figures 6a shows the number of students in the total test-case sample of 100 who could access, purely from a timetabling perspective (i.e., not considering whether or not in the current curriculum model these courses appear on their professionally related elective tables) various percentage ranges of the available 261 minors courses offered in F2012. Again, the table in Figure 6b breaks down each of the numbers in the chart by program. For example, one of the five selected 3rd year Nursing students could access between 30 to 39 percent of the minors courses offered in F2012 while nine of the ten selected 3rd year Marketing students could access between 90 to 100 percent of these minors courses.

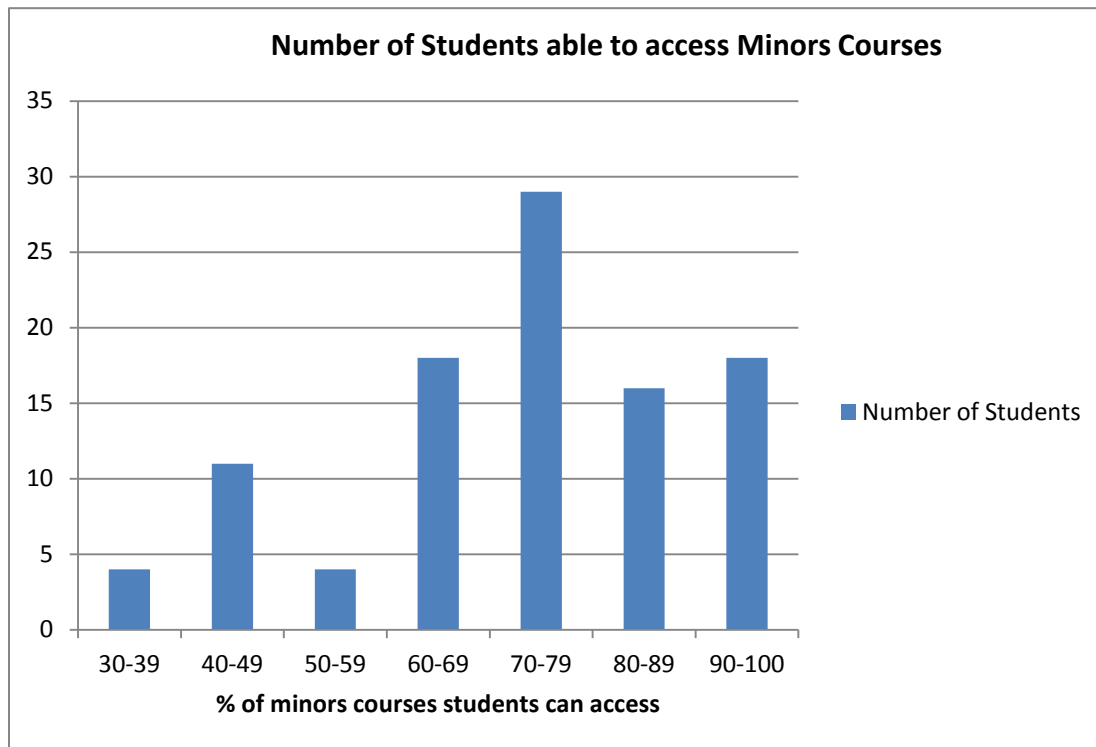**Figure 6a. Access to Courses on the Minors List**

Number of Students able to access Minors Courses

Figure 6b. Number of Program Students in Each Percentage Range (total 100)

30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
(1) 3Nursing (3) 3SocialWork	(5) 1BEMechEng (2) 3SocialWork (4) 3Nursing	(1) 2Design (1) 2BSContSci (2) 3UrbRegPlan	(7) 3FilmStudy (2) 2BAGeoAnlys (4) 2Design (3) 3UrbRegPlan (2) 2Journalism	(5) 4BusTechMgt (4) 2Design (10) 2RadioTV (3) 2BAGeoAnlys (5) 2Journalism (2) 3FilmStudy	(3) 2BSContSci (1) 3Marketing (3) 3RetailMgt (1) 3FilmStudy (3) 2BACrimJust (3) 2Journalisn (1) 2Design (1) 2BAPolGov	(9) 3Marketing (1) 2BSContSci (4) 2BAPolGov (2) 2BACrimJust (2) 3RetailMgt
4	**11**	**4**	**18**	**29**	**16**	**18**

ii. Interim Results and Needed Refinements

Figure 5b shows that 67 of the 100 selected students could access 60 to 100 percent of the liberal studies courses in their program's band, while Figure 6b shows that 81 of these same students could access 60 to 100 percent of courses offered in minors. The percentage range representing the mode in the case of liberal studies courses was 90 to 100 percent and the median was 70 to 79 percent. For minors courses, the comparable mode and median were both 70 to 79 percent.

The analysis above has three major implications.

> ➢ First, not only did the vast majority of students have a range of electives, both liberal studies and courses in minors, to choose from. As shown in Figures 5 and 6, most students were able to fit a majority of these courses into their schedules.

> ➢ Second, it should come as no surprise that programs with more highly constrained curricula (e.g., Nursing, Social Work) are clustered in the columns to the left of the tables in Figures 5 and 6. Given curriculum constraints, these programs' students were less able to accommodate both liberal studies and minors courses in their schedules than students in programs such as those in Arts and TRSM that have more open curricular structures. Less expected is the fact that the variation in scheduling availability was much greater in the case of liberal studies than for courses in minors.

> ➢ Third, as shown in the two charts in Figures 5 and 6, the mode of the various percentage ranges for the availability of liberal studies courses was significantly higher than for courses in minors. But because of the significant variation in the scheduling availability of liberal studies, the median percentage range was the same for liberal studies than for courses in minors.

In assessing these implications, it is important to keep in mind that the test-case scenario we have been examining has important limitations. The sample it is based on is wide-ranging in its reach across different Faculties, but arbitrary in its selection of particular programs. Also, for the purposes of the exercise, evening courses and distance sections were excluded. If these courses were incorporated, the extent of access would increase markedly. Finally, and most importantly, capacity and available spaces were not considered in the test-case calculations – only possible placement in students' schedules.

How can this analysis be further refined? What is required is a closer analysis of supply and demand for open electives overall – not least, courses in minors and the proposed flagship electives. How do we gain a better sense of the picture of demand and supply that influences so significantly issues related to access and scheduling?

C. Student Access

i. Current Evidence on Access and the Impact of SCIF

The issues associated with ensuring student access to courses appearing on the open elective list are some of the most difficult for the CIC to deal with, both from conceptual and investigatory perspectives. Some of these issues will be mitigated by the fact that a student's ability to take a particular open elective will no longer be so closely constrained by the student's own programs (except when exclusions apply). If a student finds their preferred open elective is full, they have literally hundreds of others to choose from. Similarly, if there are timetabling challenges, a student may have a conflict with their preferred open elective but find that there are many other interesting and valuable ones to choose from. In other words, once the system is in place, there will be some internal self-regulation of enrolment behaviour.

Nonetheless, access issues could present a major challenge. There is a perception in parts of the University that insufficient spaces are available in some courses for students external to the Faculties offering those courses. To test the validity of this perception, we have carried out an analysis of enrolment data to gauge the capacity for courses self-identified as open electives as well as those in minors. By definition, these courses should be open to most, if not all, students on campus. This means they should already be accessed in ways very much as we expect open electives to be accessed by students in the new model. Figure 7 shows a Faculty-by-Faculty summary for the programs who responded to the CIC's survey (full details in Appendix 4). Highlighted here are the actual enrolments for the two most recent academic years and the number of enrolments from outside of the Faculty hosting the courses.

Figure 7. Out of Faculty Enrolment Estimates.

Faculty	Courses (OE + Minor)	Total Enrolment[a)]	Enrolment from Outside the Faculty	% Enrolment from Outside the Faculty
Arts	394	65,199	40,703	62.1
FCAD	117	12,089	3,798	31.4
FCS	98	10,813	1,004	9.2
FEAS	11	0	0	0
FoS	71	5,263	40	0.7
TRSM	144	54,661	5,929	10.8
Grand Total	835	148,025	51,474	34.7

a) For reporting programs only. Data cumulative for F2011, W2012, F2012, W2013. Does not include liberal studies.

The data in Figure 7 show the greatest *extra*-Faculty enrolment is associated with the courses offered by the Faculty of Arts. This comes as no surprise. What this chart does not convey is the capacity of other Faculties to provide more spaces to external students. It must also be noted that the patterns seen here are likely to be influenced at least in part by scheduling constraints (i.e., students take some courses because they fit their schedules, not because the students really want these courses). If the scene portrayed here does not change, there remains a probability that there will be insufficient opportunities in some courses on the open elective list to accommodate students, especially in the case of courses that will be serving double duty as core within

a program and an elective to others. The University has already begun to address issues of student access through the Student Choice Incentive Fund (SCIF) administered by the University Planning Office (UPO). Since 2011-12 three cycles of SCIF proposals have been submitted. Data on these proposals as well as the first year of approvals, broken down by Faculty, are summarized in Figure 8 below.

Figure 8. SCIF Proposals by Year

Faculty	2011-12 Proposals (Approvals)	2012-13 Proposals	2013-14 Proposals	Cumulative Proposals
Arts	23 (2)	32	52	97
FEAS	0	0	0	0
Science	6 (3)	0	11	17
TRSM	0	2	6	8
FCAD	6 (4)	2	15	23
FCS	4 (1)	2	0	6
TOTAL	**39 (10)**	**38**	**84**	**151**

Since 2011, just over 150 courses have been proposed for SCIF-based funding allocation. Based on the one year for which full data exists (2011-12), these proposals have an approval rate of 25%. If this holds over subsequent years, we can anticipate approximately 10 courses from the 2012-13 requests and 20 from 2013-14 for a total of approximately 40 courses. The trend that seems to be evolving is that a considerable number of departments and schools in Arts, and to a lesser extent in FCAD, have been proposing SCIF courses, and the Faculty of Science has also begun to do so, but uptake in the other three Faculties has been limited. To be designated for SCIF funding, courses must be electives and must satisfy the greater of the following two conditions: (a) 20% of their registrations must be for non-Faculty students, and (b) 20 registered students must from outside the Faculty.

If the growth in proposals seen especially in 2013-14 continues, and if this growth is more equally shared among all Faculties, SCIF's incentive structure could gradually have a significant effect on student access. But given the size of the shifts required to ensure sufficient access – shifts partially, though not completely, captured by the shifts in enrollment implicit in the mandated breadth estimates found in Figure 1 – the CIC believes it is very unlikely that SCIF, as currently specified, will be enough. Indeed, we believe that unless other strategies for dealing with access issues are implemented, almost certainly significant discrepancies will arise, especially due to the extent to which mandated breadth will redistribute elective course enrollments among various Faculties.

At this point we are not ready to make specific proposals that address these issues. Instead, we are interested in gaining ideas and direction from the consultation process that will follow the release of this green paper. The CIC looks forward to a robust discussion of these and other possible strategies during the community consultation process.

D. Implementation

i. Pilot Phase

As these general issues are discussed, the CIC is moving forward, as an integral part of its mandate, with a concrete implementation plan.

In line with the CRC white paper, we are suggesting the roll-out of the new curriculum model take place in a staggered fashion. Some programs would adopt the model before others, and the new framework would then be sequentially introduced year by year in existing programs' calendar curricula. The formal start of the implementation process would be in September 2014, with the implementation timetable for those programs with a 2013 start being worked out on a case by case basis. According to the CRC white paper's timetable, in September 2015 all common-platform Arts programs will adopt the new framework in their first-year curricula and then successively adopt it in their later-year curricula year by year.[6] In September 2016, all TRSM programs will adopt the new framework in their first-year curricula, following year by year in the same fashion. In September 2017, all other programs would follow, again utilizing the year by year adoption for later years of their curricula.

That leaves the details of a pilot phase for the coming year. Several new programs are scheduled to launch in Fall 2013. These include Accounting and Finance, Biomedical Sciences, Creative Industries, Financial Mathematics, Professional Communications and Real Estate Management. Of these, only Biomedical Sciences and Professional Communications have open electives in year 1 (i.e., starting in Fall 2013). Several of these programs have liberal studies electives in their first year as well.

To facilitate the creation of this open electives table, the CIC is proposing that all courses in currently existing minors that do not have pre-requisites as well as all the courses identified by programs in the self-identification exercise mentioned in Section 2 be designated as the initial pool of open electives. The series of events needed to confirm this pool is summarized in Figure 9.

Figure 9. Critical Path for Roll Out of New Open Electives List – Pilot Phase

Task	Responsibility	Deadline
Compile list of minor courses without pre-requisites (List 1)	Vice Provost Academic Office	Start of April 2013
Modification of the self-reported list to remove liberals(List 2)	Vice Provost Academic Office	Start of April 2013
Combine Lists 1 and 2	Vice Provost Academic Office	Start of April 2013
Expand list Departments/Schools reporting lists of open electives	Vice Provost Academic Office	On-going
Distribute list to offering departments and to pilot programs to vet the lists and to indicate exclusions/restrictions/pre-requisites	Departments/Schools offering the courses on the combined lists and the departments/schools offering the programs which have open electives	End of April 2013
Categorization of courses on the list as per categories in Proposal 1	Offering programs	End of April 2013
Review and approval of combined list, including categories, by Academic Standards	Academic Standards	Early May 2013
Approval of list by Senate	Senate	June Senate
Implementation of list by RO	Registrar's Office	June – July 2013
Roll out	Programs	September 2013

Full details on this pilot phase will be included in the CIC's white paper.

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[6] Creative Industries will also transition to the new framework in 2015 as it has open electives indicated in its Y3 curriculum.

4. Conclusion

The CIC asks the community to consider the proposals made here and to provide their views to the CIC for consideration. Comments can be emailed to curriculum@ryerson.ca or presented in person at upcoming town halls.

Respectfully submitted by Chris Evans and Mark Lovewell, Chair and Vice Chair of the CIC

April 26, 2013

Appendix 1: Curriculum Implementation Committee Membership

Last Name	First Name	Title	Faculty
Evans	Chris	Vice Provost Academic	N/A
Lovewell	Mark	Interim Secretary of Senate	N/A
Lane-Vetere	Heather	Vice Provost Students/Interim Registrar	N/A
Knapik	Sarena	Curriculum Advising (Non-Voting)	Registrar's Office
Penny	Katherine	Director, Curriculum Quality Assurance (Non-Voting)	TRSM
Schryer	Catherine	Chair, Professional Communication	FCAD
Wylie	Stephen	Chair, Chemistry and Biology	FOS
Friedman	Jacob	Chair, Mechanical/Industrial Engineering	FEAS
Evans	Elizabeth	Associate Dean	TRSM
Moshe	Marcia	Associate Dean	ARTS
Waddell	Janice	Associate Dean	FCS
Glynn	Des	Senior Program Director	Chang School
Palermo	Melissa	Student	FCAD
Diverlus	Rodney	Student	FCAD

Appendix 2: CRC White Paper Recommendations

Recommendation 1. An omnibus curriculum policy. Replacement of the large number of separate Senate policies with a single policy, with consistent definitions of the following terms: major (a program consisting of 25 to 30 core courses in a defined area), a combined major (a program of 25 to 30 core courses in more than one area), a concentration (a group of 6 to 12 courses within a program), and a minor (a grouping of 6 courses, mainly outside one's major).

Recommendation 2: Course Categories. The use of revised terminology for the Senate framework's proposed course categories: core courses, C (currently professional courses); breadth electives, BE (currently liberal studies); and open electives, OE (currently professionally related courses).

Recommendation 3a: Breadth Electives as Open Electives. The allowance of the use of breadth electives as open electives, with the caveat that 6 courses from the breadth elective category (4 for students in engineering) are required to serve as breadth electives.

Recommendation 3b: Core Electives as Open Electives. The requirement that students choose at least two of their open electives from outside their core electives.

Recommendation 4: Writing Intensive Courses. The adoption of the concept of writing-intensive (W) courses, with programs having the same number of writing intensive courses in the new curriculum as the number of liberal studies courses they have in the current curriculum.

Recommendation 5: The Breadth Elective and Writing Committee. The creation of a new committee reporting to the Academic Standards Committee (ASC) to replace the Liberal Studies Committee. This new committee will approve courses for designation as breadth electives and/or writing-intensive.

Recommendation 6: Open Elective Restrictions and Exclusions. The consistent monitoring of both restrictions and exclusions by programs of open electives, with the exact mechanism by which restrictions and exclusions are monitored and/or approved being developed by the CIC.

Recommendation 7: Long-Term Goals of the Breadth Elective Category. The expression by the University of its intent to make the breadth elective category a field for *mandated breadth* over time—while recognizing that this will not be possible at the outset of the implementation process.

Recommendation 8: Policy vs Procedures. The description of the procedures flowing from the elements of Policy 2 in a procedures document that is separate from the policy document.

Recommendation 9: Retaining the Course Intentions System. A concerted effort by the CIC to look at practical ways to improve the course intentions system as it currently operates.

Recommendation 10: Improving Course Offerings and Ensuring Access. The consideration by the CIC of strategies to improve course offerings and the number of seats available in open electives through the SCIF Fund; the possible use targeted access procedures, such as the possible establishment of University-wide targets for an annual increase in the number of seats reserved for students taking courses as open electives, with a certain pool of available dollars provided to those schools and departments that manage to exceed the target;

and/or possible mandated caps that set out the proportions of seats for program and non-program students will be needed.

Recommendation 11: Presentation of Electives. The use of new subject-based categories (understood at the beginning of the implementation process to be for guidance purposes rather than a prescriptive tool) to structure the range of elective selections into a more manageable format for students. The groupings of both breadth and open electives could, for example, be divided into the following categories: social science and humanities, science and technology, and applied topics such as business and design.

Recommendation 12: Academic Advising Report of the University Committee on Student Success. Endorsement of the recommendations from the Advising Report: (1) establishment of a central coordinating function related to academic advising at Ryerson, (2) development of early warning systems that flag students who may be in academic difficulty, (3) development of a list of outcomes for advising at Ryerson, (4) development of a common interpretation, implementation and communication of policies and procedures, (5) initiatives to make RAMSS more user-friendly and build additional tools to assist students.

Recommendation 13: Special Implementation Task Force. The appointment of a special implementation task force to oversee planning the implementation process, including the development of accompanying policies and procedures.

Recommendation 14: Establishing Breadth Elective and Writing Course Criteria. The tasking of the Breadth Elective and Writing Committee (BEWC) with the establishment of criteria and procedures for approving breadth electives and writing intensive courses.

Recommendation 15: Timing of the New Framework Rollout. A phased-in rollout of the new curriculum framework, with some programs adopting the model before others, and the new framework then being sequentially introduced year by year in existing programs' calendar curricula.

Recommendation 16: Moratorium on Minor Curriculum Changes. A moratorium on minor curriculum changes during the phase-in of the new framework.

Recommendation 17: Scheduling of Breadth Electives. Maintenance of bands for breadth electives for now, but with the expectation that an assessment of the value of this banding takes place over time.

Recommendation 18: The Status of Accredited Programs. Statement of expectation that accredited programs will work towards finding creative ways to enhance curriculum flexibility and student choice within the scope of their accreditation standards.

Recommendation 19: Defining the Lists of Open Electives. The use of following terms: restriction (a course restricted to students in a specific program), and exclusion (a course that program schools or departments will not allow their own students to take as an open elective); and the following steps being used to develop lists of open electives: (1) compile list of all courses at Ryerson, (2a) identify restrictions centrally, (2b) have offering departments identify additional restrictions, (3a) update list by removing restricted courses, (3b) have each program review non-restricted courses and identify which courses would be excluded as an open elective option for their program students.

Appendix 3. Results of Self-Reporting of Open Electives.

This data is available from the Office of the Vice Provost Academic.

Appendix 4. Results of Enrolment Analysis – Self-Reporting Programs Only.

These data are cumulative values for F 2011, W 2012, F 2012, W2013. Courses do not include Liberal Studies

Departments	Total # of courses that are OE and / or Minor	Total Enrollment	Total # of Enrollment Outside the Faculty	% of Enrollment Outside the Faculty
Faculty of Arts				
Criminal Justice	20	4478	345	7.7
English	41	6313	4025	63.75
Environment &Urban Sustainability	0	0	0	0
French	30	1335	1001	75.0
Spanish	15	384	324	84.1
History	55	650	74	11
Geographical Analysis	29	1669	437	37.0
International Economic and Finance	34	11369	9237	81.24
Music	19	2578	2079	80.6
Philosophy	29	5658	3635	64.2
Psychology	52	16540	10450	63.1
Sociology	45	11494	7438	64.7
Politics & Governance	*25*	*2731*	*1658*	*60.7*
Total	394	65,199	40,703	62.1
Faculty of Communication & Design				
Fashion Communication & Design	*13*	*2597*	*88*	*3.3*
Creative Industries	23	0	0	0

Graphic Communication Management	12	2704	0	0
Interior Design	0	0	0	0
Image Arts	29	731	24	3.2
Journalism	25	2131	473	22.1
Professional Communication	15	3926	3213	81.8
RTA School of Media	0	0	0	0
Total	117	12,089	3798	31.4
Faculty of Community Services				
Child & Youth Care	16	3196	588	18.3
Disability Studies	13	564	6	1.0
Early Childhood Studies	6	961	22	2.2
Midwifery	0	0	0	0
Nursing	0	0	0	0
Nutrition &Food	19	699	13	1.7
Occupational Health & Safety	19	4891	374	7.6
Social Work	25	502	1	0
Urban &Regional Planning	0	0	0	0
Total	98	10,813	1004	9.2
Faculty of Engineering & Architectural Science				
Architectural Science	11	0	0	0
Aerospace Engineering	0	0	0	0
Biomedical Engineering	0	0	0	0
Chemical Engineering	0	0	0	0
Civil Engineering	0	0	0	0
Computer Engineering	0	0	0	0

Electrical Engineering	0	0	0	0
Total	**11**	**0**	**0**	**0**
Faculty of Science *(data only for F2011 – W 2012)*				
Biology	29	1957	23	1
Chemistry	23	296	3	1
Computer Science	0	0	0	0
Financial Mathematics	0	0	0	0
Mathematics and its Applications	0	0	0	0
Medical Physics	19	3010	14	0
Total	71	5263	40	0.7
Faculty of Ted Rogers School of Management				
Accounting	14	10,658	726	6.8
Finance	23	10,680	603	5.6
Global Management	11	2736	33	1.2
Health Services Management	8	-	-	-
Human Resources	13	6989	926	13.2
Marketing	14	9541	1918	20.1
Entrepreneurship & Strategy	12	3432	632	18.4
Hospitality & Tourism	10	1,342	50	3.7
Law	20	6647	856	12.8
Retail Management	19	2636	185	7.0
Total	144	54,661	5,929	10.8
GRAND TOTAL	835	148,025	51,474	34.7